



ANGOON AIRPORT

Final Environmental Impact Statement
and Section 4(f) Evaluation

Appendix Q – Part 2



SEPTEMBER 2016



Federal Aviation
Administration



APPENDIX Q – PART 2 DOCUMENTATION OF COMMUNICATIONS WITH AGENCIES AND TRIBES

Note: The Section 508 amendment of the Rehabilitation Act of 1973 requires that the information in federal documents be accessible to individuals with disabilities. The FAA has made every effort to ensure that the information in the *Draft Angoon Airport Environmental Impact Statement* is accessible. However, this appendix is not fully compliant with Section 508, and readers with disabilities are encouraged to contact Leslie Grey at (907) 271-5453 or Leslie.Grey@faa.gov if they would like access to the information.

Angoon Land-Based Airport EIS: Wetlands Section

(Notes and revisions from 7/5/2012 3-4pm PST call in red. Corps personnel: Eva Zaki and Randy Vigil, SWCA personnel Jamie Young and Greg Swenson)

1. Project Status (Amanda ~~Jamie~~ Young)

- PDEIS stage
- Schedule for DEIS
- Format of section

Jamie provided the introduction to Eva Zaki (Randy was delayed approximately 10 minutes). Eva may be helping Randy with his project review. Jamie explained that we are following the prescribed sequence that occurs in FAA Order 1050.1E regarding coordination with the U.S. Army Corps of Engineers. Jamie mentioned that Order 1050.1E especially emphasizes coordination with the Corps regarding the significance determinations. Jamie provided a schedule of fall 2013 for the Public DEIS and also mentioned that we are using a unique format that is intended to be more reader-friendly. When Randy arrived, Greg and Jamie quickly rehashed this introduction. Randy mentioned that he was aware of the airport project and EIS but wasn't familiar with the details.

2. Wetland Identification Field Methodology and Functional Assessment (Greg)

- Satellite imagery / National Wetland Inventory desktop review
- U.S. Forest Service GIS data (soils and vegetation)
- Field reconnaissance
- Functional assessment

Greg provided a summary of the desktop and field effort involved in identifying and characterizing wetlands in the areas of the action alternatives. Greg mentioned that SWCA combined aerial/satellite imagery, NWI mapping, and Forest Service GIS to create the basemap. Field crews then field-verified the mapping. Greg emphasized that SWCA did not conduct a delineation, but that the mapping in the EIS is field-verified. Randy recalled that George Weekley had been to his office a while back and they discussed some aspects of the EIS. Randy also stated that a delineation was not critical for the EIS but that one would need to be completed for the preferred alternative and the 404 application. Greg stated that SWCA was aware of this requirement. Greg provided some detail regarding the



functional assessment, indicating that the assessment had more detail than the Corps-approved method described in their RGL 09-01. Randy offered that the Corps-approved method was probably too generic and that a more detailed methodology was preferred. Randy mentioned that the WESPAK-SE functions model is now available and is the required methodology for the Seal Trust organization for negotiating debits and credits. Greg mentioned that SWCA was aware of the WESPAK-SE method and Seal Trust's requirements, but that the method was not available at the time that SWCA's methodology was being developed, therefore hadn't been applied to this project.

3. EIS Alternatives (Greg)

- Separate wetlands and aquatics sections
- Magnitude of potential impacts
- Significance determinations

Greg described SWCA's rationale for splitting wetlands and aquatics into 2 different sections of the EIS even though they are both regulated by the Corps. Greg focused on the challenge of trying to describe non-wetland waters through the lens of a wetland functions assessment while trying to maintain a reader-friendly document. Randy didn't seem to have a problem with this approach but he did refer to their current lack of staff as an issue for timely reviews. Greg indicated that the intent was to achieve an open dialog so that SWCA and the Corps could coordinate effectively. Greg went on to discuss the range of wetland impact acreages and how SWCA made the significance determinations. It was discussed that the FAA Order has a very specific set of thresholds for determining significance and that technically one of the thresholds appears to be triggered. It was also discussed that during their review, the Corps can disagree with SWCA's interpretation of this if it doesn't seem appropriate. Randy agreed that the significance criteria are specific and he pondered how the criteria are supposed to interact with Corps regulations. Greg and Jamie reinforced that an important part of the Corps review is to provide the Corps' perspective on the significance determinations.

4. Comments (Amanda Jamie Young and Greg)

- Timeline
- Preference for providing comment (PDF mark-up, comment matrix, etc.)
- Post-comments follow-up

Greg discussed the July 15, 2012 deadline that was previously mentioned in an email. Randy responded that staff time is limited right now but that he and Eva



would give it their best shot. Greg mentioned that he would call Randy on 7/11/2012 to check-in. Randy agreed this was a good idea. Some discussion was had regarding the format of comments: Randy agreed to do an electronic pdf mark-up. Greg mentioned that SWCA's goal was to follow-up with the Corps within a week of receiving comments to confirm SWCA's understanding. Randy was agreeable to this approach. The call closed after about an hour. Greg emailed a pdf copy of the wetlands section to Randy after the call.

Lara Bjork

From: Greg Swenson
Sent: Thursday, July 05, 2012 4:33 PM
To: randal.p.vigil@usace.army.mil
Cc: Amanda Childs; Jamie C. M. Young; Lara Bjork; Kari Chalker
Subject: Angoon Airport EIS: Wetlands Section

Randy, thanks again for yours and Eva's time. Attached you will find the wetlands section for your review. As we discussed, an ideal turn-around for your comments would be July 16, 2012 (we talked about the 15th but that's a Sunday). I appreciate your staff constraints so I will check back in with you by next Wednesday the 11th to see how it's going. Please note that there are a few highlighted "XX" areas that need acreage numbers from another section that is currently in progress. Hopefully that won't affect your review of the document content.

Please let me know if you have any questions.

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4.15. Wetlands: Existing Conditions and Project Effects

This section addresses the existing conditions of wetlands in the area of the airport and access alternatives and the potential changes to wetlands from those alternatives.

The information contained in this section is summarized from the *Vegetation, Wetlands, and Wildlife Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement Angoon, Alaska* (SWCA 2010d), which is included as [Appendix VWW](#).

What are “wetlands”?

“Wetlands” are defined as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (40 CFR 230.3(t)).

Practically speaking, what defines a wetland is the presence of three characteristics—a predominance of *hydrophytic* plants, the presence of *hydric* soils, and enough water to support the two (Figure WT1).

Sections in 4.16

- 4.15.1. Setting the stage: What does the reader need to know to understand existing conditions and project effects?
- 4.15.2. Existing conditions: What are wetlands like today in the area analyzed for effects?
- 4.15.3. Project effects: How would the project alternatives affect wetlands?

Terms to Know

- Hydric:** Characterized by an abundance of moisture.
- Hydrophytic:** Adapted for growth in water or within saturated soils.

Three Components of Wetlands



Hydrophytic plants



Water



Hydric soil

Figure WT1. Wetlands components.



17 Wetlands are recognized as important features that contribute to the overall health and vitality of a
18 landscape. Wetlands provide beneficial functions and services for people and for fish and wildlife.
19 These functions and services include, but are not limited to, protecting and improving water quality,
20 providing fish and wildlife habitats, storing floodwaters, controlling erosion, and maintaining surface
21 water flow during dry periods. Studies of wetlands, therefore, involve assessments of their functions
22 and services.

Terms to Know

Non-wetland: In this context, “non-wetland” means other waters of the U.S. that lack the three wetland characteristics of water, hydrophytic plant predominance, and hydric soils.

23 Wetlands are a subset of water bodies that the United States Army Corps of Engineers calls “waters of the U.S.” The term
24 waters of the U.S. covers

25 all waters that are currently used, or were used in the past, or may be susceptible to
26 use in interstate or foreign commerce, including all waters that are subject to the ebb
27 and flow of the tide. These include...lakes, rivers, streams, mudflats, [and] sandflats,
28 wetlands..., the use, degradation, or destruction of which could affect interstate or
29 foreign commerce.... (33 CFR 328.3)

30 In Angoon, the prevalence of commercial and recreational fishing—which are considered part of interstate commerce by
31 regulation—means that most water bodies in the area are considered waters of the U.S. In this EIS, wetlands are discussed
32 separately from other waters of the U.S. Discussion of **non-wetland** waters of the U.S.—streams and lakes, for example—
33 is found in [section 4.5.2 Aquatic Habitats and Associated Species](#), because that section contains the evaluations of effects
34 to all water bodies other than wetlands.



35 **4.15.1. Setting the stage: What does the reader need to know to understand existing conditions and project**
36 **effects?**

37 To understand what wetlands are like in the Angoon area today, and the possible changes to them from the airport and
38 access alternatives, the following background information is essential:

- 39
- How wetland functions and services were assessed for this EIS
 - The existing condition of wetlands in the area of the airport and access alternatives
 - The methods for assessing potential effects from each alternative on wetlands
 - Discussions of the potential effects from each alternative and the significance of those effects
- 42

43 **How are wetlands and their functions and services studied?**

44 Wetlands are categorized in various ways. This EIS uses the convention established
45 by Cowardin et al. (1979). The Cowardin classification system creates a hierarchical
46 structure for wetlands. There are five main categories—marine, estuarine, riverine,
47 lacustrine, and palustrine—which are distinguished based on a variety of wetland
48 characteristics. All wetlands identified in the vicinity of the action alternatives were
49 assigned to the palustrine class. Examples and attributes of the palustrine class are
50 listed in Figure WT2.

51 Wetland functions and services are generally assessed based on landscape position
52 and examination of human-caused disturbance in the wetlands and surrounding
53 uplands (defined here as areas that lack one or more of the three wetland
54 characteristics and that are seldom or infrequently flooded with water). For example, a
55 new road could alter the flow of surface water and groundwater that enters or leaves a
56 wetland, resulting in diminished flood storage functions or reduced fish spawning
57 habitat. Vegetation removal at the edges of lakes or estuaries can reduce shoreline stability functions. The loss of root
58 systems can result in greater rates of erosion from wave action. [Figure WT3](#) on the next page provides examples of
59 wetland functions.

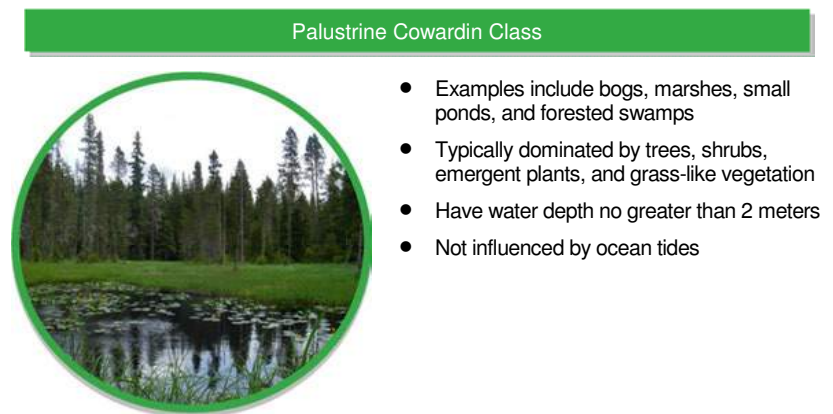
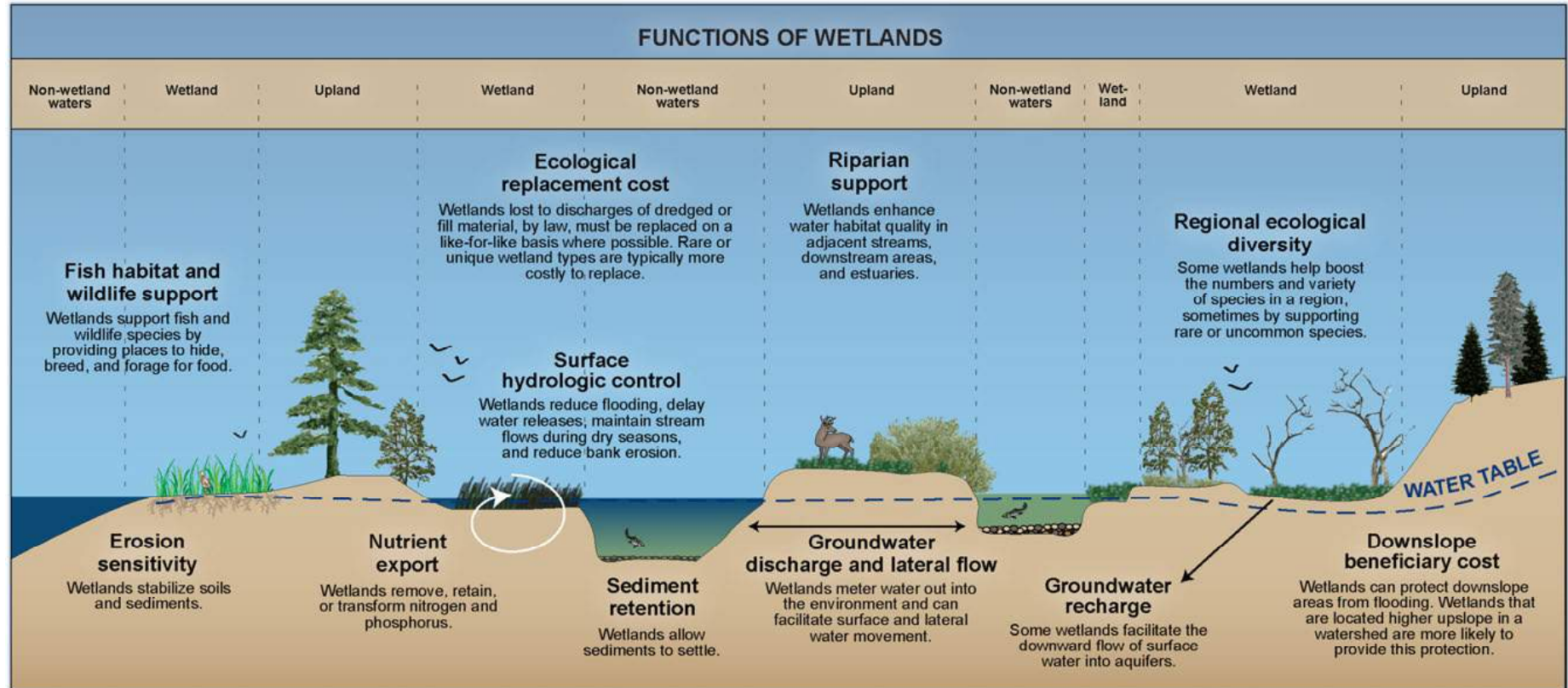


Figure WT2. Characteristics of the palustrine Cowardin class.



60
61 **Figure WT3.** Examples of wetland functions

62 Wetland services are the benefits that humans receive from
63 wetlands. Services are derived by identifying wetland functional
64 attributes that contribute specifically to human use or human well-
65 being. Wetland services in the Angoon area include *provisioning*,
66 *regulating*, *habitat*, and *public use and recognition*.

Terms to Know

- Provisioning:** The use of a wetland for things like food, water, and energy.
- Regulating:** A wetland can provide water storage, water purification and water temperature control.
- Habitat:** Nutrient and organic matter cycling, primary production, and wildlife habitat.
- Public use and recognition:** The potential and actual capacity of a wetland to sustain low-intensity human uses such as hiking, nature photography, education, and research.



67 **4.15.1.1.1. What areas were studied to determine if wetlands could be affected by the project alternatives?**

68 For the field studies related to this EIS, a study area was defined around the potential airport and access road alternatives
69 (Appendix VWW). This study area measured approximately 5,276 acres and consisted of the locations of the airport and
70 access alternatives plus a 500-meter buffer around them. This allowed field studies to begin while engineering designs for
71 the alternatives were being further refined. Once the alternatives were refined, the area analyzed for effects to wetlands
72 was also refined to cover only those wetlands that would receive direct or indirect effects from the alternatives. Of the 570
73 acres of palustrine wetlands originally identified, 264 acres are analyzed in this section for effects.

74 Baseline wetland mapping was obtained from the National Wetland Inventory map that covers the study area. Satellite
75 imagery was reviewed to identify potential wetlands based on different color and texture signatures of vegetation.
76 Additional information about the locations of wetlands was taken from the *Angoon Airport Master Plan* (DOT&PF 2006)
77 as well as the fieldwork conducted for this EIS in June and August 2009. The fieldwork focused on locating and
78 differentiating wetland types and identifying dominant wetland vegetation. Wetland identification codes were applied
79 based on geographic location and Cowardin class. This combination of existing data review and fieldwork resulted in an
80 accurate and detailed wetlands map for the study area (see Appendix VWW). The U.S. Forest Service and the U.S. Army
81 Corps of Engineers were consulted regarding the suitability of this approach, and both agencies have reviewed the
82 technical report.

83



84 **4.15.2. Existing conditions: What are**
85 **wetlands like today in the area**
86 **analyzed for effects?**

87 The mapping and classification revealed only palustrine
88 wetlands in the vicinity of the action alternatives. Figure
89 WT4 shows the distributions of the wetlands in the area
90 analyzed for effects.

91 Wetland functions were determined using a modified
92 Wetland Evaluation Technique. In this technique, scores
93 are assigned to wetland functional attributes using a
94 scale ranging from high to very low. These scores
95 indicate the likelihood that any particular function is
96 supported by the wetland, in other words, a “high” score
97 means that the wetland is highly likely to provide that
98 function. The number of acres of each wetland and an
99 assessment of 12 functions are provided below in **Table**
100 **WT1**.

101

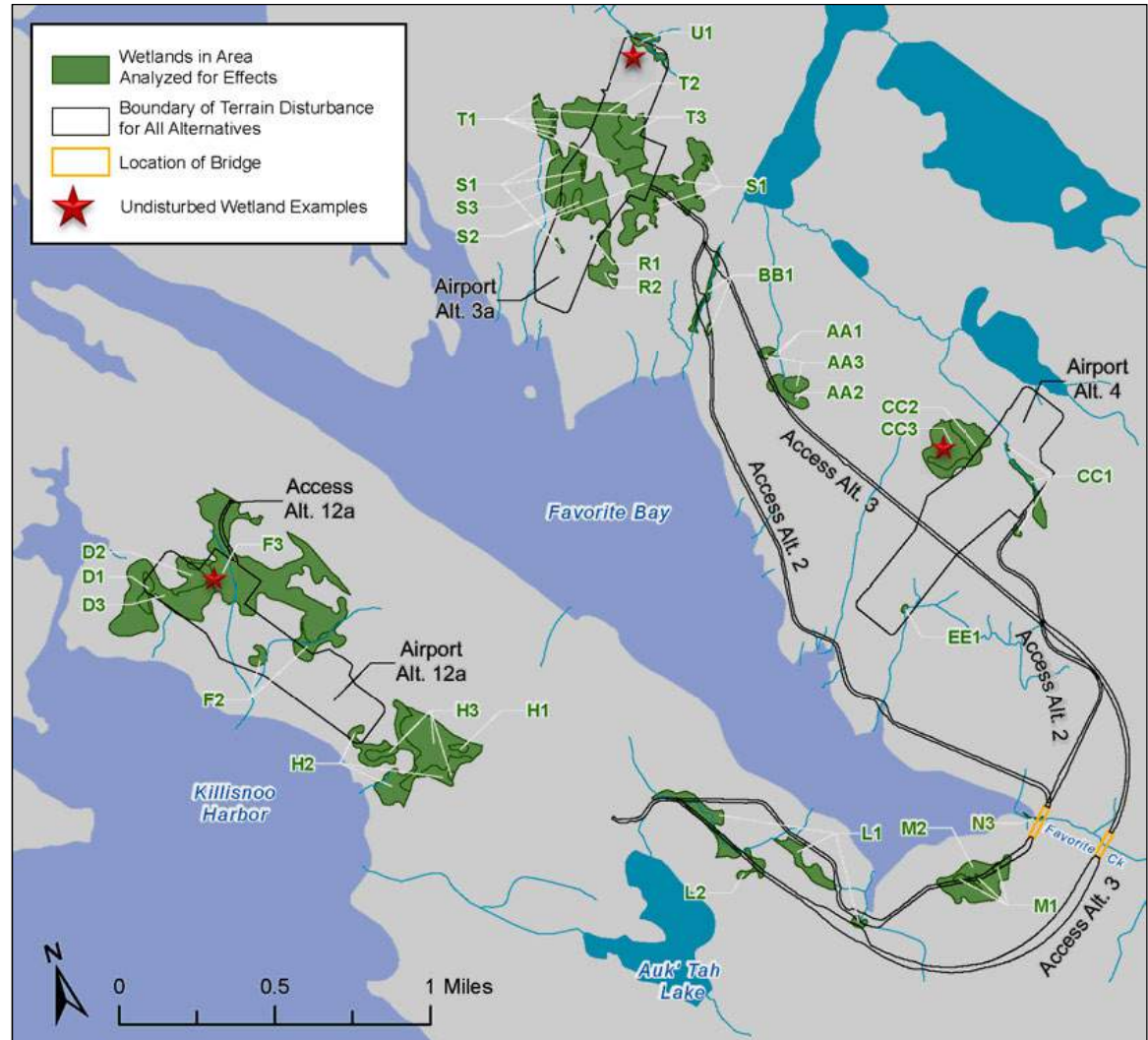


Figure WT4. Wetlands in the area analyzed for effects.



Table WT1. Wetland Acreages and Functional Assessment Scores

Wetland Identification (ID)	Acres	Groundwater Recharge	Groundwater Discharge/ Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary Sites
D1	2.20	H	M	L	L	L	M	VL	L	L	H	L	L
D2	4.86	H	L	L	L	L	M	VL	L	H	H	H	L
D3	22.95	H	H	L	L	M	M	VL	L	H	H	M	L
F2	6.32	M	H	L	L	H	H	M	L	H	H	H	L
F3	49.07	H	H	L	L	H	H	M	L	H	H	M	L
H1	0.73	H	L	L	L	L	M	VL	L	L	H	L	L
H2	17.25	M	H	L	L	M	M	L	M	H	H	H	L
H3	18.97	H	M	L	L	L	M	VL	L	H	H	M	L
L1	13.62	H	H	L	L	H	H	H	L	L	H	H	L
L2	1.94	H	M	L	L	H	H	H	L	H	H	H	L
M1	1.29	H	M	L	L	L	M	VL	L	L	H	L	L
M2	12.77	H	M	L	L	L	M	VL	L	H	H	M	L
N3	3.83	H	H	L	H	NA	H	H	H	H	NA	H	L
R1	0.03	H	L	H	H	L	M	VL	L	L	L	L	L
R2	5.43	H	L	L	L	L	M	VL	L	H	M	H	L
S1	1.28	H	H	L	L	L	M	L	L	L	H	L	L
S2	25.16	M	H	L	L	L	M	VL	L	H	H	H	L
S3	18.76	H	M	H	H	L	H	VL	L	H	H	H	L
T1	0.75	H	H	L	L	L	H	VL	L	L	H	L	L
T2	18.28	H	L	L	L	L	M	VL	L	H	M	H	L
T3	9.62	H	H	L	L	M	M	VL	L	H	H	H	L
U1	2.75	H	H	L	L	M	H	M	L	L	H	L	L
AA1	0.16	H	H	L	L	M	M	L	L	L	H	L	L
AA2	3.54	H	M	L	L	M	M	VL	L	H	M	H	L
AA3	3.02	H	M	L	L	M	M	VL	L	H	H	H	L
BB1	2.33	H	H	L	L	M	M	H	M	H	H	H	L
CC1	3.51	H	H	L	L	M	H	M	L	L	H	L	L
CC2	9.49	M	M	L	L	L	M	VL	L	H	M	H	L
CC3	7.69	H	L	H	H	L	M	VL	L	H	H	H	L
EE1	0.22	H	H	L	L	H	H	H	L	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.



102 The area originally studied for wetlands, including the location around Airport 12a with Access 12a, which is closest to
103 the Angoon population center and the existing road, is mostly undisturbed and difficult for humans to access. Field studies
104 conducted for this EIS confirm that the wetlands that would be affected by Airport 12a with Access 12a are in the same
105 pristine condition as the wetlands affected by Airports 3a and 4 and their associated access roads, which are located
106 almost entirely in the Admiralty Island National Monument and Kootznoowoo Wilderness Area. Figure WT5
107 demonstrates the undisturbed condition of those wetlands. The locations of these wetlands are shown in Figure WT4.
108 During the field inventory, the only evidence of disturbance in the vicinity of Airport 12a was a trail through the upland
109 area in the southern portion of the Airport 12a runway, and the vegetation clearing for the existing road's right-of-way.
110 Numerous informal foot trails occur in the Admiralty Island National Monument and Kootznoowoo Wilderness Area.
111 These trails cross through and around Airports 3a and 4 and their associated access roads. These foot trails are used by
112 residents to access locations in the Wilderness Area for subsistence.



Figure WT5. Examples of undisturbed wetland condition near all airport alternatives. See Figure WT4 for the locations of these wetlands.

113
114 Angoon residents commonly use wetlands to gather subsistence resources (the provisioning service of wetlands).
115 Additional information on the use of wetlands for provisioning can be found in section 4.13 Subsistence Resources and
116 Uses. When interviewed, Angoon residents said they generally use the areas within and surrounding each of the
117 alternatives for subsistence. Because of difficult terrain, these areas are accessed by foot where there are no trails or
118 existing roads.



119 Although Airports 3a and 4 would be located within the Kootznoowoo Wilderness Area and
120 Airport 12a would not, the quality and integrity of all wetlands in all areas are not differentiable.
121 Some of the wetlands around Airport 12a are easier to access because of an existing road, but
122 Angoon residents use the wetlands around Airports 3a and 4.

123 4.15.3. Project effects: How would the alternatives affect wetlands?

124 Based on the resource mapping conducted for this EIS, all action alternatives would affect
125 wetlands. Other non-wetland waters of the U.S. (such as intermittent and perennial streams) would
126 also be affected by all action alternatives, and these effects are evaluated in section 4.6.3 Aquatic
127 Habitats and Associated Species. The sections below provide a discussion of how effects to
128 wetlands were evaluated for this EIS.

129 4.15.3.1. How were the effects of the project alternatives on wetlands 130 determined?

131 4.15.3.1.1. The Actions

132 As described in section 4.1, the introduction to Chapter 4, all action alternatives would require
133 certain construction actions, and the effects from each of these actions vary for the different resources. For analysis of
134 effects to wetlands, the actions are considered as follows:

- 135 • Construction of the project elements of the airport: aircraft staging areas, passenger parking, perimeter road,
136 runway, taxiway, and cleared airfield grounds (which consist of grassed and leveled areas, fill slopes associated
137 with *impervious* paved surfaces, and earthworks related to water quality and drainage facilities such as vegetated
138 swales and ditches).
- 139 • Construction of the project elements of the access road: cut and fill to create the road base, drainage facilities,
140 rock catchments, shoulders, snow storage areas, utilities, driver recovery zones, and pavement. Less cut and more
141 fill might be needed in lower topographic positions to meet design standards for driver safety.
- 142 • Construction of both airport and access road: fill slopes, embankments, storm water management facilities (for
143 example, ditches and ponds), and other associated earthworks.

Sections in 4.16.3

4.15.3.1. How were the effects of the project alternatives on wetlands determined?

4.15.3.2. How was the significance of the potential effects from the alternatives determined?

4.15.3.3. What are the effects of the alternatives on wetlands?

Terms to Know

Impervious: The quality of not allowing water to pass through. Instead, water collects and can create runoff.

Terrain disturbance: As used in this section, the cutting and filling of the ground surface and underlying soil and/or bedrock as part of construction.



144 Of the many actions involved in construction of any of the action alternatives, the *terrain disturbance* involved in each
145 action is the primary cause of effects to wetlands. Locations of terrain disturbance were identified and quantified by
146 overlaying the locations of the action alternatives on the wetland map, revealing the locations of existing wetlands relative
147 to the limits of terrain disturbance for each alternative.

148 Other actions that also affect wetlands are as follows:

- 149 • Tree removal (without terrain disturbance) for aviation easements and access road rights-of-way
- 150 • Creation of impervious surfaces
- 151 • Increased human access and activity in the area as a result of new roads

152 4.15.3.1.2. The Effects

153 Effects are analyzed in two main groups: 1) direct effects, which in this analysis are those effects within the boundaries of
154 terrain disturbance, and 2) indirect effects, which are those effects outside the limits of terrain disturbance. Both direct and
155 indirect effects can occur during construction, in the short term, and in the long term, and these are specified where
156 appropriate.

157 *Direct Effects*

158 Terrain disturbance results in the discharge of fill material into wetlands, thereby converting them into uplands. All wetlands
159 functions and services are lost. This loss would be offset through compensatory wetland mitigation (see Chapter 6:
160 Mitigation).

161 *Indirect Effects*

162 Terrain disturbance also causes indirect effects in many ways, as do tree removal (without terrain disturbance), creation of
163 impervious surfaces, introduction of noxious and invasive weeds, and increased human access and activity. These indirect
164 effects include:

- 165 • Severing wetland hydrology and fragmenting formerly connected wetlands, which can impair all remaining wetland
166 functions and services. The remaining wetlands are diminished in size and/or disconnected from one another.



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- Increasing hydrology (in other words, storing storm water). Functions such as surface hydrologic control and groundwater discharge/lateral flow are modified or impaired.
 - Increasing sedimentation and siltation from high-flow-rate storm water discharges (in other words, flows that exceed established standards). Functions such as sediment retention, nutrient export, and erosion sensitivity can be impaired.
 - Impairing functions such as fish and wildlife habitat and nutrient export.
 - Altering vegetation communities and therefore the character of habitats for wildlife. These effects are discussed in section 4.5.1 Terrestrial Habitats and Associated Species.
 - Increasing the potential for fuel spills, hydraulic fluid leaks, construction equipment exhaust, erosion, and discharges of turbid water that may occur during construction, in the short term, and in the long term. Such effects are typically rectified or mitigated on-site during and after construction. Regarding construction effects, contractors would be required to comply with all applicable federal, state, and local laws and regulations, including the guidance contained in FAA Advisory Circular 150/5370-10F, *Standards for Specifying Construction of Airports*. Prior to construction, the contractor would also be required to prepare an Erosion and Sediment Control Plan and a Storm Water Pollution Prevention Plan to minimize construction effects (see Chapter 7: Mitigation). Regarding short-term and long-term effects, best management practices would be implemented. Untreated water from unstabilized soil or impervious surfaces would be prevented from running off into adjacent wetlands as per required design specifications. However, during large storms where those specifications are exceeded, higher storm water flows may discharge into wetlands, resulting in periodic indirect effects associated with the greater volume of water and higher flow velocities.

186 **4.15.3.2. How was the significance of the potential effects from the alternatives determined?**

187 FAA Orders 1050.1E (FAA 2004) and 5050.4B (FAA 2006) identify the thresholds for significant effects on wetlands
188 (see section 4.1, the introduction to Chapter 4, for more on significance thresholds). According to FAA Order 5050.4B,
189 these thresholds would be exceeded if any of the following were to happen:

- 190
- 191
- 192
- 193
1. The action would adversely affect the function of a wetland to protect the quality or quantity of municipal water supplies, including sole source, potable water aquifers.
 2. The action would substantially alter the hydrology needed to sustain the functions and services of the affected wetland or any wetlands to which it is connected.



- 194 3. The action would substantially reduce the affected wetland's ability to retain floodwaters or storm-associated runoff,
195 thereby threatening public health, safety, and/or welfare (this includes cultural, recreational, and scientific resources
196 important to the public, or property).
- 197 4. The action would adversely affect the maintenance of natural systems that support wildlife and fish habitat, and/or
198 economically important timber, food, or fiber resources in the affected or surrounding wetlands.
- 199 5. The action would promote development of secondary activities or services that would affect the resources
200 mentioned above.
- 201 6. The action would be inconsistent with applicable state wetland strategies.

202 **4.15.3.3. What are the effects of the alternatives on wetlands?**

203 The magnitude of many direct and indirect project effects on wetlands varies by alternative. The combination of airport
204 and access road footprint is unique to each action alternative; this section describes the effects associated with each.

205 **4.15.3.3.1. No Action Alternative**

206 Under the no action alternative, no new airport or access road construction would occur. Wetlands in the area analyzed for
207 effects would remain undisturbed. No direct or indirect effects to wetlands would occur, and existing wetland functions
208 and services would remain unchanged.

209 **4.15.3.3.2. Airport 3a with Access 2**

210 *Direct Effects*

211 This airport and access alternative would result in 42.00 acres of direct long-term loss of wetlands as a result of terrain
212 disturbance and construction of impervious surfaces (see [Figure WT6](#) and [Table WT2](#)).

213 Construction activities for Airport 3a would fill and convert to uplands portions of Wetland IDs R1, R2, S1, S2, S3, T1,
214 T2, T3, and U1. Most of this fill (30.02 acres of wetlands) would be associated with leveling the terrain for the cleared
215 airfield grounds, and 8.23 acres of filled wetlands would be associated with impervious surfaces such as the runway,
216 taxiway, perimeter road, aircraft staging area, and passenger parking.



217 Construction activities for Access 2 would fill and convert to uplands portions of Wetland IDs L1, M1, M2, T2, and BB1
218 for a total of 3.75 acres of wetlands filled. The construction of Access 2 would require temporary and permanent bridges
219 over Favorite Creek, but neither bridge would require terrain disturbance within wetlands and would be constructed above
220 ordinary high water.

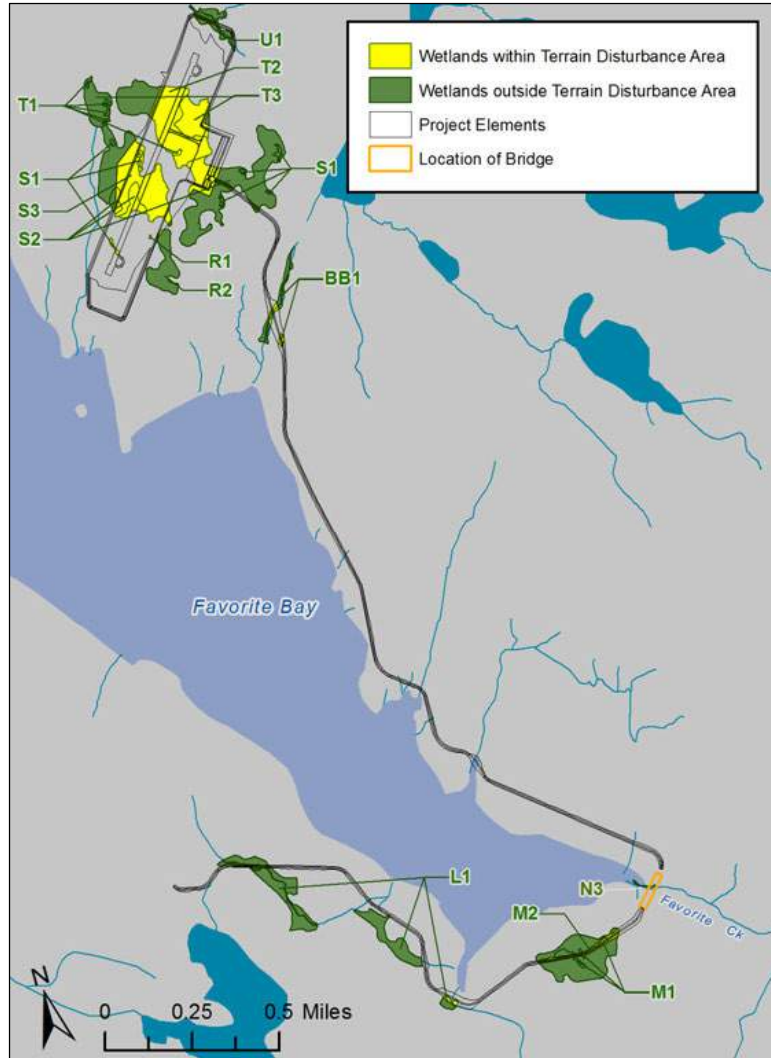


Table WT2. Acres of Terrain Disturbance by Project Element for Airport 3a with Access 2

Wetland		Project Element								Total Direct Effects (acres)
		Access Road		Airport						
ID	Size (acres)	Impervious (acres)	Non-impervious (acres)	Impervious Aircraft Staging Area (acres)	Impervious Passenger Parking (acres)	Impervious Perimeter Road (acres)	Impervious Runway (acres)	Impervious Taxiway (acres)	Cleared Airfield Grounds (acres)	
L1	13.62	0.27	0.50	-	-	-	-	-	-	0.77
M1	1.29	0.16	0.32	-	-	-	-	-	-	0.48
M2	12.77	0.45	0.90	-	-	-	-	-	-	1.35
N3	3.83	-	-	-	-	-	-	-	-	-
R1	0.03	-	-	-	-	-	-	-	0.03	0.03
R2	5.43	-	-	-	-	0.02	-	-	0.09	0.11
S1	1.28	-	-	-	-	0.00	0.08	-	0.42	0.50
S2	25.16	0.22	0.33	1.84	0.28	0.50	0.37	-	3.75	7.29
S3	18.76	-	-	-	-	0.46	0.68	-	11.19	12.33
T1	0.75	-	-	-	-	-	-	-	0.16	0.16
T2	18.28	-	-	1.13	-	0.23	1.57	0.44	9.09	12.46
T3	9.62	-	-	0.16	-	0.22	-	0.04	4.97	5.39
U1	2.75	-	-	-	-	0.21	-	-	0.32	0.53
BB1	2.33	0.10	0.50	-	-	-	-	-	-	0.60
Total	115.90	1.20	2.55	3.13	0.28	1.64	2.70	0.48	30.02	42.00

Note: Area of S1 wetland within impervious perimeter road is 0.001 acre.

221

222 **Figure WT6.** Locations of wetlands affected by Airport 3a
223 with Access 2.



224 This alternative would fill wetlands and therefore remove their functions and services. Table WT3 shows wetland
 225 functions that would be potentially lost when wetlands are converted to uplands

Table WT3. Summary of Directly Affected Wetland Functions Under Airport 3a with Access 2

Wetland Identification (ID)	Existing Acres	Acres Converted to Upland	Groundwater Recharge	Groundwater Discharge/ Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary
L1	13.62	0.77	H	H	L	L	H	H	H	L	L	H	H	L
M1	1.29	0.48	H	M	L	L	L	M	VL	L	L	H	L	L
M2	12.77	1.35	H	M	L	L	L	M	VL	L	H	H	M	L
R1	0.03	0.03	H	L	H	H	L	M	VL	L	L	L	L	L
R2	5.43	0.11	H	L	L	L	L	M	VL	L	H	M	H	L
S1	1.28	0.50	H	H	L	L	L	M	L	L	L	H	L	L
S2	25.16	7.29	M	H	L	L	L	M	VL	L	H	H	H	L
S3	18.76	12.33	H	M	H	H	L	H	VL	L	H	H	H	L
T1	0.75	0.16	H	H	L	L	L	H	VL	L	L	H	L	L
T2	18.28	12.46	H	L	L	L	L	M	VL	L	H	M	H	L
T3	9.62	5.39	H	H	L	L	M	M	VL	L	H	H	H	L
U1	2.75	0.53	H	H	L	L	M	H	M	L	L	H	L	L
BB1	2.33	0.60	H	H	L	L	M	M	H	M	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.

226 **Indirect Effects**

227 Wetlands S2, S3, T1, T2, and T3 would be divided, leaving fragmented wildlife habitat on the east and west sides of the airport.
 228 However, these wetlands were rated as having low potential to provide the function of fish habitat and wildlife support during
 229 the functional assessment. Wetland U1 is adjacent to a stream and would be partially within the terrain disturbance limits for the
 230 airport perimeter road. Indirect effects due to storm water runoff and introduction of weeds could occur, but would be



231 minimized because the perimeter road would only affect a small edge of the wetland. The stream corridor would remain intact
232 such that the riparian area would continue to provide functions important to fish and habitat for wildlife.

233 The temporary and permanent bridges required for Access 2 could result in indirect effects to wetlands near Favorite
234 Creek. Runoff from the bridges could enter the wetlands during rainfall events; however, the bridge would be designed to
235 control runoff and minimize water quality effects. Temporary and permanent bridges would create new areas of shade on
236 the creek. This shading could result in wetlands being colonized by shade-tolerant plant species, but the wetlands are
237 otherwise expected to be unaffected.

238 As discussed in section 4.13 Subsistence Uses and Resources, Angoon residents currently use the entire area around this
239 alternative for wetlands-based provisioning, accessing this area by crossing Favorite Bay in a boat and walking along
240 existing informal trails. Therefore, under this alternative, there would be no increase in the number of acres available for
241 subsistence use but would increase the amount of subsistence harvest because a road would make both access to the area
242 and transport of harvested materials more convenient.

243 Regulating services for water storage and water temperature would not be affected because none of the action alternatives
244 would cause flooding or would discharge temperature-modified water in downstream populated areas. The water storage
245 and purification regulating service would not be affected because the community of Angoon receives its water from
246 Auk'Tah Lake, which is located on the south side of Favorite Bay. The wetlands that exist in the vicinity of all action
247 alternatives have no surface flow into Auk'Tah Lake, nor are they located in a recharge area for the lake.

248 This alternative would affect habitat through the conversion of the natural environment to an airport and access road;
249 however, the area of habitat removal would be extremely small relative to the remaining habitat in the area. This
250 alternative would affect 42 acres of wetland wildlife habitat. Further discussion on effects to wildlife habitat can be found
251 in section 4.5 Biological Resources and its subsections. Services associated with plants, wildlife, and nutrient cycling
252 would continue to be abundantly available under this alternative.

253 Public use and recognition of the wetlands under this alternative would be expected to increase from current levels.
254 Construction of Access 2 would potentially create more opportunity for humans to interact with wetlands because it would
255 be easier to access them from the road rather than by boat and informal trails; however, such interaction would be low
256 intensity (in other words, only foot traffic off of the road), and no direct or indirect effects to wetlands would be
257 anticipated from this increase.



258 ***National Monument and Wilderness Lands***

259 This alternative would result in 42.00 acres of wetlands directly affected within the Admiralty Island National Monument
260 and Kootznoowoo Wilderness Area. The U.S. Army Corps of Engineers regulates jurisdictional wetlands regardless of
261 whether they occur on Monument or Wilderness lands; these designations mean that the land has additional protections
262 established by the President of the United States and Congress. Uses of Wilderness lands are typically restricted to
263 scientific study and non-mechanized recreation; however, land in Alaska can be removed from designated Wilderness
264 through the Alaska National Interest Lands Conservation Act (ANILCA Title XI) process. The process would need to be
265 completed and approval would need to be received from the President of the United States and Congress before an airport
266 could be constructed. Successful ANILCA review would allow the U.S. Army Corps of Engineers to proceed with Section
267 404 wetland fill permitting including compensatory wetland mitigation for unavoidable impacts.

268 ***Comparison to the No Action Alternative***

269 Airport 3a with Access 2 would convert 42.00 acres of palustrine wetlands to uplands. Under the no action alternative,
270 there would be no new construction and therefore no changes to the existing wetland acreage or wetland functions and
271 services.

272 ***Significance Determination***

273 According to the significance criteria described above in [section 4.15.3.2](#), the direct wetland effects from Airport 3a with
274 Access 2 would be considered significant. It is assumed that the terrain disturbance in wetland areas would convert those
275 wetlands to uplands. This is a substantial hydrology modification that would result in the loss of most wetland functions
276 and services in the affected areas. Due to the relatively high abundance of pristine wetlands in the surrounding landscape,
277 Airport 3a with Access 2 would not likely adversely affect the maintenance of natural systems that support fish and
278 wildlife habitat or economically important resources in the indirectly affected or surrounding wetlands. Long-term direct
279 wetland effects would be offset through compensatory wetland mitigation.

280



281 **4.15.3.3.3. Airport 3a with Access 3**

282 *Direct Effects*

283 Airport 3a with Access 3 would result in 41.18 acres of direct long-term loss of wetlands as a result of terrain disturbance
284 and construction of impervious surfaces (see [Figure WT7](#) and [Table WT4](#)).

285 Construction activities for Airport 3a would fill and convert to uplands portions of Wetland IDs R1, R2, S1, S2, S3, T1,
286 T2, T3, and U1. Most of this fill (30.02 acres of wetlands) would be associated with leveling the terrain for the cleared
287 airfield grounds, and 8.23 acres of filled wetlands would be associated with impervious surfaces such as the runway,
288 taxiway, perimeter road, aircraft staging area, and passenger parking.

289 Construction activities related to Access 3, which follows a different route than that of Access 2, would fill and convert to
290 upland Wetland ID T2 and small segments or narrow edges of Wetland IDs L1, L2, AA2, AA3, and BB1 (a total of 2.93
291 acres).

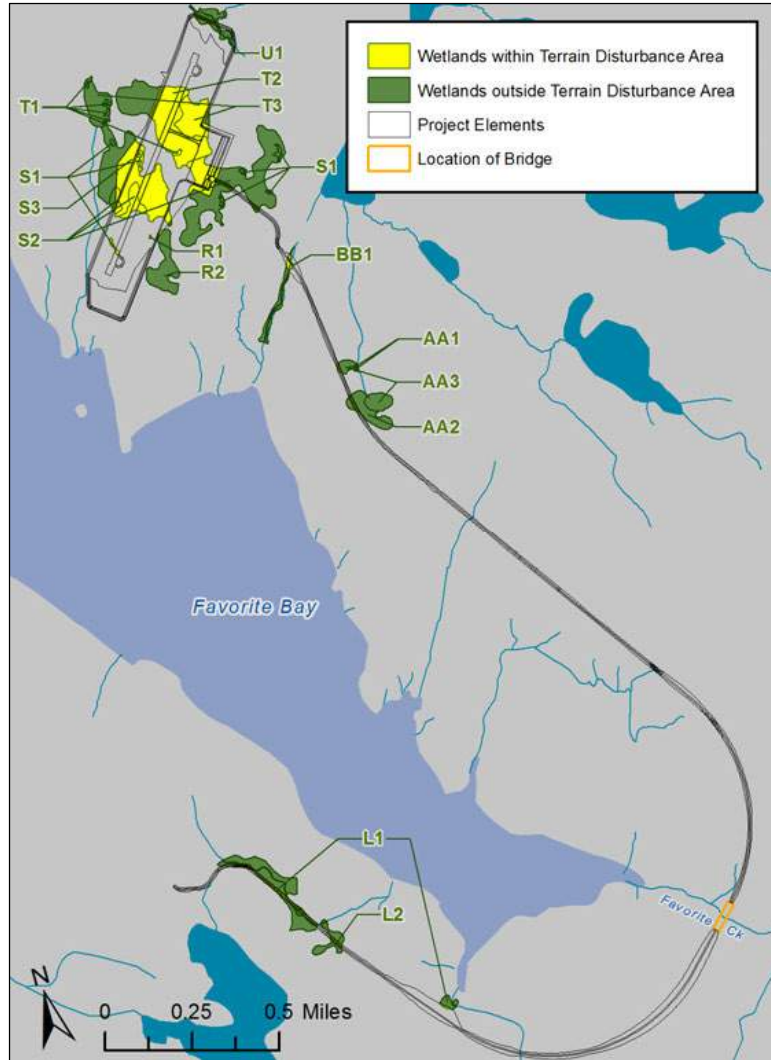


Table WT4. Acres of Terrain Disturbance by Project Element for Airport 3a with Access 3

Wetland		Project Element								Total Direct Effects (acres)
		Access Road		Airport						
ID	Size (acres)	Impervious (acres)	Non-impervious (acres)	Impervious Aircraft Staging Area (acres)	Impervious Passenger Parking (acres)	Impervious Perimeter Road (acres)	Impervious Runway (acres)	Impervious Taxiway (acres)	Cleared Airfield Grounds (acres)	
L1	13.62	0.60	0.77	-	-	-	-	-	-	1.37
L2	1.94	0.10	0.18	-	-	-	-	-	-	0.28
R1	0.03	-	-	-	-	-	-	-	0.03	0.03
R2	5.43	-	-	-	-	0.02	-	-	0.09	0.11
S1	1.28	-	-	-	-	0.00	0.08	-	0.42	0.50
S2	25.16	0.22	0.33	1.84	0.28	0.50	0.37	-	3.75	7.29
S3	18.76	-	-	-	-	0.46	0.68	-	11.19	12.33
T1	0.75	-	-	-	-	-	-	-	0.16	0.16
T2	18.28	-	-	1.13	-	0.23	1.57	0.44	9.09	12.46
T3	9.62	-	-	0.16	-	0.22	-	0.04	4.97	5.39
U1	2.75	-	-	-	-	0.21	-	-	0.32	0.53
AA1	0.16	-	-	-	-	-	-	-	-	-
AA2	3.54	0.13	0.19	-	-	-	-	-	-	0.32
AA3	3.02	0.05	0.05	-	-	-	-	-	-	0.10
BB1	2.33	0.05	0.26	-	-	-	-	-	-	0.31
Total	106.67	1.15	1.78	3.13	0.28	1.64	2.70	0.48	30.02	41.18

Note: Area of S1 wetland within impervious perimeter road is 0.001 acre.

292
 293
 294
Figure WT7. Locations of wetlands affected by Airport 3a with Access 3.



295 This alternative would fill wetlands and therefore remove their functions and services. Table WT5 shows wetland
 296 functions that would potentially be lost when wetlands are converted to uplands.

Table WT5. Summary of Directly Affected Wetland Functions Under Airport 3a with Access 3

Wetland Identification (ID)	Existing Acres	Acres Converted to Upland	Groundwater Recharge	Groundwater Discharge/Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope beneficiary
L1	13.62	1.37	H	H	L	L	H	H	H	L	L	H	H	L
L2	1.94	0.28	H	M	L	L	H	H	H	L	H	H	H	L
R1	0.03	0.03	H	L	H	H	L	M	VL	L	L	L	L	L
R2	5.43	0.11	H	L	L	L	L	M	VL	L	H	M	H	L
S1	1.28	0.50	H	H	L	L	L	M	L	L	L	H	L	L
S2	25.16	7.29	M	H	L	L	L	M	VL	L	H	H	H	L
S3	18.76	12.33	H	M	H	H	L	H	VL	L	H	H	H	L
T1	0.75	0.16	H	H	L	L	L	H	VL	L	L	H	L	L
T2	18.28	12.46	H	L	L	L	L	M	VL	L	H	M	H	L
T3	9.62	5.39	H	H	L	L	M	M	VL	L	H	H	H	L
U1	2.75	0.53	H	H	L	L	M	H	M	L	L	H	L	L
AA2	3.54	0.32	H	M	L	L	M	M	VL	L	H	M	H	L
AA3	3.02	0.10	H	M	L	L	M	M	VL	L	H	H	H	L
BB1	2.33	0.31	H	H	L	L	M	M	H	M	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.

297

298 **Indirect Effects**

299 Indirect effects from construction of Airport 3a are the same as described above under Airport 3a with Access 2. Indirect
 300 effects from construction of Access 3 are similar to those of Access 2, with the exception of Wetland IDs M1 and M2.
 301 Indirect effects at Wetland IDs AA1/AA2 and AA3 would occur along narrow edges, which would be expected to yield



302 minimal indirect effects to wildlife habitat and water quality. The bridge crossing Favorite Creek for Access 3 would be
303 located farther upstream than the bridge location for Access 2. No wetlands were mapped at the Access 3 bridge crossing.

304 As described in section 4.15.3.3.2, the conversion of wetlands to uplands associated with Airport 3a with Access 3 would
305 not result in the contamination or reduction of local water supplies or the capability to recharge that supply.

306 Although Angoon residents currently access areas north of Favorite Bay by crossing the bay in a boat and walking along
307 existing informal trails, Access 3 would offer increased access to some areas that are currently farther from the bay than
308 people tend to walk. Access 3 would increase the number of acres available for wetlands-related provisioning by XX acres
309 and would increase the amount of subsistence harvest because a road would make both access to the area and transport of
310 harvested materials more convenient.

311 As with Airport 3a with Access 2, regulating services for water storage and water temperature would not be affected.

312 Airport 3a with Access 3 would affect 41.18 acres of wetland wildlife habitat. Further discussion on effects to wildlife
313 habitat can be found in section 4.5 Biological Resources and its subsections. Services associated with plants, wildlife, and
314 nutrient cycling would remain abundantly available under this alternative.

315 As with Access 2, construction of Access 3 would potentially create more opportunity for public use and recognition of
316 wetlands (by way of more opportunity for humans to interact with wetlands); however, such interaction would be low
317 intensity (in other words, only foot traffic off the road), and no direct or indirect effects to wetlands would be anticipated
318 from this increase.

319 *National Monument and Wilderness Lands*

320 As with Airport 3a with Access 2, the ANILCA process would need to be completed before the U.S. Army Corps of
321 Engineers could proceed with Section 404 wetland fill permitting including compensatory wetland mitigation for
322 unavoidable impacts. This alternative would result in 41.18 acres of wetlands directly affected within the Admiralty Island
323 National Monument and Kootznoowoo Wilderness Area.

324 *Comparison to the No Action Alternative*

325 Airport 3a with Access 3 would convert 41.18 acres of palustrine wetlands to uplands. Under the no action alternative, there
326 would be no new construction and therefore no changes to the existing wetland acreage or wetland functions and services.



327 ***Significance Determination***

328 According to the significance criteria described above in section 4.15.3.2, the direct wetland effects from Airport 3a with
329 Access 3 would be considered significant. It is assumed that the terrain disturbance in wetland areas would convert those
330 wetlands to uplands. This is a substantial hydrology modification that would result in the loss of most wetland functions
331 and services in the affected areas. Due to the relatively high abundance of pristine wetlands in the landscape surrounding
332 the analysis area, Airport 3a with Access 3 would not likely adversely affect the maintenance of natural systems that
333 support fish and wildlife habitat or economically important resources in the indirectly affected or surrounding wetlands.
334 Long-term direct wetland effects would be offset through compensatory wetland mitigation.

335 **4.15.3.3.4. Airport 4 with Access 2**

336 ***Direct Effects***

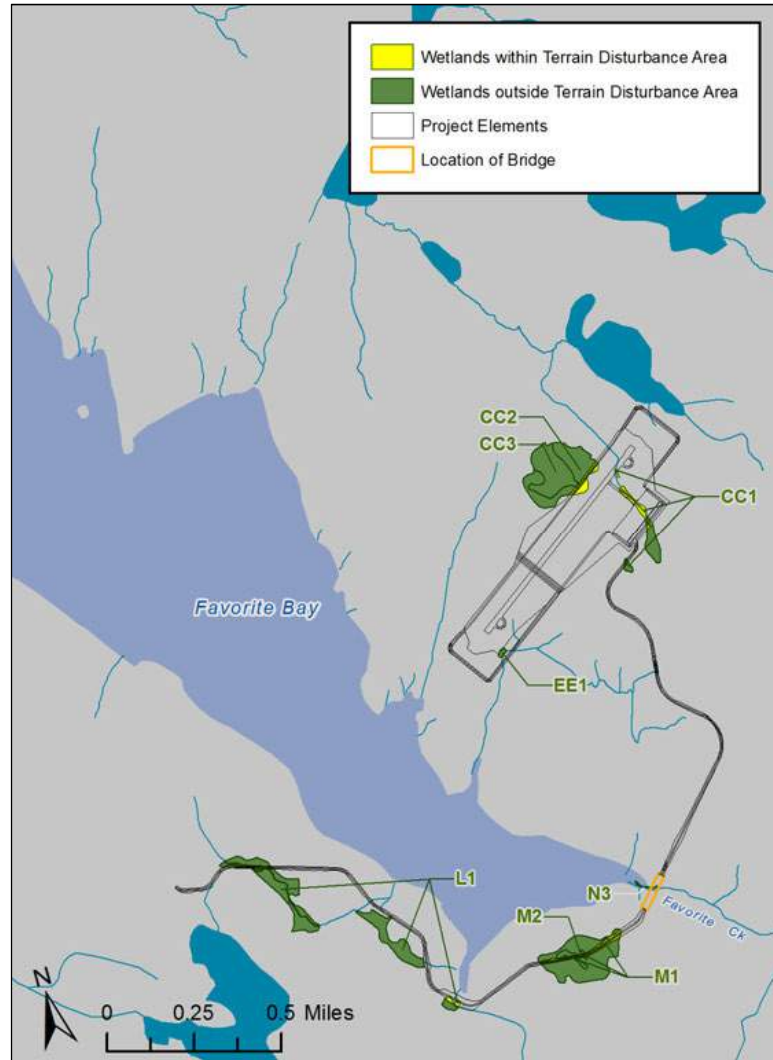
337 This airport and access alternative would result in 5.25 acres of direct long-term loss of wetlands from terrain disturbance
338 and construction of impervious surfaces (see Figure WT8 and Table WT6).

339 Construction activities for Airport 4 would fill and convert portions of Wetland IDs CC1, CC2, CC3, and EE1 to uplands.
340 A portion of this fill (1.50 acres of wetlands) would be associated with leveling the terrain for the cleared airfield grounds,
341 and 1.06 acres of filled wetlands would be associated with the construction of impervious surfaces such as the runway,
342 taxiway, perimeter road, aircraft staging area, and passenger parking.

343 Construction activities for Access 2 would fill and convert portions of Wetland IDs L1, M1, M2, and CC1 to uplands for a
344 total of 2.70 acres of wetlands filled. The construction of Access 2 would require temporary and permanent bridges over
345 Favorite Creek, but neither bridge would require terrain disturbance within wetlands and both would be constructed above
346 ordinary high water.



347



348

349 **Figure WT8.** Locations of wetlands affected by Airport 4 with
350 Access 2.

23

Table WT6. Acres of Terrain Disturbance by Project Element for Airport 4 with Access 2

Wetland ID	Wetland Size (acres)	Project Element								Total Direct Effects (acres)
		Access Road		Airport						
		Impervious (acres)	Non-impervious (acres)	Impervious Aircraft Staging Area (acres)	Impervious Passenger Parking (acres)	Impervious Perimeter Road (acres)	Impervious Runway (acres)	Impervious Taxiway (acres)	Cleared Airfield Grounds (acres)	
L1	13.62	0.27	0.50	-	-	-	-	-	-	0.77
M1	1.29	0.16	0.32	-	-	-	-	-	-	0.48
M2	12.77	0.45	0.90	-	-	-	-	-	-	1.35
N3	3.83	-	-	-	-	-	-	-	-	-
CC1	3.51	0.04	0.05	0.45	0.04	0.04	0.03	0.24	0.42	1.31
CC2	9.49	-	-	-	-	0.26	-	-	1.05	1.31
CC3	7.69	-	-	-	-	-	-	-	0.01	0.01
EE1	0.22	-	-	-	-	-	-	-	0.02	0.02
Total	52.42	0.92	1.77	0.45	0.04	0.30	0.03	0.24	1.50	5.25



351 This alternative would fill wetlands and therefore remove their functions and services. Table WT7 shows wetland
 352 functions that would be potentially lost when wetlands are converted to uplands.

Table WT7. Summary of Directly Affected Wetland Functions Under Airport 4 with Access 2

Wetland Identification (ID)	Acres	Acres Converted to Upland	Groundwater Recharge	Groundwater Discharge/ Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary Sites
L1	13.62	0.77	H	H	L	L	H	H	H	L	L	H	H	L
M1	1.29	0.48	H	M	L	L	L	M	VL	L	L	H	L	L
M2	12.77	1.35	H	M	L	L	L	M	VL	L	H	H	M	L
CC1	3.51	1.31	H	H	L	L	M	H	M	L	L	H	L	L
CC2	9.49	1.31	M	M	L	L	L	M	VL	L	H	M	H	L
CC3	7.69	0.01	H	L	H	H	L	M	VL	L	H	H	H	L
EE1	0.22	0.02	H	H	L	L	H	H	H	L	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.

353 **Indirect Effects**

354 Construction of Airport 4 could indirectly affect the functions and services of adjacent wetlands. Wildlife activity might
 355 be indirectly affected by the construction of the airport at Wetland IDs CC1 and EE1; however, wildlife corridors would
 356 be largely left intact in downslope areas and these wetlands were rated as having low potential to provide the function of
 357 fish habitat and wildlife support.

358 The temporary and permanent bridges required for Access 2 could result in indirect effects to wetlands near Favorite
 359 Creek. Runoff from the bridges could enter the wetlands during rainfall events; however, the bridge would be designed to
 360 control runoff and minimize water quality effects. Temporary and permanent bridges would create new areas of shade on
 361 the creek. This shading could result in wetlands being colonized by shade-tolerant plant species, but the wetlands are
 362 otherwise expected to be unaffected.



363 As described in section 4.15.3.3.2, the conversion of wetlands to uplands associated with Airport 4 with Access 2 would
364 not result in the contamination or reduction of local water supplies or the capability to recharge that supply.

365 As discussed in section 4.13 Subsistence Resources and Uses, Angoon residents currently use the area around the
366 alternative for wetlands-based provisioning, accessing this area by crossing Favorite Bay in a boat and walking along
367 existing informal trails. This alternative could potentially increase the number of acres available for subsistence use by
368 XX acres and would increase the amount of subsistence harvest because a road would make both access to the area and
369 transport of harvested materials more convenient.

370 As with Airport 3a with Access 2, regulating services for water storage and water temperature would not be affected.

371 Airport 4 with Access 2 would affect habitat by virtue of the conversion of the natural environment to an airport and
372 access road; however, the area of habitat effect would be extremely low relative to the remaining habitat in the area. A
373 total of 5.25 acres of wetland wildlife habitat would be converted under this alternative. Further discussion on effects to
374 wildlife habitat can be found in section 4.5 Biological Resources and its subsections. Services associated with plants,
375 wildlife, and nutrient cycling would remain abundantly available under this alternative.

376 Public use and recognition of the wetlands under this alternative would be expected to increase from current levels.
377 Construction of Access 2 would potentially create more opportunity for humans to interact with wetlands because it would
378 be easier to access them from the road rather than by boat and trails; however, such interaction would be low intensity (in
379 other words, only foot traffic off the road), and no direct or indirect effects to wetlands would be anticipated from this
380 increase.

381 *National Monument and Wilderness Lands*

382 As with Airport 3a with Access 2, the ANILCA process would need to be completed before the U.S. Army Corps of
383 Engineers could proceed with Section 404 wetland fill permitting including compensatory wetland mitigation for
384 unavoidable impacts. This alternative would result in 5.25 acres of wetlands directly affected within the Admiralty Island
385 National Monument and Kootznoowoo Wilderness Area.



386 ***Comparison to the No Action Alternative***

387 Airport 4 with Access 2 would convert 5.25 acres of palustrine wetlands to uplands. Under the no action alternative, there
388 would be no new construction and therefore no changes to the existing wetland acreage or wetland functions and services.

389 ***Significance Determination***

390 According to the significance criteria described above in section 4.15.3.2, the direct wetland effects from Airport 4 with
391 Access 2 would be considered significant. The terrain disturbance in wetland areas is assumed to convert those wetlands
392 to uplands. This is a substantial hydrology modification that would result in the loss of most wetland functions and
393 services in the affected areas. Due to the relatively high abundance of pristine wetlands in the landscape surrounding the
394 analysis area, Airport 4 with Access 2 would not likely adversely affect the maintenance of natural systems that support
395 fish and wildlife habitat or economically important resources in the indirectly affected or surrounding wetlands. Long-
396 term direct wetland effects would be offset through compensatory wetland mitigation.

397 **4.15.3.3.5. Airport 4 with Access 3**

398 ***Direct Effects***

399 Airport 4 with Access 3 would result in 4.30 acres of direct long-term loss of wetlands from terrain disturbance and
400 construction of impervious surfaces (see Figure WT9 and Table WT8).

401 Construction activities for Airport 4 would fill and convert to uplands portions of Wetland IDs CC1, CC2, CC3, and EE1.
402 A portion of this fill (1.50 acres of wetlands) would be associated with leveling the terrain for the cleared airfield grounds,
403 and 1.06 acres of filled wetlands would be associated with the construction of impervious surfaces such as the runway,
404 taxiway, perimeter road, aircraft staging area, and passenger parking.

405 Construction activities related to Access 3 would fill and convert to uplands portions of Wetland IDs CC1, L1, and L2.

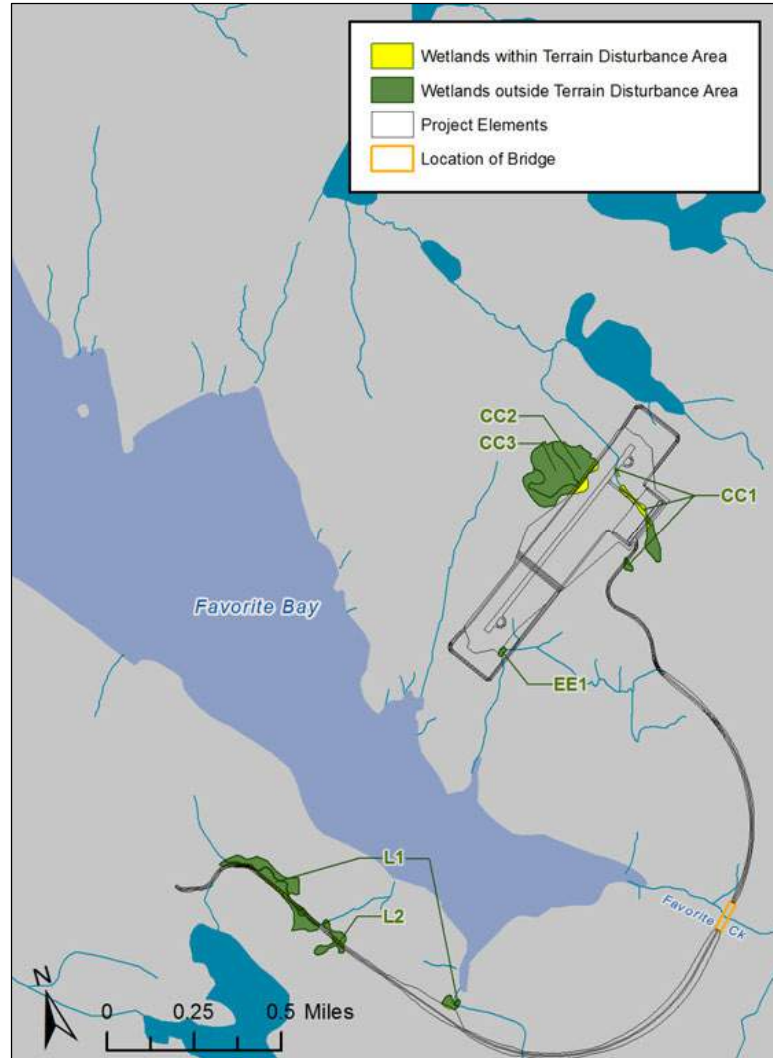


Table WT8. Acres of Terrain Disturbance by Project Element for Airport 4 with Access 3

Wetland ID	Size (acres)	Project Element								Total Direct Effects (acres)
		Access Road		Airport						
		Impervious (acres)	Non-impervious (acres)	Impervious Aircraft Staging Area (acres)	Impervious Passenger Parking (acres)	Impervious Perimeter Road (acres)	Impervious Runway (acres)	Impervious Taxiway (acres)	Cleared Airfield Grounds (acres)	
L1	13.62	0.60	0.77	–	–	–	–	–	–	1.37
L2	1.94	0.10	0.18	–	–	–	–	–	–	0.28
CC1	3.51	0.04	0.05	0.45	0.04	0.04	0.03	0.24	0.42	1.31
CC2	9.49	–	–	–	–	0.26	–	–	1.05	1.31
CC3	7.69	–	–	–	–	–	–	–	0.01	0.01
EE1	0.22	–	–	–	–	–	–	–	0.02	0.02
Total	36.47	0.74	1.00	0.45	0.04	0.30	0.03	0.24	1.50	4.30

406
407 **Figure WT9.** Locations of wetlands affected by Airport 4 with
408 Access 3.



409 This alternative would fill wetlands and therefore remove their functions and services. Table WT9 shows wetland
 410 functions that would be potentially lost when wetlands are converted to uplands.

Table WT9. Summary of Directly Affected Wetland Functions Under Airport 4 with Access 3

Wetland Identification (ID)	Acres	Acres Converted to Upland	Groundwater Recharge	Groundwater Discharge/Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary Sites
L1	13.62	1.37	H	H	L	L	H	H	H	L	L	H	H	L
L2	1.94	0.28	H	M	L	L	H	H	H	L	H	H	H	L
CC1	3.51	1.31	H	H	L	L	M	H	M	L	L	H	L	L
CC2	9.49	1.31	M	M	L	L	L	M	VL	L	H	M	H	L
CC3	7.69	0.01	H	L	H	H	L	M	VL	L	H	H	H	L
EE1	0.22	0.02	H	H	L	L	H	H	H	L	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.

411 **Indirect Effects**

412 Indirect effects from construction of Airport 4 are described above. Indirect effects from construction of Access 3 would
 413 be very similar to those for Access 2; however, no indirect effects would occur at Wetlands M1 and M2. Indirect effects at
 414 Wetlands L1, L2, and AA1/AA2 would occur along narrow edges, which would be expected to yield minimal indirect
 415 effects to wildlife habitat and water quality. The bridge crossing over Favorite Creek for Access 3 would be further
 416 upstream of the bridge location for Access 2. Because no wetlands are mapped at this location, no indirect wetland effects
 417 would be expected to occur for the bridges.

418 As described in section 4.15.3.3.2, the conversion of wetlands to uplands associated with Airport 4 with Access 3 would
 419 not result in the contamination or reduction of local water supplies or the capability to recharge that supply.



420 Although Angoon residents currently access areas north of Favorite Bay by crossing the bay in a boat and walking along
421 existing informal trails, Access 3 would offer increased access to some areas that are currently farther from the bay than
422 people tend to walk. Access 3 would increase the number of acres available for wetlands-related provisioning by XX acres
423 and would increase the amount of subsistence harvest in wetlands because a road would make both access to the area and
424 transport of harvested materials more convenient.

425 As with Airport 3a with Access 2, regulating services for water storage and water temperature would not be affected.

426 Airport 4 with Access 3 would affect 4.29 acres of wetland wildlife habitat. Further discussion on effects to wildlife
427 habitat can be found in section 4.5 Biological Resources and its subsections. Services associated with plants, wildlife, and
428 nutrient cycling would remain abundantly available under this alternative.

429 As with Access 2, construction of Access 3 would potentially create more opportunity for public use and recognition (by
430 way of more opportunity for humans to interact with wetlands); however, such interaction would be low intensity (in other
431 words, only foot traffic off the road), and no direct or indirect effects to wetlands would be anticipated from this increase.

432 *National Monument and Wilderness Lands*

433 As with Airport 3a with Access 2, the ANILCA process would need to be completed before the U.S. Army Corps of
434 Engineers could proceed with Section 404 wetland fill permitting including compensatory wetland mitigation for
435 unavoidable impacts. This alternative would result in 4.30 acres of wetlands directly affected within the Admiralty Island
436 National Monument and Kootznoowoo Wilderness Area.

437 *Comparison to the No Action Alternative*

438 Airport 4 with Access 3 would convert 4.29 acres of palustrine wetlands to uplands. Under the no action alternative, there
439 would be no new construction and therefore no changes to the existing wetland acreage or wetland functions and services.

440 *Significance Determination*

441 According to the significance criteria described in section 4.15.3.2, the direct wetland effects from Airport 4 with Access
442 3 would be considered significant. The terrain disturbance in wetland areas is assumed to convert those wetlands to
443 uplands. This is a substantial hydrology modification that would result in the loss of most wetland functions and services
444 in the affected areas. Due to the relatively high abundance of pristine wetlands in the landscape surrounding the analysis



445 area, Airport 4 with Access 3 would not likely adversely affect the maintenance of natural systems that support fish and
446 wildlife habitat or economically important resources in the indirectly affected or surrounding wetlands. Long-term direct
447 wetland effects would be offset through compensatory wetland mitigation.

448 **4.15.3.3.6. Airport 12a with Access 12a**

449 *Direct Effects*

450 This airport and access alternative would result in a total of 29.03 acres of direct long-term loss of wetlands as a result of
451 terrain disturbance and construction of impervious surfaces (see [Figure WT10](#) and [Table WT10](#)).

452 Construction activities for Airport 12a would fill and convert to uplands portions of Wetland IDs D1, D2, D3, F2, F3, and
453 H2. Most of this fill (18.19 acres of wetlands) would be associated with leveling the terrain for the cleared airfield
454 grounds, and 9.50 acres of filled wetlands would be associated with impervious surfaces such as the runway, taxiway,
455 perimeter road, aircraft staging area, and passenger parking.

456 Construction activities for Access 12a would fill and convert to uplands portions of Wetland ID F3 for a total of 1.34
457 acres of wetlands filled.

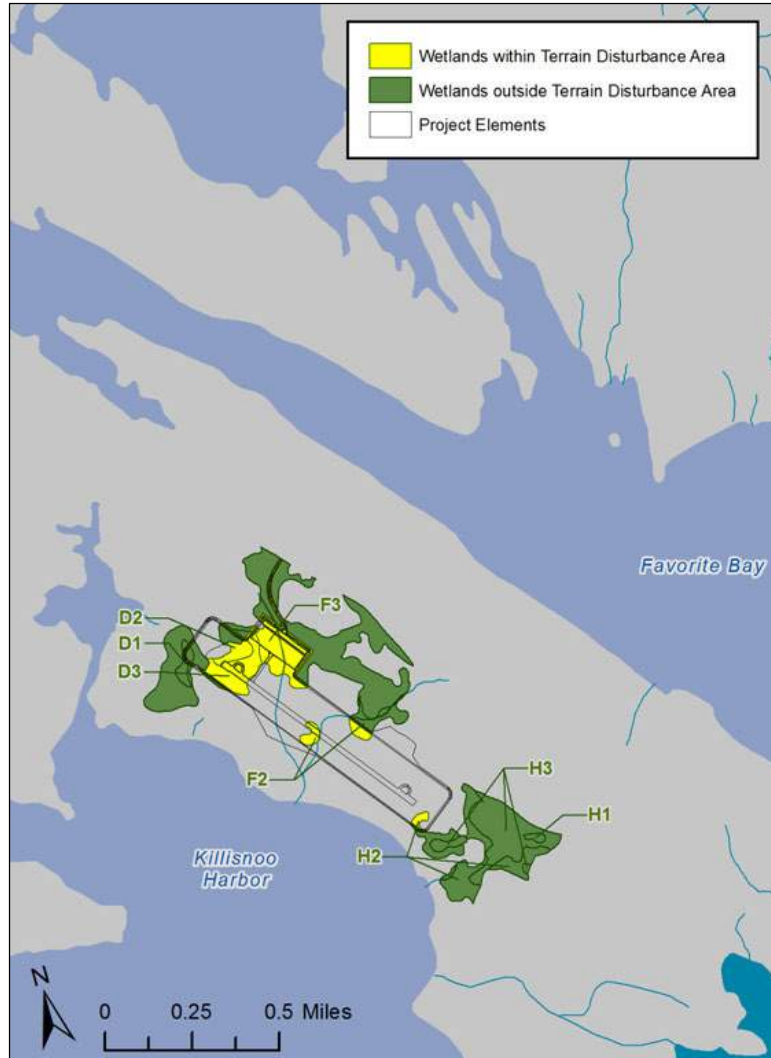


Table WT10. Acres of Terrain Disturbance by Project Element for Airport 12a with Access 12a

Wetland		Project Element								Total Direct Effects (acres)
		Access Road		Airport						
ID	Size (acres)	Impervious (acres)	Non-impervious (acres)	Impervious Aircraft Staging Area (acres)	Impervious Passenger Parking (acres)	Impervious Perimeter Road (acres)	Impervious Runway (acres)	Impervious Taxiway (acres)	Cleared Airfield Grounds (acres)	
D1	2.20	–	–	–	–	0.15	–	–	0.20	0.35
D2	4.86	–	–	0.05	–	0.18	0.01	–	2.82	3.06
D3	22.95	–	–	0.20	–	0.53	1.08	0.00	7.06	8.87
H1	0.73	–	–	–	–	–	–	–	–	–
H3	18.97	–	–	–	–	–	–	–	–	–
F2	6.32	–	–	–	–	0.20	0.39	–	2.44	3.03
F3	49.07	0.49	0.85	4.49	1.10	0.84	–	0.18	4.79	12.74
H2	17.25	–	–	–	–	0.10	–	–	0.88	0.98
Total	102.65	0.49	0.85	4.74	1.10	2.00	1.48	0.18	18.19	29.03

Note: Area of D3 wetland within impervious taxiway is 0.002 acre.

458

459 **Figure WT10.** Locations of wetlands affected by Airport 12a with
 460 Access 12a.



461 This alternative would fill wetlands and therefore remove their functions and services. Table WT11 shows wetland
 462 functions that would potentially be lost when wetlands are converted to uplands.

Table WT11. Summary of Directly Affected Wetland Functions Under Airport 12a with Access 12a

Wetland Identification (ID)	Acres	Acres Converted to Upland	Groundwater Recharge	Groundwater Discharge/Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary Sites
D1	2.20	0.35	H	M	L	L	L	M	VL	L	L	H	L	L
D2	4.86	3.06	H	L	L	L	L	M	VL	L	H	H	H	L
D3	22.95	8.87	H	H	L	L	M	M	VL	L	H	H	M	L
F2	6.32	3.03	M	H	L	L	H	H	M	L	H	H	H	L
F3	49.07	12.74	H	H	L	L	H	H	M	L	H	H	M	L
H2	17.25	0.98	M	H	L	L	M	M	L	M	H	H	H	L

Note: H = high, M = moderate, L = low, VL = very low. Source: SWCA 2010d.
 NA = not applicable. In this case wetland type is not captured in the rating category description.

463 **Indirect Effects**

464 Construction of this alternative could indirectly affect the functions and services of adjacent wetlands. Wetlands D2 and
 465 D3 would be divided, leaving fragmented wildlife habitat on the north and south sides of the airport. However, these
 466 wetlands were rated as having low or very low potential to provide the function of fish habitat and wildlife support during
 467 the functional assessment. Indirect effects due to storm water runoff and introduction of weeds could occur, but would be
 468 minimized because the perimeter road would only affect a small edge of the wetland. Wetlands H1 and H3 are adjacent to
 469 the southeast corner of the airport terrain disturbance limits. Indirect effects to these wetlands are not likely to occur due
 470 to their distance from the terrain disturbance limits and their upslope landscape position relative to the airport.

471 As described in section 4.15.3.3.2, the conversion of wetlands to uplands associated with Airport 12a with Access 12a
 472 would not result in the contamination or reduction of local water supplies or the capability to recharge that supply.



473 As discussed in section 4.13 Subsistence Resources and Uses, Angoon residents use the eastern part of the area around
474 Airport 12a with Access 12a for wetlands-based provisioning, but do not use the western portion. This is because the
475 vegetation along the western portion of Airport 12a is denser than in other locations and more difficult to walk through.
476 Airport 12a would be closer to an existing road, and access to the wetlands along this existing road is easier than the
477 access by boat to wetlands near Airports 3a and 4. Airport 12a with Access 12a would decrease the number of acres
478 available for subsistence use by XX acres due to conversion of the natural environment to an airport.

479 As with Airport 3a with Access 2, regulating services for water storage and water temperature would not be affected.

480 Airport 12a with Access 12a would affect habitat by virtue of the conversion of the natural environment to an airport and
481 access road; however, the area of habitat effect would be extremely low relative to the remaining habitat in the area. A
482 total of 29.05 acres of wetland wildlife habitat would be converted under this alternative. Further discussion on effects to
483 wildlife habitat can be found in section 4.5 Biological Resources and its subsections. Services associated with plants,
484 wildlife, and nutrient cycling would remain abundantly available under this alternative.

485 Public use and recognition of wetlands under this alternative would not change because this alternative would not create
486 the additional opportunity for humans to interact with wetlands.

487 *ANCSA Conveyed Lands*

488 This alternative would result in 29.03 acres of wetlands directly affected on ANCSA conveyed lands and would require a
489 Section 404 wetland fill permit.

490 *Comparison to the No Action Alternative*

491 Airport 12a with Access 12a would convert 29.05 acres of palustrine wetlands to uplands. Under the no action alternative,
492 there would be no new construction and therefore no changes to the existing wetland acreage or wetland functions and
493 services.

494 *Significance Determination*

495 According to the significance criteria described in section 4.15.3.2, the direct wetland effects from Airport 12a with
496 Access 12 would be considered significant. The terrain disturbance in wetland areas is assumed to convert those wetlands
497 to uplands. Due to the relatively high abundance of pristine wetlands in the landscape surrounding the analysis area,
33



498 Airport 12a with Access 12a would not likely adversely affect the maintenance of natural systems that support fish and
499 wildlife habitat or economically important resources in the indirectly affected or surrounding wetlands. Long-term direct
500 wetland effects would be offset through compensatory wetland mitigation.

501 Secondary activities or services related to Airport 12a or Access 12a would not be anticipated because of the way the land
502 is zoned. Land in the vicinity of Airport 12a with Access 12 has been zoned for future subdivisions, and therefore the area
503 is already likely to experience more access. Any wetland effects associated with residential development would not be
504 considered secondary to the airport construction.

505 **4.15.3.3.7. Summary of Effects on Wetlands**

506 To enable a comparison of the action alternatives regarding wetlands that would be converted to uplands, the acres of
507 terrain disturbance involving wetlands are presented per project element and tallied (Table WT12). The largest total
508 acreage of wetlands being converted to uplands would occur under Airport 3a with Access 2. The smallest total
509 acreage of wetlands being converted to uplands would occur under Airport 4 with Access 3. The project element
510 with the largest acreage would be the cleared airfield grounds for Airport 3a with either Access 2 or Access 3. The
511 project element with the smallest acreage would be impervious passenger parking for Airport 4 with either Access 2
512 or Access 3.

513

514

515



Table WT12. Summary Wetland Fill by Project Element

Alternative	Access Road		Airport						Acres of Wetland Filled
	Impervious	Non-impervious	Impervious Aircraft Staging Area	Impervious Passenger Parking	Impervious Perimeter Road	Impervious Runway	Impervious Taxiway	Cleared Airfield Grounds	
Airport 3a with Access 2	1.20	2.55	3.13	0.28	1.64	2.70	0.48	30.02	42.00
Airport 3a with Access 3	1.15	1.78	3.13	0.28	1.64	2.70	0.48	30.02	41.18
Airport 4 with Access 2	0.92	1.77	0.45	0.04	0.30	0.03	0.24	1.50	5.25
Airport 4 with Access 3	0.74	1.00	0.45	0.04	0.30	0.03	0.24	1.50	4.30
Airport 12a with Access 12a	0.49	0.85	4.74	1.10	2.00	1.48	0.18	18.19	29.03

516

517 To enable a comparison of the reduction of wetland function between the action alternatives, acreages of wetlands that
 518 received a score of “high” for certain functions (meaning they are highly likely to provide that function) were added for
 519 each alternative. High-scoring functions that had the greatest combined acreages were given a score of 1. High-scoring
 520 functions with the next-greatest acreages were given a score of 2 and so on, so that a score of 5 represents the high-scoring
 521 functions with the fewest combined acres (Table WT13). Where similar rankings occur, it is because the acreage across
 522 alternatives was the same or, in the case of wildlife and downslope beneficiary, they were not assigned a “high” ranking in
 523 the original assessment. Compared to other action alternatives, Airport 3a with Access 2 would result in the largest loss of
 524 the following functions: groundwater recharge, surface hydrologic control, sediment retention, regional ecological
 525 diversity, erosion sensitivity, and ecological replacement cost. Airport 12a with Access 12a would result in the largest loss
 526 of groundwater discharge/lateral flow, nutrient export, and riparian support. Overall, the fewest potential effects to
 527 functions would occur under Alternative 4 with Access 2.



Table WT13. Ranking of Key Function Loss

Alternative	Groundwater Recharge	Groundwater Discharge/ Lateral Flow	Surface Hydrologic Control	Sediment Retention	Nutrient Export	Riparian Support	Fish Habitat	Wildlife	Regional Ecological Diversity	Erosion Sensitivity	Ecological Replacement Cost	Downslope Beneficiary
Airport 3a with Access 2	1	2	1	1	5	2	2	1	1	1	1	1
Airport 3a with Access 3	2	2	2	2	3	3	1	1	2	3	2	1
Airport 4 with Access 2	5	3	3	3	4	5	4	1	4	4	5	1
Airport 4 with Access 3	4	4	3	3	2	4	3	1	5	5	4	1
Airport 12a with Access 12a	3	1	4	4	1	1	5	1	3	2	3	1

528



AGENDA – FAA/USFS NOISE ANALYSIS TELECONFERENCE
JULY 23, 2012

Participants: FAA □ Leslie Grey, Amanda Childs, Brad Rolf, George Weekley
USFS □ Jennifer Berger, John Neary, Chad Van Ormer, Steve Kimball

Time: Monday, July 23, 2012
2:00pm Alaska

Call-In: 1-866-740-1260

Passcode: 9763197#

1. Introductions/Purpose of the Call □ Leslie
2. Project background/alternatives discussion - Leslie
3. Discussion of noise analysis protocol - Brad
4. FAA integration of noise analysis data into EIS -Brad and George
5. FS review of noise analysis protocol - Amanda
6. Additional Questions (if any)
7. Wrap up



AGENDA – FAA/USFS NOISE ANALYSIS TELECONFERENCE
JULY 23, 2012
NOTES IN RED

Participants: FAA – Leslie Grey, Amanda Childs, Brad Rolf, George Weekley
USFS –Jennifer Berger, John Neary,

Time: Monday, July 23, 2012
2:00pm Alaska

Call-In: 1-866-740-1260

Passcode: 9763197#

1. Introductions/Purpose of the Call – Leslie

Thank you for meeting with us. We'll do some quick introductions and then go through the protocol. Leslie is the FAA Project Manager for Angoon Airport EIS. John is the Wilderness manager. His role is to review the EIS for the wilderness and recreation perspective. Jen is the District staff officer for wilderness, special uses, and archeology. She is also the designated USFS liaison for the EIS. The purpose for this call is to initiate your review of the protocol

2. Project background/alternatives discussion – Leslie

As the USFS is aware, like most airport projects, the Angoon Airport EIS has received public concern about aircraft noise. We are evaluating noise impacts in the EIS. In 2009, FAA and the USFS had a teleconference where we notified the USFS that we would develop a noise protocol that outlined the approach for the noise analysis and that we would share it for USFS review. Since then, we have developed the protocol and have shared the document with you. All alternatives in the EIS will have the noise analysis completed as part of the EIS. We used the FAA process for sensitive parks and environments to develop this protocol. The protocol went through FAA HQ review and received approval. We are now asking for your review of the noise protocol. After your review, we will run the model for each alternative and use the information to describe impacts in the draft EIS.

3. Discussion of noise analysis protocol – Brad

Brad provides a brief introduction of the FAA guidance on noise. FAA has a lot of experience with aircraft noise and has a very standardized process for evaluating noise impacts from airport projects that they have used for years. However, FAA recognized it wasn't always applicable for

park lands and wilderness. As part of the NPS Grand Canyons Overflights issue, FAA developed guidance (citation of name) for parks and other sensitive areas, such as designated wilderness. We are using that guidance to assess noise effects from the EIS alternatives and to be able to describe potential effects to wilderness character.

Brad then walked through the noise protocol and explained each section. In Section 3, we covered the noise screening assessment to see if a more detailed noise analysis was needed for this EIS. Because there is no existing airport and there are 2 alternatives in noise sensitive areas (wilderness), it was clear that we passed the screening criteria and moved on to detailed noise analysis. Brad then described the existing data we've collected and the locations of the noise monitors that collected the data in relation to the community and EIS alternatives. Brad then described that as part of the detailed analysis, the noise contours would assess aircraft sound from the airport alternatives down to 65 DNL. However, Brad cautioned that it was likely the noise contours would not extend much beyond the airport properties. Below the 65 DNL, FAA will do a grid point analysis to assess noise impacts beyond the 65 DNL contours. Brad then explained the measures FAA will assess to describe noise impacts as part of the grid analysis.

4. FAA integration of noise analysis data into EIS -Brad and George
5. FS review of noise analysis protocol – Amanda

The USFS asked what time line was the FAA looking at for review. Amanda replied that initially we were hoping for one week, but knowing that you are busy, we would like comments back within two weeks. Jenn replied that the summer is our busy time and a lot of their folks are in the field right now, so the two weeks for review will be a challenge. John is out starting Wednesday this week all through next week. Jenn is out all next week. They haven't even discussed this with Steve Kimball, so they don't even know if he's available. 2 weeks would be on the short side.

Leslie: can you please provide a date of when you can get it back to us?

Jenn: We will have a date to you by the end of the week.

6. Additional Questions (if any)

John: Yes, for myself, I don't have much time to review it. The protocol you outlined seems pretty straight forward. However, we are not noise experts and the terminology you are using is new to us. As an agency, we are sensitive to the noise impacts, particularly within the wilderness area. The area of greatest concern is effects to the area up the bay (Mitchell Bay). How far does the grid extend out?

Brad: The greatest noise change is close to the airport (within a couple 1000 feet). We can look at things up to 10 to 15 miles out to show relative change in noise from all alternatives, including to the wilderness.

John: Airport Alternative 12a closer to current condition with the existing seaplane flights and I would not expect much effect up the bay from that alternative. My bigger question is how Airports 3a and 4, particularly landings and takeoff, would affect the bay. If you can include grid points that show out to the bay, it would be helpful to us. Sensitivity to noise goes up the further you get from the community.

Brad: We will get with you to make sure we have grid points that cover the areas you are most concerned. Keep in mind that we expect most of the noise changes are close to the airport.

Jon: I understand and get that concept. However, landing and takeoff pattern, particularly for 3a and 4 will introduce noise to the wilderness in a different way than current conditions.

Brad: We will look at individual flights. Keep in mind, we are likely only talking about 4-5 flights a day on average. Our analysis as part of the grid will show time above ambient sound levels and show then change in noise at a specific place. You should be able to see how much time a specific place would have that noise.

Jon: For wilderness, we describe effects as being within sight or sound of a wilderness user in that area. We also consider the bigger puzzle of effects to the wilderness, like the sight of the airport, the nature of the development itself. We will be looking for the noise effects as well as that part

George: As part of the section in the EIS on wilderness characteristic, we will rely on the noise analysis to describe the effects to opportunities for solitude as it relates to changes in noise level. The ability of a wilderness user to be in sight of the airport will be described as an effect to the wilderness qualities of undeveloped and untrammeled. The primary use of noise is for opportunities for solitude. Given the terrain and vegetation in and around the airport alternatives, the sound is going to have a different level of effect than being within sight of the airport. You will be able to hear airplanes at a further distance than you will see the airport for much of the wilderness area. We will incorporate noise into solitude and the visual effects of the airport will be in untrammeled and undeveloped.

Jon: That makes sense. For Untrammeled, will you be describing actions that affect natural functions of ecosystems?

George: The effects to untrammeled are broader than that. We are using the "Hendee" [clarify: actual citation is Landres et. al] definition "of wilderness character and for untrammeled, it is authorized and unauthorized human and management actions.

Jon: The standard lately for wilderness character is to describe changes to the ecosystems. A classic example is a dam on a river, changing the way fish migrate or paving a road would change the way the water flows. Increased development might change the index we use to describe effects. There is multiple ways to look at it. My point to Brad is to think not just about me up the bay at a campsite and how the airport will change my experience, but also the bear that came out to feed, but now won't because of noise from aircraft flying overhead. This can be more complicated than a person's perception of solitude. George, I know you understand that concept. I originally asked for a technical report for Wilderness as part of this EIS so we could make sure FAA is bringing these issues into one report. I am worried that having pieces of it addressed in other sections is not a holistic way to address it. All those things need to be looked at in the EIS.

George: As part of the wilderness characteristics section, we are taking a look at the 4 major qualities of wilderness and the public values of the Kootznoowoo Wilderness. Not just noise and opportunities for solitude. All other aspects, such as effects on ecological systems through the natural quality of wilderness, undeveloped (putting road or airport in) and many others. We will

incorporate as much information as we can from other sections such as heritage and fish, wildlife, plants to describe effects to wilderness character for the whole ecosystem.

John: Ok, that sounds good.

7. Wrap up

George to send a comment matrix for them to use (completed 7-24). Jenn to provide George a date for USFS comments back on the noise protocol.

Lara Bjork

From: Angoon Airport EIS [maillist@angoonairporteis.com]
Sent: Tuesday, July 24, 2012 12:47 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (7/13/12)

We are excited to announce that the latest version of the Angoon Airport Environmental Impact Statement Newsletter, published by the Federal Aviation Administration - Alaskan Region Airports Division, is now available on our website. Please visit www.angoonairporteis.com or click the link below to check it out!

Click [HERE](#) for the July 2012 Newsletter

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
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ANGOON AIRPORT

Environmental Impact Statement



A Message from the FAA



Hello Angoon Community!

I would like to thank you for welcoming Amanda Childs and Jamie Young during their visit in June. As with past visits, I met with the EIS team to discuss all of the questions, comments, and concerns that you shared with them. These visits are very valuable to our team, as they allow us to develop our understanding of the concerns of the community about the airport project, and keep the right kind of information flowing back to you. Our team is very grateful for your hospitality and honest communication. Often the comments and questions we receive from Angoon community members help us to refine the EIS document, and make sure that we pay attention to the issues that are most important to the community.

As a follow up to our visits to the community, we prepare these newsletters in order to answer the common questions we are asked, and provide the answers to everyone. However, you might find that some of your questions are not addressed here, and we understand that this can be frustrating. In our newsletter below, we focus on questions about the airport project in particular, and not on questions about matters that are outside of the area of FAA responsibility. We don't answer these questions because we don't want to make guesses that could mislead the community.

One of the questions asked by community members during the recent visit was if the Angoon community's preference for an alternative is the biggest factor in the decision process. In order to answer this question, we have developed an article on the role of the public in the EIS process. I hope you find it informative.

I am firmly committed to involving the public throughout all stages of this process and believe that the Angoon community is integral to the successful completion of the EIS. I am dedicated to involving you by listening to your questions, comments, and concerns. My contact information is provided on the last page of this newsletter. I hope that you continue to provide your feedback as we work toward the public draft of the EIS.

Best wishes,

*Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager*

The Role of the Public in the EIS Process

The public plays an essential role in the EIS process. In fact, ensuring public access to information about the environmental impacts of any federal action is one of the reasons the National Environmental Policy Act (NEPA) was enacted.

NEPA requires the FAA to provide meaningful public involvement opportunities. There are set guidelines within the NEPA process for when public involvement should happen, such as scoping in the beginning of the NEPA process and the public comment period that follows the release of a Draft EIS. As you know, the FAA wants to involve the community in the process *beyond* these required times, and that's why we provide newsletters and updates and come to the community for in-person visits. We want to hear from you!

The most important contribution that you as a member of the public can provide is to actively take part in the process, and the best ways to do that are to provide comments and questions and to stay informed through our newsletters, Facebook postings, emails, and community visits.

Your voice will be heard through the comments you submit. It is important to understand that commenting on this project is not a "vote" on whether the airport should be built or which alternative should be selected. Nonetheless, the information you provide during this process can and will influence the FAA and their final decision.

The Council on Environmental Quality (CEQ) has developed "A Citizen's Guide to the NEPA: Having Your Voice Heard." This publication is a great guide to the NEPA process. You can find it online at http://ceq.hss.doe.gov/publications/citizens_guide_to_nepa.html

Questions Asked about the Angoon Airport Project during the June 2012 Visit

Q: What is the projected date for the Draft EIS?

At this time, the draft is scheduled to be released to the public in the fall of 2013. We understand that many residents of Angoon feel they have been waiting for this airport for more than three decades. And we understand that the process seems frustratingly long. We want to assure you that the time we take up front to make sure things are done right will save time in the end. We don't want to rush the process and risk having issues come up later that could delay the project further.

Q: Will there be more noise from land-based airplanes than from seaplanes?

The results of the noise study will be presented in the Draft EIS. There will be an analysis of the impact of noise on properties near the different airport alternatives, using graphics and diagrams to show how and where noise levels will increase. If the results of this analysis show that the impact of airport noise will be significant, the FAA will investigate noise mitigation measures.

Q: Why is the runway 3,300' long?

Variations of this question have been brought up during each of our previous community visits. Because the topic was brought up again at our latest visit, it's important to address it again:

The FAA and DOT&PF have developed aviation plans for the proposed airport. During the development of these plans, both agencies looked at the likely demand for air travel in Angoon over the next 15–20 years. The results show that a 3,300-foot runway would be enough to meet travel demands for the next 15 years. When looking beyond the 15 years, the studies show that a 4,000-foot runway may be needed. Because of this, all of the runways at the alternative airport locations considered in the EIS can be expanded from 3,300 to 4,000 feet.

Q: Will the Sitka SEARHC medevac jet be able to land at all proposed airports?

Yes. The regional medevac aircraft fleet that is currently used and projected for future use in Southeast Alaska was considered during planning for the airport runway length.

Regional operators such as Guardian Flight and Harris Aircraft Service operate almost exclusively with wheeled aircraft that cannot land in Angoon without a land-based runway. Both Guardian Flight and Harris Aircraft Service have indicated that they would readily serve Angoon if a suitable land-based facility was available to accommodate their wheeled Beechcraft Super King Air B200 and Piper Navajo Chieftain aircraft.

Q: How would land be acquired if Airport 12a is selected?

Any land acquisition would be done according to fair market values. The EIS will contain a discussion regarding land acquisitions for all alternatives.

Q: How can I stay involved?

As always, you can submit formal comments online through our website, www.angoonairporteis.com, or you can contact Leslie Grey, the FAA project manager, directly. We will be in touch with the community at important milestones in the project, as well as other times just to check in. We are also on Facebook and are posting small updates as often as possible. Come join in on the conversation!

www.facebook.com/AngoonAirportEIS



How to Contact Us

If you have any questions about the proposed project or the EIS, please contact Leslie Grey.



FAA Project Manager

Leslie Grey – AAL 614
Angoon Airport EIS
222 West 7th Avenue
Box #14
Anchorage, AK 99513-7587
Telephone: 907-271-5453
Fax: 907-271-2851
Email: Leslie.Grey@faa.gov



Angoon Airport EIS
DOT&PF ANILCA Meeting Agenda
July 25, 2012

Participants:

Verne Skagerberg, DOT&PF
Janet Schempf, DOT&PF
Sue Magee, DOT&PF-DNR
Leslie Grey, FAA
Mike Edelman, FAA
Elizabeth Perry, SWCA
Amanda Childs, SWCA

Agenda Topics:

1. Introduction and Opening – Leslie Grey

Janet Schempf - environmental for Angoon project (Jane is her boss). Keeping Jane informed.

Sue Magee – State ANILCA program is with DNR, not DOT&PF

Mike is Verne's counterpart, Janet is Leslie's counterpart.

2. Project Update

a. FHWA NEPA Compliance – Liz Perry

Liz briefly went over memo. She explained that the content of the EIS will be adequate for FHWA as both FAA and FHWA follow CEQ guidelines. What is different is the FHWA process. The memo provides a table that shows what needs to be done for FHWA to adopt the EIS.

Verne asked if with this information we could say how much work FHWA would have to do to adopt the EIS. He will review the document and get back to us. Leslie said that the best thing to do is to talk with FHWA and ask them what they would need to do to adopt. Verne agreed and will talk with FHWA.

b. Budget

i. Memo for second half of Phase III – Leslie Grey

Leslie summarized. Verne noted it fits within the grant outline. Leslie and Liz agreed. Verne also noted that as before a full scope of work would need to be provided before a NTP.

ii. Refining scope and budget for Phase III/Timing – Leslie Grey

FAA process is that SWCA sends detailed scope and budget. FAA reviews and then will send to DOT.

Verne says getting the scope and budget through review on contracting with DOT&PF can be done in a month. Liz told the group that SWCA will likely exhaust Phase II by Oct 1. Need NTP to add the grant money. Verne cleared up that DOT&PF can do NTP without having all money in Phase II spent.

Verne explained to Sue about how the FAA is directing the process. DOT&PF writes contract and pays the bill but Leslie is the boss. When it comes to DOT&PF review time, they work through Leslie and Mike on our comments and don't typically work directly with SWCA.

iii. Phase III Activity – Mike Edelmann

Note from HQ that says that 2011 grant for Phase III needs to show activity. Even though DOT&PF prefers to spend all of one grant before starting to bill another, Verne agreed that he would show activity on the grant in the next few weeks rather than wait for Phase III with SWCA.

c. Community Visit Notes – Leslie Grey and Amanda Childs

Amanda and Leslie discussed the most recent community visit, showed the Facebook page and discussed the intent to keep the community informed.

d. Construction Report Review and Comment Database Overview – Amanda Childs

Amanda showed group the comment database. Verne is interested in using it if they can access it on their computers. Amanda will send a log in to Verne and he will see if it works. They will discuss later in the week.

The construction report will be sent out on Monday for review. DOT&PF will have 10 business days to provide review.

Verne to look at who will be reviewing, their schedules, and let us know if 10 days works.

e. Overall EIS process schedule update – Amanda Childs

Amanda discussed the delay on the noise protocol and how it is impacting other sections. Has the likelihood to push back current milestone dates by a few weeks. As we know more we will update DOT&PF

3. Overview of ANILCA process – Leslie Grey and Amanda Childs (using graphic)

Sue comments and questions: Has FS given us what they need from their orders on what is needed for the application (reg says "and applicable agency rules"). FAA is sending application for agencies to review. Did they give you information on the agency requirements? Verne and Leslie talked about having involved FS but it seems FS isn't sure what they need. Sue would like to send a flow chart the NPS uses for the ANILCA process. Leslie agreed that would be a fine idea.

Sue asked if the review of the application starts the ANILCA timeline. Liz answered yes.

Verne voiced concerns over the 10 day review for ANILCA adequacy. Leslie said that the intent of the review is only if there is enough information for the application, not on the content of the EIS. Verne stressed that as the project sponser, they want to know that the document supports their application, and is the project they would apply for. He is concerned that they are applying for a permit with a document that we haven't commented on.

Verne also asked about why we are doing the application now instead of later. Leslie explained that since there will not be a preferred alternative until after public draft; we need to review all options to avoid looking predecisional. He also asked if 12a was selected, would the DOT&PF just rescind the application. Leslie said yes.

Verne wants to make sure that the other agencies know that the both the application and the document supporting the application would be draft until after the FEIS.

Leslie asked who would review the EIS for ANILCA. Verne replied most likely him, Janet, Sue, some design folks, and Jane. The determination on who will be the signatory has not been made. Could be Al Clough.

4. DOT review of the EIS for adequacy of for ANILCA application– Leslie Grey and Elizabeth Perry

See above notes

5. Wrap-Up and Action Items

a. SWCA Action Items

- i. Amanda to send Verne FHWA NEPA Compliance document, community visit notes, budget memo
- ii. Amanda to send a log in to database for Verne to see if he can use it or not. DOT to review for 10 business days.
- iii. Update ANILCA chart to add “restart the clock” (work with colors too).

b. DOT&PF Action Items

- i. Verne to look at who will be reviewing the construction memo and their schedules and let us know if 10 days review will suffice.
- ii. Verne to test database to see if it works for DOT&PF and discuss with Amanda.
- iii. If database works, Verne will send Amanda names and emails of all that will be reviewing.
- iv. Verne to determine who will sign the ANILCA application to see if it changes the 10 day review time.
- v. Verne to determine who will be reviewing ANILCA application.
- vi. Verne to discuss with FHWA about adopting the EIS and the differences between their process and FAA process.
- vii. Sue to check into pre application meeting (is there an allowance for it? Is it required?)

RECORD OF CONVERSATION		Time:	Date: August 2012
TYPE	<input type="checkbox"/> In-person Conversation	<input type="checkbox"/> Meeting/Conference	<input type="checkbox"/> Telephone <input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
<input checked="" type="checkbox"/> E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)			
Location of In-person Conversation, Meeting, or Conference: NA			
Name of Persons Contacted or in Contact with You Jenn Berger	Organization U.S. Forest Service		Telephone No. NA

Subject: USFS input on draft Angoon Airport EIS section on natural resources and energy supply

Summary of Conversation

On 8/16/12 Jamie Young (SWCA) emailed Jenn Berger (USFS) to get USFS input on draft text in the NR&ES section of the EIS. Below are the *draft text*, SWCA questions to USFS, and USFS input/confirmation of the text. Highlighting has been removed but text is noted to replace this function.

Jen, thanks again for your (and your colleagues') time providing input on these effects assumptions for the EIS' Natural Resources & Energy Supply (NR & ES) section. I've attached the NR & ES FAA guidance from Order 1050-1E for your reference. Below I've included our draft text in italics and then highlighted questions for the USFS regarding these presumed potential effects and the two Wilderness alternatives.

DRAFT TEXT: Direct effects on energy supplies and natural resources would come from consumption of energy and materials during construction, maintenance, and operation of an airport and access road. Specific sources of direct effects include the following:

- *Removal of vegetation: Temporary vegetation removal would occur in work zones and staging areas. These areas would be reclaimed or allowed to naturally revegetate after construction was complete. Permanent vegetation removal would occur in the areas of terrain disturbance, in cleared areas around the airport, and along the access road right-of-way. Selective permanent tree removal would occur in the avigation easements where overly tall trees constitute hazards for air traffic.*

Question for USFS: Can we make any assumptions about whether trees removed from Monument-Wilderness lands could be harvested for timber, ie. in the areas of "permanent vegetation removal"?

Note to USFS regarding avigation easements, specifically: the plan for these areas is that trees > 150' would be individually cut by chainsaw and that this harvest would be accessed on foot.

Jamie summarizing Jenn's 9/13/12 response: Chris Budke (USFS forester) said that whether the timber is put to sale or donated to the community of Angoon (which will be Line Officer discretion: Monument Ranger, Forest Supervisor, or Regional Forester) is dependent on several factors which include: the level of isolation, ie. the distance from other sales or the nearest mill, the acreage of proposed harvest (ie. quantity of timber), and the quality of the timber

- *Removal of soil and rock: Construction of an airport and access road would require excavating and removing soils and rock in the areas of construction. Although the FAA expects that much of the material excavated during construction would be reused in other areas of construction, some materials are likely to not be suitable for airport or access road construction uses. These materials would be removed from the construction site and either stockpiled in the Angoon area for future uses or barged to offsite disposal sites.*

Question for USFS: can excess material be removed from the Monument-Wilderness?

Jenn's 9/20/12 response from USFS Minerals group: Excess can be removed from the Monument/Wilderness, but may require a permit for extraction and/or disposal. Suggest the sentence simply state "These materials would be removed from the construction site and disposed of according to Forest Service regulations and permits".

-
- *Dust suppression, soil compaction, and concrete mixing: Dust suppression, soil compaction, and concrete mixing during construction would all require the consumption of water. In most cases, untreated water could be used. However, concrete mixing might require treated water. The FAA anticipates that water used for construction purposes would be acquired from local sources near the individual alternatives.*

Question for USFS: can water be obtained from the Monument-Wilderness for these purposes?

Jenn's 8/23/12 response: On the water question (third bullet point), both Chad and I believe this is a question for DNR... take a look at this overview/info http://dnr.alaska.gov/mlw/factsht/wtr_fs/wtr_rght.pdf

Jamie's 8/30/12 follow-up confirmation of EIS section language: It appears that ADOT&PF would need a DNR Temporary Water Use Permit for the proposed water use, prior to construction. What we wanted to clarify with the Forest Service is whether any Wilderness guidelines would limit or prohibit this use for the Wilderness alternatives? We will proceed with the assumption in this section that "water used for construction purposes would be acquired from local sources near the individual alternatives."

Action Required: SWCA to incorporate USFS input into EIS as appropriate.

Name of Person Documenting Conversation: Jamie Young

Water Rights in Alaska

What are water rights?

A water right is a legal right to use surface or ground water under the Alaska Water Use Act (AS 46.15). A water right allows a specific amount of water from a specific water source to be diverted, impounded, or withdrawn for a specific use. When a water right is granted, it becomes appurtenant to the land where the water is being used for as long as the water is used. If the land is sold, the water right transfers with the land to the new owner, unless the Department of Natural Resources (DNR) approves its separation from the land. In Alaska, because water wherever it naturally occurs is a common property resource, landowners do not have automatic rights to ground water or surface water. For example, if a farmer has a creek running through his property, he will need a water right to authorize his use of a significant amount of water. Using water without a permit or certificate does not give the user a legal right to use the water.

How do I obtain a water right?

To obtain water rights in Alaska, you need to submit an application for water rights to the DNR office in the area of the water use. After your application is processed, you may be issued a permit to drill a well or divert the water. Once you have established the full amount of water that you use beneficially and have complied with all of the permit conditions, a certificate of appropriation may be issued. This is the legal document that establishes water rights.

What costs are involved?

An application for water rights must be accompanied by the appropriate filing fee as determined by 11 AAC 05.010(a)(8) :

- \$100 for one single-family residence or duplex, or for water use associated with one single-family residence or duplex
- \$1,200 for activities related to oil and gas and associated substances
- Fee varies for activities related to locatable minerals, unless the application is filed under 11 AAC 05.010(a)(9)(E)(i) or (9)(F)(i) - *contact Water Resources Section for pre-application meeting*

- Fee varies for hydroelectric power generation - *contact Water Resources Section for pre-application meeting*
- Fee varies for water removal out of a hydrologic unit under AS 46.15.035 or 46.15.037 - *contact Water Resources Section for pre-application meeting*
- \$200 for 5,000 gallons per day (gpd) or less for a use not listed above
- \$450 for greater than 5,000 gpd and no more than 30,000 gpd for a use not listed above
- \$550 for greater than 30,000 gpd and no more than 100,000 gpd for a use not listed above
- \$900 for greater than 100,000 gpd for a use not listed above

To ensure that the public is notified of proposed water uses, you may be required to pay the cost of a legal advertisement in at least one issue of a local newspaper in the area of the proposed water use. Public notice is required if the appropriation is greater than 5,000 gpd. Public notice may be required for uses of less than 5,000 gpd if the water source is an anadromous fish stream or the water source has a high level of competition among water users. In addition, permit, certificate, and authorization holders are subject to an annual \$50 administrative service fee. Water appropriations of 500 gpd or less for any use, appropriations of 1,500 gpd or less for a single-family residence or duplex, and reservations of water for public benefit are exempt from the annual fee.

Why should I apply for water rights?

1. If you have water rights, you have legal standing to assert those rights against conflicting water users who do not have water rights.
2. A person with water rights has priority to use water over persons who later file for water rights from the same source.
3. Anyone who diverts, impounds, or withdraws a significant amount of water for use, without a permit, certificate, or authorization is guilty of a misdemeanor (AS 46.15.180). A significant amount of water is defined by 11 AAC 93.035(a) and (b) as:

- the consumptive use of more than 5,000 gallons of water from a single source in a single day;
 - the regular daily or recurring consumptive use of more than 500 gpd from a single source for more than 10 days per calendar year;
 - the non-consumptive use of more than 30,000 gpd (0.05 cubic feet per second) from a single source; or
 - any water use that may adversely affect the water rights of other appropriators or the public interest.
4. By filing for water rights, you provide valuable information about water use and water availability in Alaska. Water right records are updated and maintained in an online database. This system contains data on customers, water right status, water source (well depth or water body name), type of water use, water quantity, period of water use, water right priority date, and property description (meridian, township, range, section, quarter sections, latitude and longitude, subdivision name or survey number, tract, block, and lot). Currently, the water right database has over 24,000 records. This information allows state water managers to estimate present uses of water, determine how much water is available from streams and aquifers in the state, protect established water right holders, prevent over-appropriation of water sources, and manage the state's water resources.

What other water resources authorizations are available from the Department of Natural Resources?

- Dam Safety: A certificate of approval is required for constructing or modifying a dam that impounds 50 acre-feet of water and is at least 10 feet high, or is at least 20 feet high, or poses a threat to life and property. An application form and the fee prescribed by 11 AAC 05.010(a)(8) should be filed with the Department of Natural Resources.
- Instream Flow: A certificate is required for maintaining a specific flow in a portion of stream or water level in a lake. An instream flow reservation can be made to protect fish and wildlife habitat, migration, and propagation; recreation and park purposes; navigation and transportation purposes; and sanitary and water quality purposes. An application form and the fee prescribed by 11 AAC 05.010(a)(8) should

be filed with the Department of Natural Resources.

How do I obtain authorization for short-term water use (temporary water use authorization)

A temporary water use authorization may be needed if the amount of water to be used is a significant amount, the use continues for less than five consecutive years, and the water to be used is not appropriated. This authorization does not establish a water right but will avoid conflicts with fisheries and existing water right holders. The application fee for a temporary water use authorization is \$350 for all uses of water from up to five water sources.

Where can I get more information?

More information is available in the Department of Natural Resources' fact sheets on Administrative Service Fee, Dam Safety in Alaska, Reserving Water for Instream Use, Federal Reserved Water Rights, and Alaska Hydrologic Survey. Further information and application forms may be obtained from the following offices or visit www.dnr.state.ak.us/mlw/water/index.htm.

**Department of Natural Resources
Water Resources Section**

Anchorage Office
550 West 7th Avenue, Suite 1020
Anchorage, AK 99501-3562
Phone: (907) 269-8600
Fax: (907) 269-8947

Fairbanks Office
3700 Airport Way
Fairbanks, AK 99709-4699
Phone: (907) 451-2790
Fax: (907) 451-2703

Juneau Office
PO Box 111020
400 Willoughby Avenue
Juneau, AK 99811-1020
Phone: (907) 465-3400
Fax: (907) 586-2954

Comment Form
Angoon Airport Project EIS
Noise Protocol Review

In reviewing the document, please provide meaningful comments on technical adequacy and accuracy and suggestions for improving the language and clarifying the concepts. Comments such as “*This won’t work*” are not helpful. Please be concise and work to help improve the document with your input.

(Please use the following table to submit comments on the preliminary draft document. Comments should be submitted to George Weekley at gweekley@swca.com

Commenter’s Name	Chapter	Page	Section	Comment	Comment Disposition
<i>Name only - in every row.</i>	<i>Number only</i>	<i>Number only</i>	<i>Heading or subheading number and title</i>	<i>If you have a good suggestion for a change in language, provide it here. In many places, your suggestion can be fully integrated with a simple cut and paste.</i>	<i>Do not write in this column. This will be used to track how your comment has been used in revising the document.</i>
J.Berger		1	1.0 Intro	I appreciate that the draft protocol is based upon the “ <i>Guidance on Procedures for Evaluating the Potential Noise Impacts of Airport Improvement Projects on National Parks and Other Sensitive Park Environments</i> ” publication. This seems to be a good fit for the project in many ways.	Thank you for the comment.
J. Berger		3	5.0 Noise Analysis Protocol	The Wilderness Act of 1964 mandates that resource managers uphold wilderness character. From this standpoint, the protocol needs to measure acoustic impact to qualities for which Kootznoowoo wilderness is managed. These qualities include: 1) Untrammled – freedom from modern human control or	The Noise Analysis Protocol prepared for the Angoon Airport EIS describes the types of noise analysis and noise metrics used for the assessment of changes to noise levels resulting from aircraft operations at the alternative airport sites. The Wilderness Characteristics Section being prepared for the EIS will assess the

Commenter's Name	Chapter	Page	Section	Comment	Comment Disposition
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				<p>manipulation.</p> <ol style="list-style-type: none"> 2) Natural – freedom from the effects of modern civilization. 3) Undeveloped – without permanent improvement or modern human occupation. 4) Providing outstanding opportunities for solitude or primitive and unconfined types of recreation. 5) Unique features of scientific, educational, scenic or historical value. 	<p>impacts to the wilderness areas and their qualities in consideration of the changes in aircraft noise, among others.</p> <p>Aircraft noise can affect wilderness character in two ways: Disturbance to the natural environment (wildlife displacement and avoidance under the Natural quality) or to the human experience (under the Opportunities for Solitude quality). To incorporate the noise protocol into the analysis, FAA will be identifying areas (both within and outside the wilderness) where there would be cumulative noise levels above 45 dBA. Outside of those areas, select grid points within the wilderness area will be identified. These grid points will show noise levels using DNL, L_{max}, and L_{eq} metrics in relation to ambient measurements. The amount of time that changes in noise levels will occur for those grid points will be qualitatively described based on the anticipated amount of aircraft operations.</p>

Commenter's Name	Chapter	Page	Section	Comment	Comment Disposition
<i>Name only - in every row.</i>	<i>Number only</i>	<i>Number only</i>	<i>Heading or subheading number and title</i>	<i>If you have a good suggestion for a change in language, provide it here. In many places, your suggestion can be fully integrated with a simple cut and paste.</i>	<i>Do not write in this column. This will be used to track how your comment has been used in revising the document.</i>
					For effects to wildlife, we will be qualitatively describing the areas where wildlife would either permanently avoid or be temporarily displaced as a result of noise from aircraft operations.
J. Berger			5.0 Noise Analysis Protocol	<p>What is the protocol for analyzing acoustic impact upon quality of visitor experience? Likewise, what is the protocol for analyzing acoustic impact upon aesthetic qualities (solitude, tranquility, natural sounds) of wilderness?</p> <p>I've attached a copy of the publication "<i>Aesthetic, Affective, and Cognitive Effects of Noise on Natural Landscape Assessment</i>" by Britton L. Mace et. al. Colorado State University for your reference.</p>	As noted above, the Noise Analysis Protocol prepared for the Angoon Airport EIS describes the types of noise analysis and noise metrics used for the assessment of changes to noise levels resulting from aircraft operations at the alternative airport sites. The Wilderness Characteristics Section being prepared for the EIS will assess the impacts to the wilderness areas and their qualities in consideration of the changes in aircraft noise, among others. The "acoustic impact" of the alternatives will be discussed within the Wilderness Characteristics Section.

C. VanOrmer				<p>What is FAA’s approach for assessing how noise affects the “quiet use and enjoyment of Mitchell, Kanalku and Favorite Bays” (ANILCA Sec. 506)?</p> <p>I suggest the protocol cite this provision and come to a conclusion for each alternative.</p>	<p>The FAA will include those areas as key grid points for analysis of aircraft noise using the Noise Analysis Protocol and assess the effects to wilderness users based on the results. As part of the analysis of wilderness character, the FAA will cite that provision of ANILCA and the effects will be described under the wilderness character of “opportunities for solitude”.</p>
				<p>I suggest the analysis identify key areas within Mitchell Bay and its environs where activity from Angoon is occurring – Kanalku Bay/Creek and Salt Lake/Hasselborg Creek, for example.</p>	<p>The FAA will develop grid points for the key areas requested for analysis of aircraft noise and the effects to wilderness users. The FAA will coordinate the grid point locations with USFS before completing the noise assessment.</p>
				<p>Analysis should address how noise will impact wilderness character.</p>	<p>See comments above.</p>

RECORD OF CONVERSATION	Time: 3:00 pm (Mtn)	Date: August 22, 2012
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TYPE

Visit
 Meeting/Conference
 Telephone

Incoming
 Outgoing

Location of Visit/Conference: N/A

Name of Persons Contacted or in Contact with You	Organization	Telephone No.
Bruce Brunette	ADOT&PF, Materials Division	907-465-4198

Subject: Angoon Airport EIS – Material Sources

Summary of Conversation:

The purpose of this call was to gather more information about potential sources of construction materials (e.g., fill, aggregate, etc.) in the southeast Alaska region for use at an airport in Angoon. The goal was to identify potential source locations, the type of material available and its suitability for different applications at an airport, and quantities of material available.

I described the project to Mr. Brunette and told him that the preliminary material source investigations by DOWL-HKM indicated that material suitable for fill may be present in Angoon but that material suitable for use as aggregate in paving and for certain courses probably isn't. As such, the DOWL-HKM study indicates that outside sources, such as the Ketchikan Airport or Texada Island would likely need to be used. Mr. Brunette stated that, in his opinion, it is entirely possible that materials available in Angoon could be used for some paving projects given that it has been used for other paving projects in Angoon before. He said they would need to test the material to confirm its suitability for use in runway paving to make sure it would meet FAA standards. He said he was not sure what volume of such material might be available in Angoon.

I also asked Mr. Brunette about potential regional sources the DOT&PF – Southeast has used in the past for construction materials, particularly aggregates for paving. He indicated that the Stabler Point quarry in Juneau has been one major source and that they should have plenty of material available for a project in Angoon. I asked about the use of materials from the Ketchikan Airport, and Mr. Brunette indicated that he wasn't really sure what the availability of material from that site would be, particularly as it relates to material meeting FAA standards for paving runways. I then asked about the source at Texada Island, and he confirmed that there are several potential sources there. He said they don't really use that source, though, because of the extra expense of barging from that distance, but added that if they were looking at a large project and most materials had to be barged in, they would be more inclined to use a Texada Island source because of the broader range of materials available. Mr. Brunette also noted that if the DOT&PF were going to go to the expense of barging in materials, they would probably barge in all the needed materials if only small quantities of suitable material were available in the local area.

Action Required: Sheri to summarize information in Chapter 3 of EIS.

Name of Person Documenting Conversation: Sheri Ellis

Lara Bjork

From: Amanda Childs
Sent: Friday, September 14, 2012 1:30 PM
To: Lara Bjork
Subject: FW: Angoon Airport EIS Noise protocol FS comments and FAA responses
Attachments: 081712 FAA-FS Coordination Plan Comment Form_noise_Revisions.docx

Follow Up Flag: Follow up
Flag Status: Flagged

From: George Weekley
Sent: Thursday, September 06, 2012 2:26 PM
To: Berger, Jennifer -FS
Cc: Leslie.Grey@faa.gov; Amanda Childs; Brad Rolf
Subject: Angoon Airport EIS Noise protocol FS comments and FAA responses

Jenn,
Attached are FAA responses to USFS comments on the noise protocol. Regarding the comment and response on the grid points, we would like to work with the USFS to identify key locations within the wilderness area for analysis. If you could identify USFS preferred locations for the grid point analysis and let us know those locations via a map or GPS points (NAD 83), that would be ideal. Please let me know if you have any questions on this or the other responses to your comments.

Thanks,

Geo Weekley
Great Basin Business Development Lead

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, UT 84111
P 801.322.4307 | F 801.322.4308
C 801.819.3560



Lara Bjork

From: Angoon Airport EIS [maillist@angoonairporteis.com]
Sent: Thursday, September 06, 2012 12:07 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (9/6/12)

The Angoon Airport EIS Team is pleased to announce our final community visit for 2012. Please come and share your thoughts and questions about the project, or just say hello. We hope that you can take this opportunity to meet with FAA Project Manager Leslie Grey and FAA Aviation Planner Mike Edelmann, along with other team members.

We'll be available from 10 AM to 4 PM, at the Angoon Community Association, and we'll have lunch from noon to 1 PM, at the Angoon Senior Center.

By providing questions, comments, and concerns, you play an essential role in the successful completion of the EIS. That's why the FAA is committed to involving Angoon residents in the EIS process—we can't do it without you! We are looking forward to visiting with you on the 19th.

A flyer about the community visit is available on the project website by clicking [HERE](#).

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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Angoon Airport EIS Team Members Visiting Angoon on September 19, 2012

The Angoon Airport EIS Team is pleased to announce our final community visit for 2012. Please come and share your thoughts and questions about the project, or just say hello. We hope that you can take this opportunity to meet with FAA Project Manager Leslie Grey and FAA Aviation Planner Mike Edelman, along with other team members.

We'll be available from 10 AM to 4 PM, at the Angoon Community Association, and we'll have lunch from noon to 1 PM, at the Angoon Senior Center.

By providing questions, comments, and concerns, you play an essential role in the successful completion of the EIS. That's why the FAA is committed to involving Angoon residents in the EIS process—we can't do it without you! We are looking forward to visiting with you on the 19th.



Don't forget to check us out on Facebook!

www.facebook.com/AngoonAirportEIS

Comments may also be submitted using the "Contact Us" link at www.angoonairporteis.com, by email to comments@angoonairporteis.com, or by hardcopy to: **Leslie Grey** - AAL 614, FAA Project Manager; Angoon Airport EIS; 222 West 7th Avenue, Box #14; Anchorage, AK 99513-7587.

Lara Bjork

From: Jamie C. M. Young
Sent: Thursday, September 06, 2012 3:47 PM
To: sspores@fs.fed.us; bcase@fs.fed.us
Cc: Amanda Childs; George Weekley; Jen Berger (jberger@fs.fed.us)
Subject: Angoon Airport EIS: your input on our avigation easement assumptions
Attachments: TreesPerAcreOver150ft.pdf

Sheila and Ben,

Thanks again for directing us to the stand characteristics datasets. We correlated them with the SDM GIS data's VOLSTRAT attribute and the attached is the outcome for the Angoon Airport EIS project area. As I discussed with Sheila, we found that, at the most, those data predict 1 tree > 150' per 2 acres. So, within the proposed avigation easements, up to 1 tree per 2 acres would be felled by someone with a chainsaw entering that area on foot. We need your help clarifying in the EIS what this means for potential effects.

- Do you have references or language that you can provide to us regarding this level of partial harvest and its potential effects (or lack of) to other resources?
- Can we say that this level of tree felling is similar to (or less than?) personal use cutting, or a level of natural disturbance from windthrow?

Sheila mentioned that in some of the Tongass NF's effects analyses you analyze the % basal area removed from an area and that < 5% would have negligible effects to stand characteristics. (Sheila, please forgive me, if I'm misquoting you, that's why I'm getting this written down!) We would like to cite personal communication with you and scientific literature (if you have any recommendations) for our assumption that these areas will have negligible effects on all of the resources that we're including in the EIS: terrestrial and aquatic habitats and species, floodplains, hydrology, water quality, wetlands, heritage, visual, subsistence, and wilderness.

Thanks in advance for your help with this! Sincerely, Jamie

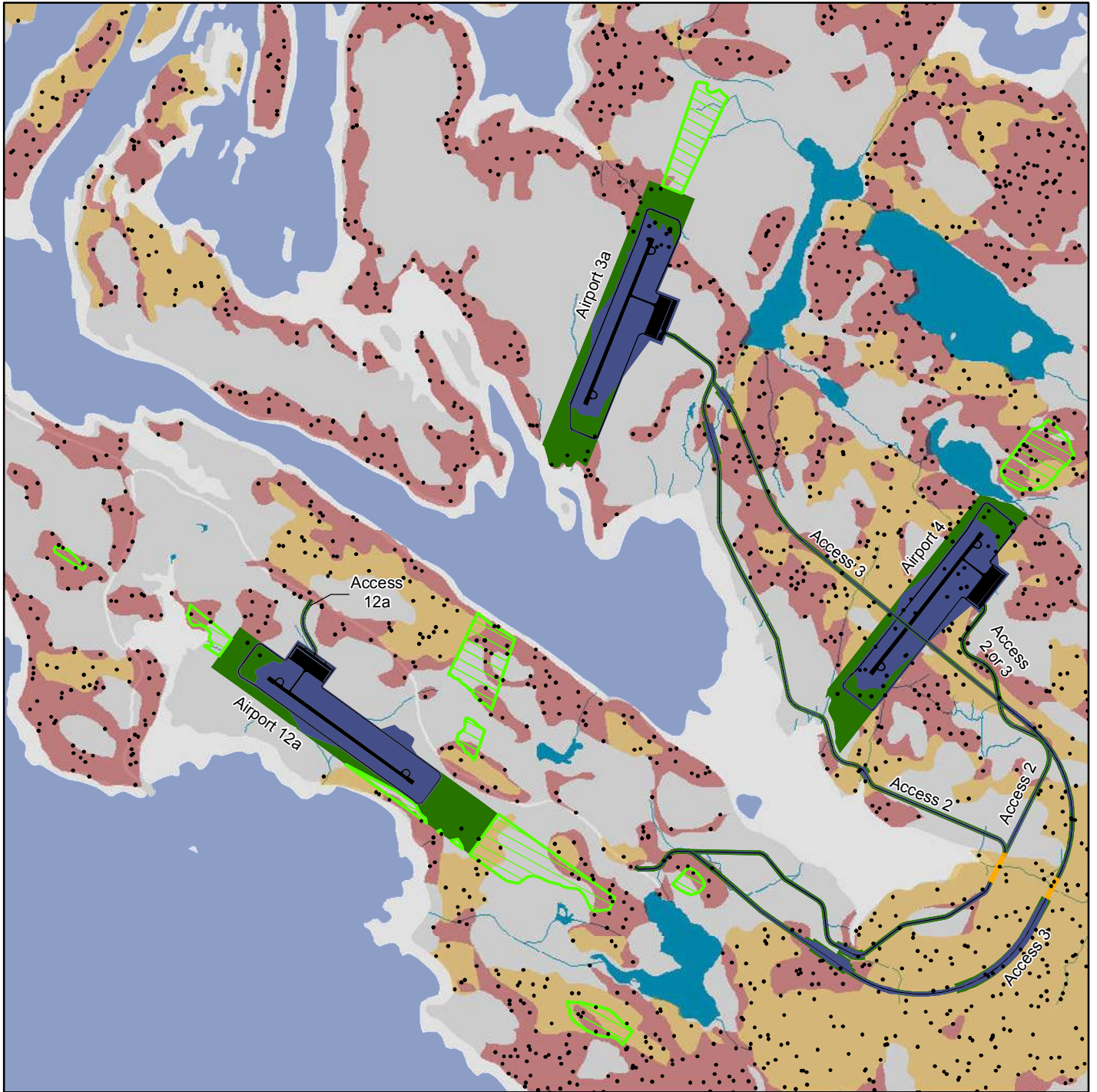
Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 | C 907.821.0404 | F 907.279.7922



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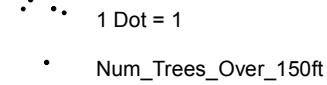
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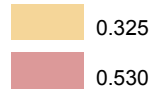
Draft



Random Distribution of Trees Over 150 Feet



Trees per Acre Over 150 Feet.



Lara Bjork

From: Amanda Childs
Sent: Friday, September 14, 2012 1:27 PM
To: Lara Bjork
Subject: FW: Angoon Airport EIS Noise protocol - grid points as requested
Attachments: Mitchell Bay map of campsites and use sites.pdf

For admin record. Noise stuff.

From: George Weekley
Sent: Thursday, September 13, 2012 9:45 AM
To: Leslie.Grey@faa.gov
Cc: Amanda Childs; Brad Rolf
Subject: FW: Angoon Airport EIS Noise protocol - grid points as requested

FYI,
Here are locations from the USFS for the noise grid point analysis.

Geo Weekley
Great Basin Business Development Lead

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, UT 84111
P 801.322.4307 | F 801.322.4308
C 801.819.3560



From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Thursday, September 13, 2012 10:42 AM
To: George Weekley
Subject: Angoon Airport EIS Noise protocol - grid points as requested

Here you go George!

Jennifer Berger
Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?
A: <http://three.sentenc.es>

From: Neary, John -FS
Sent: Tuesday, September 11, 2012 12:14 PM
To: Berger, Jennifer -FS; VanOrmer, Chad M -FS

Cc: Kimball, Stephen J -FS

Subject: RE: Angoon Airport EIS Noise protocol FS comments and FAA responses

Jenn,

I camped in upper Mitchell Bay August 15 and 16, 2012 and made note of each plane I saw or heard from my position. I was boating and paddling around like a typical visitor to the Kootznoowoo Wilderness and also recorded observations of visitors in boats, canoes and other craft as part of normal visitor encounter monitoring. August 15 observations were for 10.5 hours while in Mitchell Bay and Salt Lake. August 16 observations were from Mitchell Bay for 4.5 hours, Salt Lake for 4 hours, and Kanalku Bay for 2 hours.

During this time I observed a total of 9 small planes for a total of 20 minutes, averaging 2.2 minutes of audible noise per flight. Two flights were less than 1000' estimated altitude, five flights were between 1000'-5000', and two were above 5000' estimated altitude (at least one was likely the mail plane from JNU). Just one flight was noticeably "taking off" from near Angoon but there were likely others that took off prior to my noticing them.

Their (admittedly subjective) effect on my sense of solitude in the wilderness was marked "low" for seven of the flights, and "medium" for the two remaining (one was taking off while I was in Kanalku, the other was the mail plane audible for the longest period of time and more overhead).

From this sample I might conclude that flights are a regular presence over Mitchell Bay but that most aren't intrusive from areas typically used by campers and boaters. I've attached a map of Mitchell Bay with use sites indicated as Mit-xx. We use this map to guide our shore checks.

As FAA conducts a noise analysis and environmental impact statement for the proposed airport they should depict the existing condition and the expected changes to this situation. It is inadequate to describe changes only around the immediate Angoon area since Wilderness conditions require us to consider the effects on outstanding opportunities for solitude in upper Mitchell and Kanalku Bays, especially considering that two proposed airport locations might direct more plane take-offs over this area.

For the grid analysis I suggest FAA direct their contractor to analyze at least the following locations as shown on the attached map 21:

General area of Map 21	Site no.	Site name
The "back channels"	Mit-1	Kugget Island lightly used campsite
"	Mit-2	Long Island lightly used campsite
Kanalku bay	Mit 37	Old village site, campsite
"	Mit-31	Burnt Island storage site, beach
"	Mit-3	Subsistence use campsite
Mitchell Bay	Mit-5	Davies Creek campsite
"	Mit-6	Diamond Island campsite
"	Mit-36	Target Island campsite
"	Mit-35	S. America Island campsite
"	Mit-7	Mitchell Bay shelter and trailhead
Salt Lake	Mit-8	"The Falls" campsite and portage
"	Mit-12	Fiorini campsite in the narrows
"	Mit-13	Boyscout Island campsite

cheers

John Neary

Wilderness Manager

Juneau District and Admiralty Island National Monument
8510 Mendenhall Loop Rd, Juneau, AK 99801
(907) 789-6224

From: George Weekley [<mailto:gweekley@swca.com>]
Sent: Thursday, September 06, 2012 1:26 PM
To: Berger, Jennifer -FS
Cc: Leslie.Grey@faa.gov; achilds@swca.com; Brad Rolf
Subject: Angoon Airport EIS Noise protocol FS comments and FAA responses

Jenn,
Attached are FAA responses to USFS comments on the noise protocol. Regarding the comment and response on the grid points, we would like to work with the USFS to identify key locations within the wilderness area for analysis. If you could identify USFS preferred locations for the grid point analysis and let us know those locations via a map or GPS points (NAD 83), that would be ideal. Please let me know if you have any questions on this or the other responses to your comments.

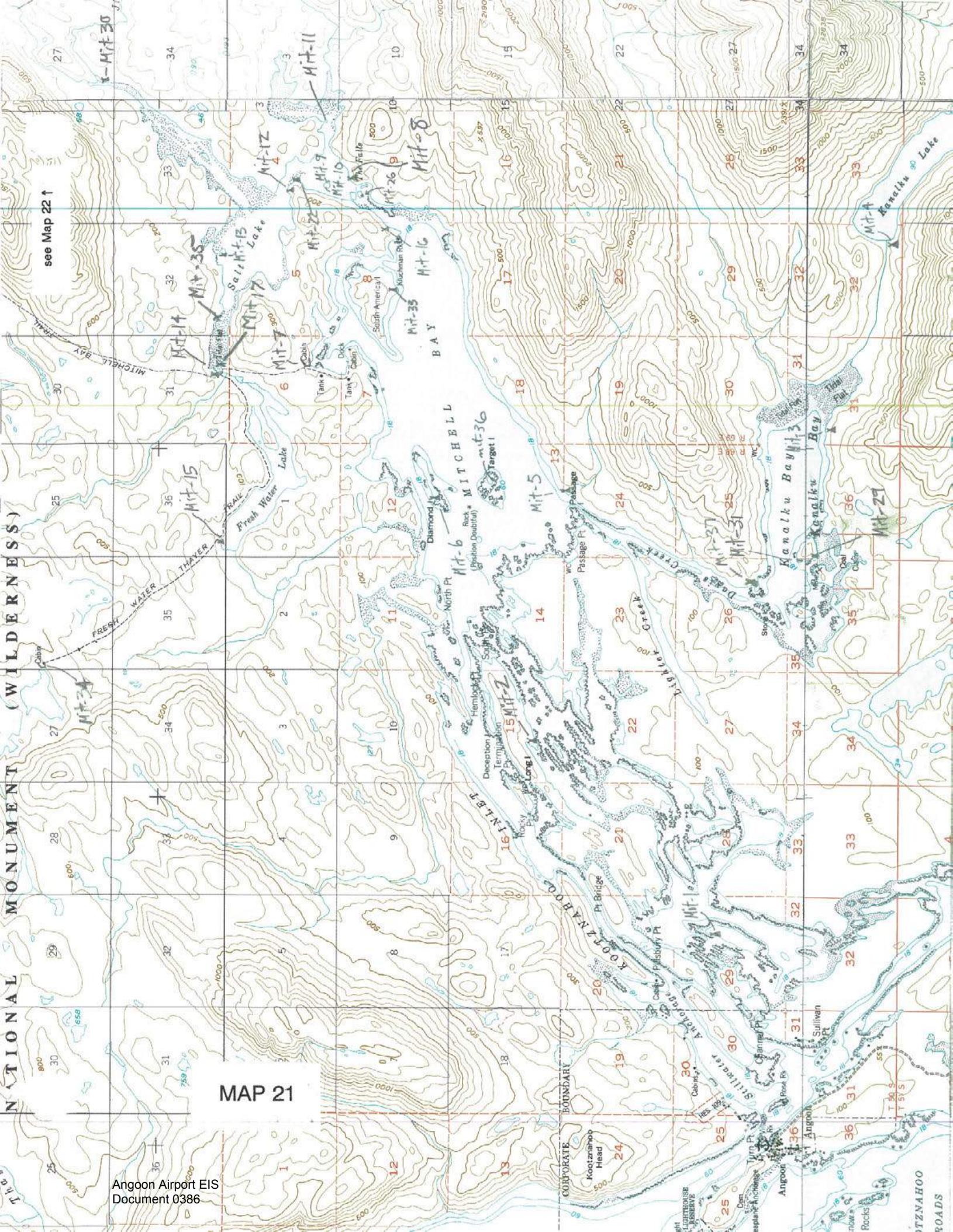
Thanks,

Geo Weekley
Great Basin Business Development Lead

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, UT 84111
P 801.322.4307 | F 801.322.4308
C 801.819.3560



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NATIONAL MONUMENT (WILDERNESS)

see Map 22 ↑

MAP 21

Angoon Airport EIS
Document 0386

CORPORATE BOUNDARY

ANGOOTZNAHOO ROADS

RECORD OF CONVERSATION	Time: 2:00 Alaska	Date: September, 18 2012
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TYPE In-person Conversation Meeting/Conference Telephone E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)

Incoming Outgoing

Location of In-person Conversation, Meeting, or Conference: Juneau Corps Office

Name of Persons Contacted or in Contact with You Randy Vigil	Organization U.S. Army Corps of Engineers	Telephone No.
--	---	----------------------

Subject: USACE review of draft EIS section on wetlands

Summary of Conversation

As per the discussions with FAA regarding the Angoon EIS wetlands section, SWCA sent the wetlands section to Randy Vigil at the USACE for his review. The intent of his review was to finalize the significance determinations for the EIS. He provided written comments on the section.

As a follow up, SWCA team members Amanda Childs and Jamie Young met with Randy while in Juneau. During this meeting, we discussed the significance determination and how to address significance in light of the FAA orders. Randy recommended that we include EPA's 404(b)(1) guidelines as part of the criteria for evaluating. SWCA agrees, and if the FAA concurs we will add these guidelines and address them in the EIS.

Randy stressed that the Corps wouldn't make a decision on significance until they had completed the 404 process. However, he felt that we should continue to call the impacts to wetlands significant in the EIS for the time being.

Action Required: SWCA to follow up with FAA to seek concurrence on inclusion of the 404(b)(1) guidelines.

Name of Person Documenting Conversation: Amanda Childs, SWCA Environmental Consultants

Lara Bjork

From: Angoon Airport EIS [maillist@angoonairporteis.com]
Sent: Monday, September 17, 2012 4:44 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (9/17/12)

FAA is pleased to announce that we have posted the September Website Project Update to our [Angoon Airport project website](#). You can view the update by clicking on the link below:

[September Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page.

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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Lara Bjork

From: Amanda Childs
Sent: Monday, September 24, 2012 3:13 PM
To: Lara Bjork
Subject: FW: Angoon Airport EIS: Method for Assessing Effects to Wilderness

From: Jamie C. M. Young
Sent: Thursday, September 20, 2012 2:23 PM
To: Jen Berger (jberger@fs.fed.us)
Cc: George Weekley; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Hello Jen,

I hope that your week is going well thus far! (I apologize ahead of time that this email doesn't subscribe to the 3 sentences – or 3 paragraphs - concept! ☺)

For the Angoon Airport EIS we are developing our methodology for assessing effects to wilderness character. Since the USFS manages the Monument-Wilderness lands where two of the action alternatives are proposed, we are requesting the USFS' concurrence on our effects methodology. FAA environmental orders have not established significance thresholds for effects to wilderness. Because of this, we have done extensive research on what the USFS and the BLM use for their analysis in Alaska, as well as the lower 48.

In our research of USFS EA's and EISs, we have found that none of these documents have specific significance thresholds - rather, they all describe changes to the wilderness character from the proposed actions as compared to the desired conditions under the Wilderness Act and ANILCA. Our BLM research indicates that their guidance is similar.

In the absence of an FAA defined significance threshold for wilderness character, we propose to follow the USFS Manual for assessing effects to wilderness character as follows:

- Changes to wilderness character from project actions will be compared to existing conditions.
- Effects to wilderness character will be described as being consistent with, or inconsistent with, the Wilderness Act and the Tongass National Forest Land and Resource Management Plan.
 - For example, the Wilderness Act prohibits permanent roads; any road placed in the wilderness area as part of project actions are therefore considered inconsistent with the desired conditions for the wilderness area.

We respectfully request the following timeline for the USFS to provide concurrence on this method:

1. Week of September 24th: USFS review the above proposed method for assessing effects to wilderness character.
2. Week of September 24th: hold a teleconference meeting between the USFS and FAA during this week (if necessary?) to discuss any comments on the proposed method. Our intent is to work through any comments or concerns during this meeting.
3. October 5th: receive written concurrence from the USFS on the effects methodology by close of business.

To facilitate setting up the potential meeting, please respond to this email with the following:

1. Dates and times during the week of September 24th that the USFS team members are available to meet via phone and discuss. We need to meet prior to close of business September 24th.
2. A list of who will be on the phone call and their contact information so that we can send out the meeting request.

Thanks so much for your help, Jen. We appreciate your time and efforts. Happy weekend, almost ☺. Sincerely, Jamie.

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants

317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 | C 907.821.0404 | F 907.279.7922



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See us on LinkedIn: <http://www.linkedin.com/company/swca-environmental-consultants>

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Lara Bjork

From: Amanda Childs
Sent: Monday, September 24, 2012 2:54 PM
To: Kari Chalker (kchalker@swca.com); Lara Bjork
Subject: FW: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

From: Jamie C. M. Young
Sent: Monday, September 24, 2012 12:03 PM
To: Berger, Jennifer -FS
Cc: Amanda Childs; Leslie.Grey@faa.gov; George Weekley
Subject: RE: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

Thanks for providing this response from the Minerals folks, Jen! Sincerely, Jamie

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Thursday, September 20, 2012 2:21 PM
To: Jamie C. M. Young
Subject: RE: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

Feedback from Minerals folks...

Question for USFS: can excess material be removed from the Monument-Wilderness?

Excess can be removed from the Monument/Wilderness, but may require a permit for extraction and/or disposal. Suggest the sentence simply state "These materials would be removed from the construction site and disposed of according to Forest Service regulations and permits".

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?

A: <http://three.sentenc.es>

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Thursday, August 30, 2012 1:49 PM
To: Berger, Jennifer -FS
Subject: RE: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

Thanks for this status update, Jen.

I just left you a voicemail, as well, please give me a call (907.821.0404), once you're back in the office. It appears that ADOT&PF would need a DNR Temporary Water Use Permit for the proposed water use, prior to construction. What we wanted to clarify with the Forest Service is whether any Wilderness guidelines would limit or prohibit this use for the Wilderness alternatives? We will proceed with the assumption in this section that "water used for construction purposes would be acquired from local sources near the individual alternatives."

Thanks again! Talk with you more soon, Jamie

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]

Sent: Thursday, August 23, 2012 11:27 AM

To: Jamie C. M. Young

Subject: RE: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

Hi Jamie,

Just an update: I have had a chance to confer with Chad Van Ormer, but am awaiting feedback from our Timber and Minerals folks specific to those resources.

On the water question (third bullet point), both Chad and I believe this is a question for DNR... take a look at this overview/info → http://dnr.alaska.gov/mlw/factsht/wtr_fs/wtr_rght.pdf

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument

Juneau Ranger District

Tongass National Forest

907.789.6278

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]

Sent: Thursday, August 16, 2012 11:10 AM

To: Berger, Jennifer -FS

Cc: achilds@swca.com; Mike.Edelmann@faa.gov; Leslie.Grey@faa.gov

Subject: Angoon Airport EIS: clarifying Natural Resource & Energy Supply effects assumptions re: Wilderness alternatives

Jen, thanks again for your (and your colleagues') time providing input on these effects assumptions for the EIS' Natural Resources & Energy Supply (NR & ES) section. I've attached the NR & ES FAA guidance from Order 1050-1E for your reference. Below I've included our draft text in italics and then highlighted questions for the USFS regarding these presumed potential effects and the two Wilderness alternatives.

Direct effects on energy supplies and natural resources would come from consumption of energy and materials during construction, maintenance, and operation of an airport and access road. Specific sources of direct effects include the following:

- *Removal of vegetation: Temporary vegetation removal would occur in work zones and staging areas. These areas would be reclaimed or allowed to naturally revegetate after construction was complete. Permanent vegetation removal would occur in the areas of terrain disturbance, in cleared areas around the airport, and along the access road right-of-way. Selective permanent tree removal would occur in the avigation easements where overly tall trees constitute hazards for air traffic.*

Question for USFS: Can we make any assumptions about whether trees removed from Monument-Wilderness lands could be harvested for timber, ie. in the areas of “permanent vegetation removal”?

Note to USFS regarding avigation easements, specifically: the plan for these areas is that trees > 150’ would be individually cut by chainsaw and that this harvest would be accessed on foot.

- *Removal of soil and rock: Construction of an airport and access road would require excavating and removing soils and rock in the areas of construction. Although the FAA expects that much of the material excavated during construction would be reused in other areas of construction, some materials are likely to not be suitable for airport or access road construction uses. These materials would be removed from the construction site and either stockpiled in the Angoon area for future uses or barged to offsite disposal sites.*

Question for USFS: can excess material be removed from the Monument-Wilderness?

- *Dust suppression, soil compaction, and concrete mixing: Dust suppression, soil compaction, and concrete mixing during construction would all require the consumption of water. In most cases, untreated water could be used. However, concrete mixing might require treated water. The FAA anticipates that water used for construction purposes would be acquired from local sources near the individual alternatives.*

Question for USFS: can water be obtained from the Monument-Wilderness for these purposes?

It would be very helpful for moving this section forward if we could have your responses by late next week. Please let me know if that is realistic. We appreciate your time. Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
C 907.821.0404 | F 907.279.7922



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Angoon Airport EIS
Angoon Community and Agency Visits
September 18–20, 2012
Notes

September 18, 2012:

□ *oot* *noowoo Incorporated*

Leslie Grey (FAA), Mike Edelmann (FAA) Amanda Childs (SWCA), and Jamie Young (SWCA) visited Peter Naoroz, President of Kootznoowoo Inc. These are notes from that meeting:

- In accordance with the MOU between FAA and Kootznoowoo Inc., FAA will provide these sections of the External Preliminary DEIS to Kootznoowoo Inc. for review and comment: Compatible Land Use, Heritage, Socioeconomics, and Subsistence.
- The Angoon Community Association (ACA) may be unhappy with the current 5 action alternatives being analyzed. There is concern that the land-based airport would bring increased hunting and fishing pressure from outside of the community of Angoon. ACA would still like to see a Hood Bay alternative, as well as supporting improved access towards the Kanalku Bay coal source.
- U.S. Senator Begich staffers, Sally Smith and James Feldmann (Transportation Planner), stopped by to visit with Peter in mid-August. Leslie prepared an update memo for these staffers and other interested parties.
- Kootznoowoo Inc.'s perspective on the 5 action alternatives:
 - There are 600 lots dedicated as home sites, and a land-based airport adds economic value to those sites, regardless of its location.
 - The Corporation wants to better market Angoon as the “Gateway to the Monument-Wilderness”, and the land-based airport would facilitate this.
 - The Corporation recognizes that the FAA’s expertise is aviation safety, and understands that the 3 runway locations are the most feasible from an aviation standpoint.
- FAA needs to decide whether we will conduct NGO visits during our next trip to Juneau.
- As discussed further in the Terrestrial Habitats and Associated Species and Subsistence sections of the EIS, it is anticipated that wildlife species (including deer) might avoid construction areas and the runway when aircraft arrive and depart. However there is sufficient adjacent habitat and these avoidance effects are not expected to cause long-term adverse effects to the wildlife species or subsistence hunting.
- Kootznoowoo Inc. is interested in cultivating cash crops in the deforested open areas that will not be paved for the runway, but will be within the fence. FAA assumes for the EIS analysis that the airport would only be used for aviation. Because they’ll be the operator, it will be ADOT&PF’s decision whether this would be allowed. FAA’s policy is to reduce potential hazards by minimizing wildlife attractants. If cash crops were pursued, Kootznoowoo Inc. might want to get input from U.S. Department of Agriculture.
- In discussing potential projects to analyze for cumulative effects, Peter clarified that the Ruth and Scenery Lake hydropower projects are in preliminary FERC review stages, are currently a “twinkle in a planner’s eye”. Kootznoowoo Inc. is pursuing those power sources because of their Prince of Wales mining claim. They hope to contribute more power into the Southeast Alaska power grid.
- FAA obtained scanned copies of Bureau of Indian Affairs (BIA) routes that were being discussed between Cyrus Randelia (BIA representative) and ACA. Cyrus also emailed these to FAA the following week. These proposed routes include: the Airport Road (AG010), Hood Bay Road (AG012) [currently a U.S. Forest Service (USFS) trail], and a road that would run parallel and connect to the existing Kootznahoo Road on

both ends (AG013), but would be closer to Favorite Bay. Kootznoowoo Inc. is retaining all of these roads in discussions with the USFS. He also mentioned that the Young Bay to Eliza Harbor Road, which would be a cross-Admiralty Island route running North/South, is in the State's 4D process.

September 19, 2012:

Community of Angoon

Leslie, Mike, Amanda, and Jamie visited Angoon on September 19, 2012 as part of community outreach related to the Angoon Airport EIS. They were available at the Angoon Community Association (ACA) building from 10AM-4PM to answer questions and gather comments from members of the Angoon community. They attended lunch from noon to 1PM at the Angoon Senior Center. Many discussion topics were similar to those from prior community visits. These are notes from the discussions had during this, and prior visits.

General Comments/Questions:

- Residents said that this process is taking too long, that they have been hoping to have an airport since 1977. The DOT&F transportation plans have all been followed for Petersburg, Wrangell, and Kake, but not Angoon. The residents are quite exasperated at how long this process takes. **We reiterated that because ADOT&PF's proposed airport location is in the Monument-Wilderness Area, this adds complications (both environmental and administrative) to this project that didn't exist for the other communities.**
- Rifle hunting around the airport: there is concern that if a shooting near an airport occurs elsewhere in the U.S., for example Florida, then the Department of Homeland Security will implement a 15mile no firearms radius around airports nationwide and that this would not allow hunting within that 15mile radius. During the 2011 visits, this concern was expressed in this same way. Can any guarantee be made to the Angoon residents that this will not occur? **We clarified that the FAA cannot provide any guarantee about what the TSA or Department of Homeland Security will do in the future. FAA has no control or influence over these agencies.**
- Maintaining the Angoon subsistence lifestyle is an extremely high priority.
- What role do the USFS, City of Angoon, ACA, and Kootznoowoo Inc. play in this project/process? What authority/decision-making ability do they have? **The USFS is a cooperating agency in the EIS. They will have to issue either adopt the FAA's EIS and Record of Decision or issue their own Record of Decision. They also have to provide a recommendation to approve or disapprove the ANILCA Title XI application if the DOT&PF submits one for Airport Alternative 3a or 4. The City of Angoon is a stakeholder in the EIS and a landholder. They provide information about the City's plans for land use and other governance but do not have a role in decisions about the selection of an alternative. The ACA is the federally recognized tribal government with whom the FAA must consult. The FAA must consider the ACA's input about issues related to the airport that might affect tribal members, but the ACA does not have a role in decision making. Kootznoowoo, Inc. is another stakeholder in the EIS process as well as a landholder. They provide input relative to how the various alternatives would affect corporation interests and would be involved in land transactions if an alternative on corporation lands was selected. They do not, however, have any decision making role in the project.**
- Who will have control over the airport? The community should have control. **The DOT&PF would own and operate the airport. Because it would be built with federal funds, it would be open to all members of the public, whether local residents or not.**

September 20, 2012:

Alaska Department of Transportation and Public Facilities (ADOT&PF)

Leslie Grey (FAA), Mike Edelmann (FAA) Amanda Childs (SWCA), and Jamie Young (SWCA) visited Pat Carroll and Janet Schempf, ADOT&PF. These are notes from that meeting:

- Other comments and discussion are incorporated into the Construction Methods and Issues section of the online comment database here: https://swcacloud.com/angoon/default/list_comments/const
- ADOT&PF's preferred format of the alignment for review: CAD and alignment pdfs, GIS ok
 - They will also review the Favorite Creek bridge plans during this review.
- ADOT&PF's Favorite Creek bridge comment:
 - They will have to weigh the money that it'll cost to construct a longer bridge versus a smaller bridge with more cut and fill. If the bridge span is any shorter, then it would be within OHWM.
 - They would expect riprap under the bridge.
 - 140-160' is the maximum length for a concrete bulb T.
 - Greg Swenson to follow-up on temporary use areas and moving equipment, prior to the Favorite Creek bridge being constructed.
- Discussing ADOT&PF's waste site comment:
 - Where will the excavated organics be disposed of? For the Petersburg airport improvements, this was the construction contractor's responsibility.
 - Waste that would go into a landfill will need to be hauled away. There isn't capacity for it at the Angoon City landfill.
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 - Is there anyone else in Angoon who might have property that could be converted?
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- ADOT&PF prefers to avoid long-term monitoring.
- Involve ADOT&PF Construction branch in the project now, if possible.

- FAA provided Janet with the ANILCA schedule and Congressional briefing documents with handwritten notes regarding schedule shifts.

Angoon Airport EIS
Angoon Community and Agency Visits
September 18–20, 2012
Notes

September 18, 2012:

□ *oot* *noowoo Incorporated*

Leslie Grey (FAA), Mike Edelmann (FAA) Amanda Childs (SWCA), and Jamie Young (SWCA) visited Peter Naoroz, President of Kootznoowoo Inc. These are notes from that meeting:

- In accordance with the MOU between FAA and Kootznoowoo Inc., FAA will provide these sections of the External Preliminary DEIS to Kootznoowoo Inc. for review and comment: Compatible Land Use, Heritage, Socioeconomics, and Subsistence.
- The Angoon Community Association (ACA) may be unhappy with the current 5 action alternatives being analyzed. There is concern that the land-based airport would bring increased hunting and fishing pressure from outside of the community of Angoon. ACA would still like to see a Hood Bay alternative, as well as supporting improved access towards the Kanalku Bay coal source.
- U.S. Senator Begich staffers, Sally Smith and James Feldmann (Transportation Planner), stopped by to visit with Peter in mid-August. Leslie prepared an update memo for these staffers and other interested parties.
- Kootznoowoo Inc.'s perspective on the 5 action alternatives:
 - There are 600 lots dedicated as home sites, and a land-based airport adds economic value to those sites, regardless of its location.
 - The Corporation wants to better market Angoon as the “Gateway to the Monument-Wilderness”, and the land-based airport would facilitate this.
 - The Corporation recognizes that the FAA’s expertise is aviation safety, and understands that the 3 runway locations are the most feasible from an aviation standpoint.
- FAA needs to decide whether we will conduct NGO visits during our next trip to Juneau.
- As discussed further in the Terrestrial Habitats and Associated Species and Subsistence sections of the EIS, it is anticipated that wildlife species (including deer) might avoid construction areas and the runway when aircraft arrive and depart. However there is sufficient adjacent habitat and these avoidance effects are not expected to cause long-term adverse effects to the wildlife species or subsistence hunting.
- Kootznoowoo Inc. is interested in cultivating cash crops in the deforested open areas that will not be paved for the runway, but will be within the fence. FAA assumes for the EIS analysis that the airport would only be used for aviation. Because they’ll be the operator, it will be ADOT&PF’s decision whether this would be allowed. FAA’s policy is to reduce potential hazards by minimizing wildlife attractants. If cash crops were pursued, Kootznoowoo Inc. might want to get input from U.S. Department of Agriculture.
- In discussing potential projects to analyze for cumulative effects, Peter clarified that the Ruth and Scenery Lake hydropower projects are in preliminary FERC review stages, are currently a “twinkle in a planner’s eye”. Kootznoowoo Inc. is pursuing those power sources because of their Prince of Wales mining claim. They hope to contribute more power into the Southeast Alaska power grid.
- FAA obtained scanned copies of Bureau of Indian Affairs (BIA) routes that were being discussed between Cyrus Randelia (BIA representative) and ACA. Cyrus also emailed these to FAA the following week. These proposed routes include: the Airport Road (AG010), Hood Bay Road (AG012) [currently a U.S. Forest Service (USFS) trail], and a road that would run parallel and connect to the existing Kootznahoo Road on

both ends (AG013), but would be closer to Favorite Bay. Kootznoowoo Inc. is retaining all of these roads in discussions with the USFS. He also mentioned that the Young Bay to Eliza Harbor Road, which would be a cross-Admiralty Island route running North/South, is in the State's 4D process.

September 19, 2012:

Community of Angoon

Leslie, Mike, Amanda, and Jamie visited Angoon on September 19, 2012 as part of community outreach related to the Angoon Airport EIS. They were available at the Angoon Community Association (ACA) building from 10AM-4PM to answer questions and gather comments from members of the Angoon community. They attended lunch from noon to 1PM at the Angoon Senior Center. Many discussion topics were similar to those from prior community visits. These are notes from the discussions had during this, and prior visits.

General Comments/Questions:

- Residents said that this process is taking too long, that they have been hoping to have an airport since 1977. The DOT&F transportation plans have all been followed for Petersburg, Wrangell, and Kake, but not Angoon. The residents are quite exasperated at how long this process takes. **We reiterated that because ADOT&PF's proposed airport location is in the Monument-Wilderness Area, this adds complications (both environmental and administrative) to this project that didn't exist for the other communities.**
- Rifle hunting around the airport: there is concern that if a shooting near an airport occurs elsewhere in the U.S., for example Florida, then the Department of Homeland Security will implement a 15mile no firearms radius around airports nationwide and that this would not allow hunting within that 15mile radius. During the 2011 visits, this concern was expressed in this same way. Can any guarantee be made to the Angoon residents that this will not occur? **We clarified that the FAA cannot provide any guarantee about what the TSA or Department of Homeland Security will do in the future. FAA has no control or influence over these agencies.**
- Maintaining the Angoon subsistence lifestyle is an extremely high priority.
- What role do the USFS, City of Angoon, ACA, and Kootznoowoo Inc. play in this project/process? What authority/decision-making ability do they have? **The USFS is a cooperating agency in the EIS. They will have to issue either adopt the FAA's EIS and Record of Decision or issue their own Record of Decision. They also have to provide a recommendation to approve or disapprove the ANILCA Title XI application if the DOT&PF submits one for Airport Alternative 3a or 4. The City of Angoon is a stakeholder in the EIS and a landholder. They provide information about the City's plans for land use and other governance but do not have a role in decisions about the selection of an alternative. The ACA is the federally recognized tribal government with whom the FAA must consult. The FAA must consider the ACA's input about issues related to the airport that might affect tribal members, but the ACA does not have a role in decision making. Kootznoowoo, Inc. is another stakeholder in the EIS process as well as a landholder. They provide input relative to how the various alternatives would affect corporation interests and would be involved in land transactions if an alternative on corporation lands was selected. They do not, however, have any decision making role in the project.**
- Who will have control over the airport? The community should have control. **The DOT&PF would own and operate the airport. Because it would be built with federal funds, it would be open to all members of the public, whether local residents or not.**

September 20, 2012:

Alaska Department of Transportation and Public Facilities (ADOT&PF)

Leslie Grey (FAA), Mike Edelmann (FAA) Amanda Childs (SWCA), and Jamie Young (SWCA) visited Pat Carroll and Janet Schempf, ADOT&PF. These are notes from that meeting:

- Other comments and discussion are incorporated into the Construction Methods and Issues section of the online comment database here: https://swcacloud.com/angoon/default/list_comments/const
- ADOT&PF's preferred format of the alignment for review: CAD and alignment pdfs, GIS ok
 - They will also review the Favorite Creek bridge plans during this review.
- ADOT&PF's Favorite Creek bridge comment:
 - They will have to weigh the money that it'll cost to construct a longer bridge versus a smaller bridge with more cut and fill. If the bridge span is any shorter, then it would be within OHWM.
 - They would expect riprap under the bridge.
 - 140-160' is the maximum length for a concrete bulb T.
 - Greg Swenson to follow-up on temporary use areas and moving equipment, prior to the Favorite Creek bridge being constructed.
- Discussing ADOT&PF's waste site comment:
 - Where will the excavated organics be disposed of? For the Petersburg airport improvements, this was the construction contractor's responsibility.
 - Waste that would go into a landfill will need to be hauled away. There isn't capacity for it at the Angoon City landfill.
 - Material that can be used in the alignment will be.
- SWCA asked whether ADOT&PF has any best management practices (BMPs) suggestions or effectiveness ratings for typical BMPs that they use.
 - Janet has her own hardcopy Alaska version of the Blue Book.
 - Typical BMPs: settling basins, rock check dams, temporary seeding, visqueen sheets
 - Gravina Island ROD could be used as an example.
 - Art Dunn is the Stormwater Pollution Prevention Plan (SWPPP) Contact. Keri Williamson came and provided her contact information. She emailed SWCA SWPPPs for several similar Southeast Alaska airport/road projects.
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- Involve ADOT&PF Construction branch in the project now, if possible.

- FAA provided Janet with the ANILCA schedule and Congressional briefing documents with handwritten notes regarding schedule shifts.

Lara Bjork

From: Jamie C. M. Young
Sent: Monday, September 24, 2012 2:24 PM
To: Amanda Childs
Cc: Lara Bjork
Subject: FW: Angoon Airport BMPs
Attachments: 823400_KTN_Revised Final EA 1-09-06.pdf; Final Signed PSG RSA EA 1-28-08.pdf; HNH - Airport EA - FAA Signed.pdf

Here's what I got from Keri W. re: our SWPPP request. I haven't reviewed yet...

From: Williamson, Keri (DOT) [mailto:keri.williamson@alaska.gov]
Sent: Monday, September 24, 2012 11:31 AM
To: Jamie C. M. Young
Cc: Dunn, Arthur C (DOT)
Subject: Angoon Airport BMPs

Jamie,

I don't have very many SWPPPs off hand to pass on as examples. Instead, I have attached the environmental commitments for several projects that may have similar elements to the proposed Angoon Airport project. If you can give me a more specific idea of what you are looking for, for example if you are exploring BMPs and want to know options, I need some sense of whether they are for erosion/sediment control, temporary/permanent, their location and purpose, etc. The only relevant SWPPP I have in the office is for the Petersburg Runway Safety Area Improvements (it was written under the old ADEC CGP); it is a paper copy only that I would need back if you would like to borrow it for reference.

Please let me know how Art or I can better assist you in preparing the EIS.

Thanks,
Keri



4.18 Wild and Scenic Rivers

The National Park Service, Wild and Scenic Rivers website (<http://www.nps.gov/rivers/wildriverslist.html#ak>) shows that the proposed project activities would not impact a wild and scenic river corridor.

The No Action Alternative would have no affect on wild and scenic river corridors.

4.19 Avoidance and Minimization Measures and Environmental Commitments for Proposed Action

4.19.1 Avoidance and Minimization Measures

The following measures have been incorporated into the design to avoid, minimize and mitigate wetland, water quality and habitat impacts:

The Proposed Action shifts the runway to the east in order to avoid impacts to the mouth of Airport Creek and its estuary, which is of higher habitat quality and more productive than lower Government Creek and its estuary.

The Proposed Action reroutes Government Creek and its tributary rather than culverting the creeks to minimize impacts to fish habitat and fish passage.

The Proposed Action will use material excavated from the Government Creek re-route, thus decreasing the impact and size of the material site next to the runway.

The use of 2:1 slopes east of the existing Runway 11 threshold and a 3:1 slope west of the existing Runway 11 threshold minimizes the acreage of impacted wetlands.

4.19.2 Environmental Commitments

The following commitments will be included in the project to reduce environmental impacts:

Air Quality

Should watering not be sufficient to control dust, DOT&PF will require construction contractors to implement one or a combination of BMPs appropriate for the work site. These BMPs may include the following actions:

- Prewater sites prior to excavation;
- Apply a dust palliative such as calcium chloride;
- Phase development to minimize disturbed areas during construction;
- Use wind fencing and other erosion control techniques;

- Control construction traffic patterns and haul routes; and
- Cover or otherwise stabilize fill material stockpiles and material sources.

Water Quality

- DOT&PF will produce an ESCP during the design phase to describe appropriate BMPs. Such BMPs could include:
 - Use silt fences;
 - Use check dams;
 - Minimize exposure of easily eroded soils;
 - Apply of temporary mulch, with or without seeding;
 - Use plastic sheet covering;
 - Use a silt boom around the intertidal work area;
 - Use clean shot rock and riprap for intertidal fill;
 - Conduct all intertidal work above elevation 5 ft when the fill area is de-watered by low tide;
 - Seal floor of quarry with bentonite;
 - Control construction sequencing to minimize areas exposed;
 - Use tacifiers and flocculants;
 - Minimize handling of materials; and
 - Use temporary bridges with solid and sealed decks and silt fences on sides that are connected to silt fences on the shore.
- The Contractor will prepare and implement a SWPPP specific to the project area. It will use the ESCP for guidance and be subject to approval by DOT&PF.
- Intermittent streams located above the material site will be diverted around the material site using the perimeter service road.
- Most haul routes will be located within the construction footprint. Area used as haul routes will be minimized. For example, the existing access road to the approach lights will be used for hauling.

Construction

- Traffic from the airport terminal to Lewis Reef will be accommodated during construction on the temporary road (under construction now) until the road is completed under the extended RSA by the FHWA Gravina Access project.
- The Contractor will be required to conduct work in a manner that protects and minimizes disturbance to natural resources in compliance with all federal, state, and local laws and regulations.
- Upon completion of the work, the Contractor will be required to clear all rubbish, excess materials, temporary structures, and equipment from the project and material source sites and properly dispose at a contractor-selected location.
- The contractor staging area will be located at the material site.

Aircraft Operations

- Construction will be scheduled so that only one threshold is displaced at a time.
- DOT&PF will partition the runway lengthwise to keep portions of the runway available for operations while working on the RSA.
- NAVAIDs will be relocated, on a temporary or permanent basis, so as to not interrupt service.
- ~~The contractor will notify the~~ **The KTN Flight Service Station will be advised** of any changes to the available landing surface or NAVAIDs for broadcast to airport users.
- Construction activities will be staged to avoid delaying aircraft or passengers.

Fish, Wildlife and Plants

- Government Creek will be rerouted to connect with Tongass Narrows through the present location of Boulder Creek. The new Government Creek channel will be optimized for fish habitat characteristics with increases in both spawning and rearing habitat for anadromous fish beyond what is currently found in the lower reach of Government Creek.
- The first north tributary of Government Creek will be relocated. It will not be designed for EFH, as the existing tributary provides unique habitat in the absence of salmon species.
- The Boulder Creek estuary will be enlarged to provide a riparian marsh fringe that will mimic the habitat which now exists along the north side of the existing

Government Creek estuary and provide increased high tide feeding opportunities for juvenile salmonids, especially coho, from the relocated Government Creek.

- In consultation with the Interdisciplinary Team of agency biologists, DOT&PF will develop a Monitoring Plan so that it is in place to begin monitoring after construction to evaluate the created habitat. **The final monitoring plan will be completed during permitting and will establish objectives and field methods. FAA will provide funding for monitoring through the construction grant and through a subsequent monitoring grant.**
- **FAA will provide funds for repairs that exceed the DOT&PF maintenance capabilities if habitat objectives are not met. Repairs needed while the construction is underway will be funded under the construction grant.**
- Impacts to fish in the streams will be minimized by using stipulated timing windows and isolating work areas and relocating fish prior to work. DOT&PF will coordinate with DNR/OHMP during the permitting stage to establish the specific construction methods to avoid or minimize impacts to fish.
- **DOT&PF will provide DNR/OHMP a few days advance notice prior to trapping and moving resident fish in South Ditch so that a biologist may choose to be present.**
- Areas disturbed during construction will be covered with rock or restored by selective grading and seeding with suitable species of vegetation.
- To compensate for 2.2 acres of impact to the unvegetated shoreline of Tongass Narrows that will be filled and the 0.1 acre of Waters of the U.S. within the Government Creek estuary, DOT&PF will give ~~\$49,910~~ **\$55,200** (~~\$21,700~~ **\$24,000**/acre) to the Klawock Watershed Council for culvert repair and/or replacement on the Klawock-Hollis Highway.
- **Overburden stockpiled during construction will be placed along the fill slopes of the RSA and the cut slopes of the relocated streams and material site.**

Hazardous Waste, Pollution Prevention and Solid Waste

- DOT&PF will require the Contractor to develop an HMCP to address storage and handling of hazardous materials, including fuel and lubricants, and spill response.
- Construction contracts will include a provision that in the event previously unknown contaminants are encountered at any location during excavation, the contractor will contact the project engineer and stop work at the discovery area until the contamination is identified and the department coordinates with ADEC.

- Construction specification will require that the Contractor be responsible for providing a waste receptacle on site and for proper disposal of its contents.

Historical, Archaeological and Cultural Resources

- The construction contract will contain the provision, “Should cultural or paleontological resources be discovered as a result of this activity, all work that will impact these resources will halt and the project engineer **and SHPO** will be notified immediately.”

Wetlands

- The Contractor will be required to obtain permits, or document that no permits are required, before using any material source for fill not discussed in this EA.
- When working near designated wetlands, the Contractor will neither place fill nor operate equipment outside the permitted slope limits.
- The project will permanently impact a total of 51.9 acres of wetlands, including areas of both dredge and fill. An additional 10.6 acres of wetlands will be temporarily impacted. The total compensatory mitigation for wetland impacts under the proposed action will be ~~\$31,000~~ **31500** (~~62~~ **63** acres at \$500 per acre).
- The 10.6 acres of wetlands which will be temporarily impacted during construction will be restored after construction is completed by removal of all fill.
- A 0.5 acre estuary will be created **at the mouth of Boulder Creek** to replace the 0.4 acre of Government Creek estuary lost to fill.
- An additional ~~4.6~~ **4.5** acres of **streams and** wetlands will be created during the construction of the Government Creek and tributary reroutes.

to improve the commercial pink and chum salmon fishery (personal communication with J. Gendron, 11/30/2007). Data were not collected to assess the improvement.

The following repairs to Falls Creek fish ladder will be included in the proposed work:

- Remove obstructions
- Repair a large hole in the wall of the fish ladder
- Reconstruct grating system
- Install access hatches through the grating to facilitate routine maintenance
- Replace two debris deflection racks, which have been damaged by floating debris
- Replace a defective sluice gate

The Falls Creek fish ladder is assumed eligible for listing in the National Register of Historic Places. All repairs will be designed and implemented similar to upgrades or repairs to historic bridges.

FAA and DOT&PF propose to apply all mitigation funds (**\$198,000**) required to compensate for the loss of stream and wetland habitat at PSG towards the reconstruction and improvement of the Falls Creek fish ladder. If mitigation funds remain following implementation of these fish ladder improvements, they **will** ~~would~~ be contributed to the Alaska Wetland Conservation Fund as specified in the MOA between FAA, USACE, USFWS, DOT&PF, and ADF&G.

4.15 Environmental Commitments

The following commitments will be included as part of the Proposed Action to reduce environmental impacts:

Air Quality

Should rainfall not be sufficient to control dust, DOT&PF will require construction contractors to implement one or a combination of BMPs appropriate for the work site. These BMPs may include the following actions:

- Pre-water sites prior to excavation to reduce dust generation
- Apply a dust palliative such as calcium chloride
- Control construction traffic patterns and haul routes
- Cover or otherwise stabilize fill material stockpiles and material sources

Water Quality

- The new culverts at HS-4, HS-6, HS-7 and MS-1 will be installed prior to diverting the water from existing culverts to reduce the amount of sedimentation.
- DOT&PF will produce an Erosion and Sediment Control Plan (ESCP) during the design phase to describe appropriate BMPs. **DOT&PF will provide the ESCP to DNR/OHMP for review.**
- The construction contractor will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) specific to the project area. It will use the ESCP for guidance and be subject to DOT&PF approval.

Construction

- The construction contractor will be required to conduct work in a manner that protects and minimizes disturbance to natural resources in compliance with all Federal, State, and local laws and regulations.

- Upon completion of the work, the construction contractor will be required to clear all rubbish, excess materials, temporary structures, and equipment from the project and material source sites and properly dispose at a contractor-selected location.
- The contractor staging area will be located at the material site approximately 0.5 miles south of the airport or other locations approved by DOT&PF.
- The quarry and disposal areas will be permitted and meet all State, Federal, and local regulations.
- The construction contractor will meet highway load requirements when using public roads.
- DOT&PF will monitor traffic control around the airport.

Aircraft Operations

- DOT&PF will provide alternate transportation service during the full runway closure by routing airline passengers and air freight through Wrangell Airport. ~~The alternate transportation service plan currently under development includes twice daily bus/ferry service between the Petersburg South Mitkof Ferry Terminal and Wrangell that will coincide with scheduled Alaska Airlines flights will include bus or van transportation between each vessel docking location and the Petersburg and Wrangell airports.~~ **A detailed Alternative Transportation Plan will be developed and included in the Request for Proposals/Construction Bid documents. DOT&PF will use the project website, local newspapers and public service announcements to inform and update businesses and the public about the runway closures or service interruptions.**
- Construction will be scheduled so that only one threshold is displaced at a time.
- DOT&PF will partition the runway lengthwise to keep portions of the runway available for operations while working on the RSA expansion and pavement overlay.
- Changes to NAVAIDs will be scheduled to minimize air service interruptions.
- The construction contractor will notify the DOT&PF Project Engineer of any changes to the available landing surface or NAVAIDs for broadcast to airport users. The Project Engineer will inform the DOT&PF Airport Manager who will coordinate and issue all required Notices to Airmen through the Sitka and/or Juneau FSS.
- Construction activities will be staged to minimize delays to aircraft or passengers.
- During construction periods that do not require partial or full runway closures, the construction contract will require the contractor to conform to FAA safety guidelines and avoid delays to aircraft or passengers.

Fish, Wildlife and Plants

- Impacts to fish in the streams will be minimized by ~~using stipulated timing windows and~~ isolating work areas, ~~and~~ relocating fish prior to work, **and blocking fish access during construction.** DOT&PF will coordinate with DNR OHMP during the permitting stage to establish the specific construction methods to avoid or minimize impacts to fish.
- To mitigate for the **2,270 linear ft of anadromous fish habitat and 2,370 1,300 linear ft of resident fish habitat** impacted by the proposed project, **\$152,500** ~~\$92,500~~ will be allocated to fund proposed Falls Creek fish ladder repairs. Repairing the fish ladder would enhance fish passage and access to spawning and rearing habitat for 12.4 miles of catalogued anadromous stream.

Hazardous Waste, Pollution Prevention, and Solid Waste

- DOT&PF will require the construction contractor to develop an HMCP to address storage and handling of hazardous materials, including fuel and lubricants, and spill response.

- Construction contracts will include a provision that in the event previously unknown contaminants are encountered at any location during excavation, the construction contractor will contact the DOT&PF Project Engineer and stop work at the discovery area until the contamination is identified and the department coordinates with ADEC.
- Construction specifications will require that the construction contractor properly dispose of all waste generated by the project.

Historical, Archaeological, and Cultural Resources

- **The Falls Creek fish ladder is assumed eligible for listing in the National Register of Historic Places. All repairs will be designed and implemented similar to upgrades or repairs to historic bridges.**
- The construction contract will contain the provision, “Should cultural or paleontological resources be discovered as a result of this activity, all work that could impact these resources will halt and the DO&PF Project Engineer and SHPO will be notified immediately.”

Wetlands

- Low ground pressure, rubber-tracked equipment will be used to install the perimeter fence.
- The construction contractor will use BMPs along embankment slopes to prevent sediment-laden water from entering adjacent wetlands.
- The project will ~~permanently~~ impact a total of 91 acres of wetlands, including areas **excavated, filled, and used for construction activities.** ~~of both excavation and fill.~~ Compensatory mitigation for wetland impacts under the Proposed Action will be \$45,500 (\$500/acre). **These compensatory in-lieu fees will be allocated first to completion of the Falls Creek Fish Ladder Improvements. The Alaska Wetland Conservation Fund Conservation Fund will receive remaining fees to fund wetland acquisition and restoration projects.**

Approximately 0.26 acre of the impounded water behind the beaver dam does not support rooted-emergent, woody plant species, or other hydrophytic vegetation. The fringe areas surrounding the deeper portion of the pond were previously delineated as palustrine emergent and palustrine scrub-shrub wetlands by CH2M Hill in 2003. As the pond water level drops after removal of the beaver dam, the area of palustrine scrub-shrub and palustrine emergent wetland will increase, while the amount of palustrine open water will decrease, causing an overall increase in exposed less-inundated palustrine-emergent and palustrine scrub-shrub wetlands.

There would be a temporary use of 3.1 acres of uplands that are previously disturbed former wetlands immediately north of the RSA within the airport infield for dewatering purposes during the relocation of Coho Creek (see Section 4.6 Construction Impacts).

Cumulative Impacts: Present and reasonably foreseeable future airport projects identified in the AMP would not cause additional cumulative impacts to wetlands at the Hoonah Airport. Should the seaplane haulout ramp be constructed in the future as proposed in the AMP, there may be cumulative impacts to wetlands that would need to be addressed prior to construction. Should any other unforeseen projects result in potential impacts to wetlands, any potential impacts would be developed through consultation with the various resource agencies and other interested parties.

No-build Alternative

Direct and Indirect Impacts: The No-build Alternative would not result in additional impacts to wetlands.

4.16 Avoidance and Minimization, Mitigation, or Enhancement Measures

Measures have been taken to avoid impacts to protected resources. Many of the proposed mitigation measures, such as culvert installations and stream relocations, are included in the Proposed Action. Where avoidance would not be possible, every effort has been made to minimize impacts. The following measures have been incorporated into the design to avoid, minimize and mitigate EFH, wetland, water quality, other habitat impacts, and historic properties:

Avoidance

- The Proposed Action extends the runway to the east to avoid impacts to EFH, high-value wetland and intertidal estuarine habitats at the west end of the airport (see Hoonah Airport Runway Extension drawings in USACE Drawings, Appendix A.3).
- The Proposed Action extends the runway to the east only the amount necessary to meet the Purpose and Need.

- The Proposed Action extends the existing apron 250 feet to the east to avoid larger impacts to wetlands and EFH that would be caused by creating a new separate apron and associated taxiway (see Hoonah Airport Runway Extension Drawings in USACE Drawings, Appendix A.3).
- The Proposed Action creates a new parking area in uplands to the north of the existing airport access road that avoids wetland impacts (see Hoonah Airport Runway Extension Drawings in USACE Drawings, Appendix A.3). The proposed parking lot location was shifted to the west after comments were received during the draft EA that suggested a wetland area adjacent to the parking lot might be impacted by fill. The proposed action now avoids that wetland area.

Minimization

- The Proposed Action extends the existing apron 250 feet to the east into predominately upland terrain to minimize wetland impacts.
- The apron fill slope has been steepened in the lower wetland portion of the apron extension from 2:1 to 1.5:1 to minimize impacts to wetlands at the toe of new apron slope.
- The proposed action was designed to incorporate natural landforms, such as the upland apron area and the uplands north of the proposed relocation of Coho Creek to minimize additional excavation or fill in wetlands.
- The proposed action minimizes impacts to EFH by the construction of replacement habitat. Stream habitat loss from proposed fills would be replaced with similar habitat during stream relocations of Coho Creek and the Unnamed Creek immediately east of the apron expansion area. Replacement habitat would be constructed prior to fill placement in the existing habitat (see Hoonah Airport Runway Extension in USACE Mitigation Drawings in Appendix A.3.).
- Appropriate BMPs would be employed to minimize impacts to remaining wetlands during construction

Mitigation - Wetlands

The project would permanently impact 2.21 acres of wetlands, including areas of both excavation and fill. DOT&PF and FAA have determined that compensatory mitigation is required and would conduct permittee-responsible mitigation as described below:

- As permittee-responsible mitigation for wetland loss, DOT&PF proposes to install a new culvert in Coho Creek to improve fish passage at the confluence of Shotter and Coho Creeks. During normal flow Shotter Creek flows past its intended culvert inlet and empties into Coho Creek.

At the confluence of Shotter Creek and Coho Creek, the combined streams flow through an undersized Corrugated Metal Pipe (CMP) culvert that is also subject to tidal action. DOT&PF would install a new 120-inch CMP culvert designed to provide fish passage for both Shotter Creek and Coho Creek (see USACE Mitigation Drawings in Appendix A.3). The larger culvert would also improve floodwater discharge and tidal action flows. The new culvert would compensate for wetland functions loss, in particular those functions supporting fish habitat, but would also serve as additional EFH mitigation for temporary stream habitat loss and stream relocation caused by the Hoonah Airport Expansion. The proposed culvert would improve fish habitat and would also enhance subsistence use within the Coho Creek watershed.

- As additional permittee-responsible mitigation for wetland loss, DOT&PF proposes to install a new culvert in Shotter Creek. Shotter Creek historically flowed through a meandering channel into the Coho Creek estuarine area. When the airport access road was constructed it was directed through a 48-inch CMP culvert. Over time, the culvert became disproportionately elevated and failed to collect water except during flood stages and also prevented fish passage due to a perched outlet. Shotter Creek was originally intended to flow through this culvert, but after many years eventually formed a channel parallel to the access road and now merges with Coho Creek at the location for the proposed new 120-inch culvert.

Because the existing Shotter Creek perched pipe has starved the lower reach of Shotter Creek of fresh water for many decades, the functions and value of the lower Shotter Creek estuarine wetland have deteriorated.



Photo 9- *Shotter Creek perched undersized culvert.*

As part of the permittee-responsible mitigation proposal, DOT&PF proposes to replace the existing 48-inch perched culvert in Shotter Creek with a new, properly installed, 60-inch culvert to restore fish passage to Shotter Creek and to restore fresh water outflow into the estuarine area of the historic lower reach of Shotter Creek

By replacing the Shotter Creek culvert, fresh water flow will be restored to its

historic channel and the estuarine wetlands adjacent to lower Shotter Creek will again be inundated and previous wetland functions restored. The estimated length of the lower Shotter Creek reach below the existing culvert that would be influenced by the restoration of fresh water flows is 988 feet.

Reach length was measured from the discharge point of the new culvert to a point where wetland appears to be predominantly influenced by fresh water flows from Coho Creek. The approximate area of restored inundation along the lower Shotter Creek reach, based on fluvial geomorphologic features is 57,106 square feet (1.311 acres). (See USACE Mitigation Drawings in Appendix A.3)

Mitigation - EFH

For impacts to EFH as a result of the relocations of Coho Creek and the unnamed apron tributary, the following mitigation efforts would be conducted:

- Lost habitat would be replaced with similar habitat in created reaches of Coho Creek to the north of the existing runway and the Unnamed Creek immediately east of the apron expansion area. Replacement habitat would be constructed prior to fill placement in the existing habitat.
- A five-year monitoring plan would be developed in conjunction with the Alaska Department of Fish and Game (ADF&G). This plan would provide for ADF&G inspections of the created stream reaches to ensure the replacement habitat is functioning as Essential Fish Habitat. Inspection criteria would include fish surveys within the created habitat and analysis of placed woody debris in maintaining hydraulic complexity as well as its effectiveness as aquatic rearing habitat. Monitoring would begin at the time of construction and would continue for five years.
- Six short fingers or alcoves would be constructed within the airport boundary, each approximately five feet long, to the lower wetland portion of the relocated unnamed tributary adjacent to the apron. These alcoves would provide improved rearing habitat and compensate for the reduced overall length of the relocated unnamed tributary.
- Habitat diversity and hydraulic complexity would be incorporated into the new unnamed tributary channel, such as creating sinuosity to the channel bottom, boulders and root wads.
- Willow or alder shoots would be planted in the rip rap slope of the expanded apron adjacent to the new unnamed tributary channel to promote more rapid development of riparian cover.
- A 5-foot wide vegetated buffer, vegetated with grass and low woody shrubs, would be created at the edge of the apron to help reduce contaminants from aircraft and other equipment from discharging into the new channel.

Mitigation – Section 106 and Section 4(f)

As mitigation for an Adverse Impact to the Section 106 and Section 4(f) Resource, the Spasski Trail, FAA, and SHPO and other signatories developed a MOA that stipulates how the adverse effects to the Spasski Trail would be mitigated. The following stipulations are contained within the MOA:

- The construction footprint would be minimized in the vicinity of the Spasski Trail to limit impacts to only those outlined in the Proposed Action. No temporary sediment basins, temporary construction staging areas or other impacts would be allowed on the Spasski Trail during construction.
- An interpretive panel would be constructed in the Proposed Action's new parking lot. The panel would describe and commemorate the Spasski Trail, its role and importance in Hoonah's history. The panel would be constructed and in place within one year of the completion of the Proposed Action. Design and content for the interpretive panel would be jointly developed between FAA, SHPO and other signatories to the MOA.

4.17 Environmental Commitments

In addition to the Environmental Commitments required as mitigation described in Section 4.16 above, additional Environmental Commitments are required during construction as listed below.

DOT&PF would produce an Erosion and Sediment Control Plan (ESCP) during the design phase to describe appropriate Best Management Practices (BMPs). The construction contractor would prepare and implement a DOT&PF-approved Storm Water Pollution Prevention Plan (SWPPP) specific to the project area using the ESCP for guidance.

4.17.1 Air Quality

Should rainfall not be sufficient to control dust, DOT&PF would require construction contractors to implement one or a combination of Best Management Practices (BMPs) outlined in the Contractor SWPPP appropriate for the work site.

4.17.2 Water Quality

Water quality impacts would be mitigated by using BMPs during construction. The beaver dam would be removed and water allowed to flow through the established Coho Creek channel. The stream channel to be relocated would be constructed before construction of the runway safety area begins and ADF&G approval would be obtained before the water is rerouted into the new channel. Side slopes would be designed to reduce erosion. The construction contractor would prepare and implement a DOT&PF-approved SWPPP specific to the project area to minimize or eliminate sediment discharges to waters of the U.S.

4.17.3 Construction

The Contractor would be required to comply with all federal, state, and local laws and regulations controlling pollution and contamination of the environment. The construction contractor would obtain coverage under the Alaska Pollutant Discharge Elimination System (APDES) prior to construction.

Upon completion of the work, the construction contractor would be required to clear all rubbish, excess materials, temporary structures, and equipment from the project and material source sites and properly dispose it at a contractor-selected location.

4.17.4 Aircraft Operations

Construction activities would be staged to minimize delays to aircraft or passengers. The construction contract would require the contractor to follow the recommendations outlined in FAA Advisory Circular AC 150/5370-2E pertaining to Operational Safety on Airports During Construction.

4.17.5 Fish, Wildlife and Plants

Proposed stream relocation and reconstruction would be based on standard reference reach morphology measurements to reestablish a stable channel based on initial design recommendations completed by Vigil Agrimis in 2007 (Appendix I). The final stream design would be further refined and provided to ADF&G and NMFS for review prior to construction. Construction of new stream channels for Coho Creek and the small unnamed tributary to Coho Creek would be conducted with the work areas separated from flowing waters prior to connection to the existing streams. Fish would be relocated before water is routed to the new stream channels.

4.17.6 Hazardous Waste, Pollution Prevention, and Solid Waste

DOT&PF would require the construction contractor to develop a Hazardous Material Control Plan (HMCP) to address storage and handling of hazardous materials, including fuel and lubricants, and spill response.

BMPs would be used to prevent pollution of surface and groundwater, soil, and the air with any contaminants including hazardous or toxic materials. Any release of these materials into the environment would require immediate corrective action by the contractor in accordance with applicable state and federal regulations.

4.17.7 Historical, Archaeological, and Cultural Resources

- The construction contract would contain the provision, “Should cultural or paleontological resources be discovered as a result of this activity, all work that could impact these resources would halt and FAA, the DOT&PF Project Engineer and SHPO would be notified immediately.”
- No temporary sediment basins, temporary construction staging areas or other impacts would be allowed near the Spasski Trail during construction.

4.17.8 Wetlands

- No fill or construction materials would be stockpiled on adjacent wetlands outside the project boundary.
- The construction contractor would use appropriate BMPs outlined in the ESCP and the contractors SWPPP to prevent sediment-laden water from entering adjacent wetlands.
- Dewatering activities related to construction of the new channel for Coho Creek would be conducted in a designated temporary use area of uplands that are previously disturbed former wetlands immediately north the RSA within the airport infield (see area shown for dewatering on Sheet 4 of the USACE Drawings, Appendix A.3).
- All disturbed and fill areas would be stabilized to prevent erosion.
- Natural drainage patterns would be maintained to the extent practicable by the installation of culverts in sufficient number and size under access roads to prevent ponding, diversion, or concentrated runoff that would result in adverse impacts to adjacent wetlands and other fish and wildlife habitats.
- Clean fill would be used for the project construction.
- Construction activities would follow guidelines established by the US Fish and Wildlife Service and the Migratory Bird Treaty Act (16 USC 703-712) to protect young birds and their nesting habitats.
- To compensate for unavoidable impacts to wetlands, DOT&PF would conduct permittee-responsible mitigation as described in Section 4.16 of this EA in accordance with 33 CFR Part 325.1(d)(7) and the USACE June 9, 2008 Final Mitigation Rule.

5.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

5.1 Introduction

Public involvement and agency coordination requirements for this project were fulfilled. Table 7 outlines the tasks and activities undertaken. A scoping summary report, records of correspondence, and meeting materials and meeting records are included in Appendix F.

Lara Bjork

From: Amanda Childs
Sent: Wednesday, October 03, 2012 9:49 AM
To: Lara Bjork
Subject: FW: Angoon Airport EIS: Method for Assessing Effects to Wilderness

From: Berger, Jennifer -FS [mailto:jberger@fs.fed.us]
Sent: Tuesday, October 02, 2012 5:08 PM
To: Amanda Childs; Jamie C. M. Young
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Thanks for the opportunity to discuss this topic... we are fine with the edit you've applied.
Please consider this our written concurrence!

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?
A: <http://three.sentenc.es>

From: Amanda Childs [mailto:achilds@swca.com]
Sent: Tuesday, October 02, 2012 3:30 PM
To: Berger, Jennifer -FS; jyoung@swca.com
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Jen,

Thanks for taking the time to get on the phone with us this afternoon. Please let John and Chad know we appreciate their time as well.

As we discussed during our call, in the absence of an FAA defined significance threshold for wilderness character, we propose to follow the USFS Manual for assessing effects to wilderness character as follows:

- Changes to wilderness character from project actions will be compared to existing conditions.
- Effects to wilderness character will be described as being consistent with, or inconsistent with, the Wilderness Act and the Tongass National Forest Land and Resource Management Plan. The analysis of effects to wilderness character will describe the intensity (or degree) of inconsistent effects to the wilderness qualities.

Will you please send this along to Chad and John so they can see what was added? Our intent is to receive an email as written concurrence from you by close of business this Friday, October 5th.

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Monday, October 01, 2012 5:34 PM
To: Amanda Childs; Jamie C. M. Young
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

I should mention that, with Steve's transfer, we are without a forest-level wilderness resource contact at the moment. I'm not certain what the future holds for that position – whether they will fill it. When/if there is another forest-level contact person designated for wilderness, I'll let you know.

Take care,

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?

A: <http://three.sentenc.es>

From: Amanda Childs [<mailto:achilds@swca.com>]
Sent: Monday, October 01, 2012 4:24 PM
To: Berger, Jennifer -FS; jyoung@swca.com
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Sounds good. We look forward to talking with you!

Thanks for the heads up on Steve, we'll update our contact list.

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Monday, October 01, 2012 5:22 PM
To: Amanda Childs; Jamie C. M. Young
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Hi Amanda-

John and I will plan to teleconference with you tomorrow. I should mention that Steve has recently transferred to Montana.

The rest of us have had a chance to review the suggested methodology, and while mindful of the time crunch, think it best to discuss.

Thanks!

Jennifer Berger

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Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?

A: <http://three.sentenc.es>

From: Amanda Childs [<mailto:achilds@swca.com>]
Sent: Monday, October 01, 2012 3:19 PM
To: Berger, Jennifer -FS; jyoung@swca.com
Cc: George Weekley; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Hi Jen,

Jamie has her head down on a deadline today, so I thought I'd check in with you.

As mentioned below we don't need to hold a wilderness call tomorrow unless the USFS needs to discuss and provide feedback before giving concurrence. Do you know if John, Steve, and Chad have had a chance to look at the suggested methodology yet and if we still need to hold the call?

Thanks! And happy Monday!

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Tuesday, September 25, 2012 5:42 PM
To: Jamie C. M. Young
Cc: George Weekley; Amanda Childs; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

I will plan on visiting w/ you then!

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

Q: Why is this email three sentences or less?

A: <http://three.sentenc.es>

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Tuesday, September 25, 2012 3:21 PM
To: Berger, Jennifer -FS
Cc: George Weekley; achilds@swca.com; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Thanks for coordinating availability on your end, Jen ☺.

Our main objective is to receive written concurrence from the USFS on our Wilderness effects methodology by 10/5. The purpose of the teleconference would be to provide clarification or receive input/suggestions from the USFS. If you (the USFS) decide that you can provide written concurrence without this call, that will be sufficient for us, as well.

We are open anytime, but how about Tues. 10/2 at 2PM AKT? The conference line will be 866.740.1260 / code 2307874.

Please contact us via email or phone in the meantime, if needed. Cheers! Jamie (907.821.0404)

From: Berger, Jennifer -FS [<mailto:jberger@fs.fed.us>]
Sent: Thursday, September 20, 2012 1:59 PM
To: Jamie C. M. Young
Cc: George Weekley; Amanda Childs; Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: Method for Assessing Effects to Wilderness

I'm checking in with John, Steve, and Chad for feedback and availability next week. Just so you're aware, we are in NEPA training next week, so hoping week of Oct 1 is an option. While I'm at it, let me check in with Minerals on your last question... they've been on the road with Green's Creek NEPA.

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Thursday, September 20, 2012 1:23 PM
To: Berger, Jennifer -FS
Cc: George Weekley; achilds@swca.com; Leslie.Grey@faa.gov
Subject: Angoon Airport EIS: Method for Assessing Effects to Wilderness

Hello Jen,

I hope that your week is going well thus far! (I apologize ahead of time that this email doesn't subscribe to the 3 sentences – or 3 paragraphs - concept! ☺)

For the Angoon Airport EIS we are developing our methodology for assessing effects to wilderness character. Since the USFS manages the Monument-Wilderness lands where two of the action alternatives are proposed, we are requesting the USFS' concurrence on our effects methodology. FAA environmental orders have not established significance thresholds for effects to wilderness. Because of this, we have done extensive research on what the USFS and the BLM use for their analysis in Alaska, as well as the lower 48.

In our research of USFS EA's and EISs, we have found that none of these documents have specific significance thresholds - rather, they all describe changes to the wilderness character from the proposed actions as compared to the desired conditions under the Wilderness Act and ANILCA. Our BLM research indicates that their guidance is similar.

In the absence of an FAA defined significance threshold for wilderness character, we propose to follow the USFS Manual for assessing effects to wilderness character as follows:

- Changes to wilderness character from project actions will be compared to existing conditions.
- Effects to wilderness character will be described as being consistent with, or inconsistent with, the Wilderness Act and the Tongass National Forest Land and Resource Management Plan.
 - For example, the Wilderness Act prohibits permanent roads; any road placed in the wilderness area as part of project actions are therefore considered inconsistent with the desired conditions for the wilderness area.

We respectfully request the following timeline for the USFS to provide concurrence on this method:

1. Week of September 24th: USFS review the above proposed method for assessing effects to wilderness character.
2. Week of September 24th: hold a teleconference meeting between the USFS and FAA during this week (if necessary?) to discuss any comments on the proposed method. Our intent is to work through any comments or concerns during this meeting.
3. October 5th: receive written concurrence from the USFS on the effects methodology by close of business.

To facilitate setting up the potential meeting, please respond to this email with the following:

1. Dates and times during the week of September 24th that the USFS team members are available to meet via phone and discuss. We need to meet prior to close of business September 24th.
2. A list of who will be on the phone call and their contact information so that we can send out the meeting request.

Thanks so much for your help, Jen. We appreciate your time and efforts. Happy weekend, almost 😊. Sincerely, Jamie.

Jamie C. M. Young

Natural Resources Specialist

SWCA Environmental Consultants

317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 | C 907.821.0404 | F 907.279.7922



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Lara Bjork

From: Amanda Childs
Sent: Thursday, October 11, 2012 10:00 AM
To: Lara Bjork
Subject: FW: Angoon Seaplane Base Ops/Forecast Data

Buy in from the State on our forecast for the seaplane base after a land based airport goes in.

From: Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]
Sent: Thursday, October 11, 2012 8:31 AM
To: Skagerberg, Verne R (DOT)
Cc: Mike.Edelmann@faa.gov; Amanda Childs; Brad Rolf; Leslie.Grey@faa.gov
Subject: Re: Angoon Seaplane Base Ops/Forecast Data

Verne,
Thanks very much for your rapid response! Leslie

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453

From: "Skagerberg, Verne R (DOT)" <verne.skagerberg@alaska.gov>
To: Leslie Grey/AAL/FAA@FAA
Date: 10/10/2012 06:35 PM
Subject: Re: Angoon Seaplane Base Ops/Forecast Data

I've given it some thought, and I concur with Cody's assessment. Let me know if you need more.

Sent from my iPad

On Oct 10, 2012, at 3:10 PM, "Leslie.Grey@faa.gov" <Leslie.Grey@faa.gov> wrote:

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453

----- Forwarded by Leslie Grey/AAL/FAA on 10/10/2012 03:09 PM -----

From: Brad Rolf <Brad.Rolf@meadhunt.com>
To: Leslie Grey/AAL/FAA@FAA, Mike Edelmann/AAL/FAA@FAA
Cc: Amanda Childs <achilds@swca.com>, Cody Fussell <Cody.Fussell@meadhunt.com>
Date: 10/10/2012 12:56 PM
Subject: FW: Angoon Seaplane Base Ops/Forecast Data

Hi Leslie and Mike,

I spoke with Amanda and she indicated that it would be ok to have one additional item added to your agenda for this afternoon. We're in the process of putting together operational assumptions for the Angoon seaplane base after construction of the new airport. Below is an estimate put together by Cody. If able, please run this by Verne and see what we need to do to get this blessed.

Thanks!
-Brad

From: Cody Fussell
Sent: Tuesday, October 09, 2012 4:30 PM
To: Brad Rolf
Subject: Angoon Seaplane Base Ops/Forecast Data

Brad,

Got a call from Cindy this afternoon regarding the Angoon SPB ops question that we discussed. I told her we would talk and get back to her ASAP.

As you mentioned, the current TAF for the Angoon SPB shows 1,150 total ops (all itinerant) with an 87% (1,000 ops)/13% (150 ops) split between air taxi and GA. My best guess is that we assume 85% of the air taxi ops will move to the Airport (I am also assuming that the EAS flights would move to the new Airport). That leaves 150 air taxi ops for the SPB plus the existing 150 GA seaplane ops for a total of 300 annual SPB operations for the future SPB contour run.

Any thoughts?

Cody Fussell, ASLA | Aviation Services
Mead & Hunt, Inc. | M & H Architecture, Inc. | 1616 E 15th Street | Tulsa, OK 74120
Main: 918-585-8844 | Direct: 918-586-7273 | Cell: 918-671-2368
cody.fussell@meadhunt.com<<mailto:cody.fussell@meadhunt.com>> |
www.meadhunt.com<<http://www.meadhunt.com/>>

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Lara Bjork

From: George Weekley
Sent: Tuesday, October 16, 2012 11:37 AM
To: Sue Wilmot
Cc: Lara Bjork
Subject: RE: Kootz records

Ok,
Talked to Peter Naoroz at Kootznoowoo. Feel free to use this as a personal communication between Peter and myself (I asked if it was ok).

The ANCSA 14(c)(3) conveyances to the City of Angoon have been surveyed, approved (by Kootz, the City, and BLM), and the titles have been transferred to the City. Peter did note that the last he had heard, the City has not recorded the titles, but Alaska is not a recording state, so they don't have to. One point that Peter brought up though, the titles do have a clause that states that if the City does not use the parcel for its intended purpose as outlined (such as recreation or watershed uses), then that parcel would revert back to Kootznoowoo ownership.

Geo Weekley

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, UT 84111
P 801.322.4307 ☐ F 801.322.4308
C 801.819.3560



From: Sue Wilmot
Sent: Tuesday, October 16, 2012 12:15 PM
To: George Weekley
Subject: RE: Kootz records

Thanks for looking. That's a good summary of what I need.

From: George Weekley
Sent: Tuesday, October 16, 2012 10:59 AM
To: Sue Wilmot
Subject: Kootz records

I couldn't find anything in the notes we had in meetings with Peter (although I did find a citation on the home sites). So you are primarily concerned about the ANCSA 14 (c)(3) conveyances to the City of Angoon and whether those conveyances have been approved, correct?

Geo Weekley

SWCA Environmental Consultants
257 East 200 South, Suite 200
Salt Lake City, UT 84111
P 801.322.4307 ☐ F 801.322.4308
C 801.819.3560

Lara Bjork

From: Amanda Childs
Sent: Thursday, October 18, 2012 5:26 PM
To: Sheri Murray Ellis; Kari Chalker (kchalker@swca.com); Jamie C. M. Young (jyoung@swca.com); Lara Bjork; Greg Swenson
Subject: FW: Material Sites
Attachments: Off-site borrow and disposal.pdf

See below.

From: Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]
Sent: Thursday, October 18, 2012 4:57 PM
To: Amanda Childs; Brad Rolf
Subject: Fw: Material Sites

FYI - Just though I would pass this along for FAA NEPA work now and in the future! L

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453

----- Forwarded by Leslie Grey/AAL/FAA on 10/18/2012 03:55 PM -----

From: Patricia Sullivan/AAL/FAA
AAL-601, Airports Division
To: AAL-601-Staff
Date: 10/18/2012 11:43 AM
Subject: Material Sites

Happy Alaska Day!

Please see the attached letter from the Advisory Council on Historic Preservation. The letter is consistent with our regional policy of requiring sponsors to include Material sites (and other connected actions such as haul routes and material storage and water areas) during the NEPA process.

We are starting to see a recurrence of draft EAs, and agency coordination letters NOT addressing/ including material site considerations --- but stating that the material will be contractor supplied. or that there is a commercial pit in the area. This does not absolve the FAA or the sponsor from responsibility for addressing the affects of expanding an existing commercial material source and the material haul route as part of the FAA's federal action.

While we understand that it is not possible to predict all potential material sites that a Construction contractor might include in the bid proposal, a thorough consideration of potential material sites including the potential resource affects minimizes having to conduct supplemental field work, agency consultation and analysis after a construction contract has been awarded.

Material sites identified post award are still part of FAA's federal action. A supplemental EA, and agency coordination and documentation (and compliance with applicable environmental laws) is be necessary because of material sources are connected action whether they are identified before or after contract award.

As we are all aware, there are tremendous schedule pressures once a contract is awarded including the national focus on drawing funds down, timely grant close outs and the looming 2015 RSA deadline. There are schedule pressures for resource and regulatory agencies, and sponsor environmental staff as well. Time and resources agencies, and sponsor staff are asked to spend on changes after contract award, diverts their resources from getting through reviews etc. on upcoming and current year projects.

The Contractor for the Kotzebue RSA project is now considering a material source just south of the area that was evaluated in the EA. This site has high potential for artifacts (it is along a beach ridge & part of the Kotzebue Archeological District) --- meaning that should the contractor proposes use this site, an archeological survey would have to be completed (which based on discussions with Ryan Anderson would likely not occur until late May, or early June 2013), an amendment to mitigation agreement, and possible data recovery could be required before this site could be approved for use for the Kotzebue RSA project. It appears that it may have been reasonable to assume that contractors might be interested in using this site previous geo-technical investigations took place at this location. Bruce and I estimate that the earliest a supplement EA could be approved for this new site is July 2013 I am not mentioning this example to place blame but rather to use a recent ongoing example to highlight the concern.

I realize that none of us have an accurate crystal ball and these situations will continue from time to time; however, a renewed & increased emphasis on a thorough investigation of potential material sources will help minimize the post construction supplemental work and reduce the potential for construction delays. I request our project engineers emphasize to Sponsors the need to include any potential material sites as part of the project scope.

I will be sending a similar message to DOTPF engineering and environmental managers.

Let me know if any of you have questions on this.

Thanks,

Patti Sullivan
Environmental Program Manager
Airports Division
Alaskan Region FAA
907-271-5454

----- Forwarded by Patricia Sullivan/AAL/FAA on 10/18/2012 10:26 AM -----

From: "Duvall, Shina A (DNR)" <shina.duvall@alaska.gov>
AAL-601, Airports Division
To: Patricia Sullivan/AAL/FAA@FAA,
Cc: "Mulcahy, Laurie A (DOT)" <laurie.mulcahy@alaska.gov>
Date: 10/18/2012 09:27 AM
Subject: RE: Bio

Thanks Patti! Also, I am compiling resources to put on a CD for workshop participants and I came across this, which I thought I would just send along to you and Laurie just for your files. I'm in the office today prepping for the workshop, but assuming I get everything done, will probably take today's holiday time tomorrow... ☺ Happy Alaska Day!

s.

From: patricia.sullivan@faa.gov [<mailto:patricia.sullivan@faa.gov>]
Sent: Wednesday, October 17, 2012 4:07 PM
To: Duvall, Shina A (DNR)
Subject: Bio

Shina,

Attached is a Bio. I hope to finish the power point and get it to you tomorrow.

Patti Sullivan

Environmental Program Manager
Airports Division
Alaskan Region FAA
907-271-5454

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

January 25, 2002

Ms. Emily Wadhams
State Historic Preservation Officer
Vermont Division for Historic Preservation
National Life Building, Drawer 20
Montpelier, VT 05620-0501

Dear Ms.  Wadhams:

I would like to reply to your question about the applicability of the Section 106 process to off-site borrow and disposal areas.

It is our opinion that, if the location of the specific source of fill or disposal site is reasonably foreseeable, the Federal agency must include such location in the Area of Potential Effects (APE). If such location is not reasonably foreseeable prior to the approval of the undertaking or the release of undertaking funds, the Federal agency must still consider the effects to historic properties on such sites either through a previously agreed process or through the other post-review discovery provisions of the Section 106 regulations.

When the Location of the Borrow or Disposal Sites is Reasonably Foreseeable Prior to Approval of the Undertaking or Release of Funds

The reasoning behind our position, that those reasonably foreseeable borrow and disposal sources must be included in an undertaking's area of potential effects, is grounded in law and regulation. Section 106 of the NHPA broadly calls for Federal agencies to "*take into account the effect of the undertaking on any [historic property].*" 16 U.S.C. § 470f (emphasis added). This statutory language does not place any limits on either the location of the historic property affected, or its physical distance from the main project. There is nothing in the statute or the implementing regulations that exempts historic properties located at off-site areas, or at lands privately owned, from being considered.

Consistent with the cited statutory language, the Section 106 regulations require Federal agencies to make a "*reasonable and good faith effort*" to carry out appropriate identification efforts within the APE, which is defined as the "*geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.*" 36 C.F.R. §§ 800.4(b) and 800.16(d) (emphasis added). A key phrase in the definition of APE is the undertaking's potential to "*directly or*

indirectly cause alterations" to historic properties, based on the professional's judgment about the nature of the undertaking and the kinds of impacts it could have. We also note that this is consistent with the requirement under Section 110(a)(2)(c) of the National Historic Preservation Act (NHPA) that Federal agencies "ensure that the preservation of properties not under the jurisdiction or control of the agency, but subject to be potentially affected by agency actions are given full consideration in planning." 16 U.S.C. § 470h-2(a)(2)(c).

When the Location of Borrow or Disposal Sites is Not Reasonably Foreseeable Prior to Approval of the Undertaking or Release of Funds

If the location of such borrow or disposal sites cannot be reasonably foreseen, we believe the Federal agency still must consider the effects to historic properties at such sites. This could most effectively be done in accordance with the post-review discovery provisions of the Section 106 regulations. 36 C.F.R. § 800.13. We note that those post-review discovery provisions allow agencies to address adverse effects to such historic properties through a previously agreed process. 36 C.F.R. § 800.13(a). The Council believes the best approach is for agencies involved in undertakings that will use a borrow or disposal site, to enter into such an agreement. Of course, such a Federal agency could also enter into a Programmatic Agreement for the entire project that may include the insertion of historic property considerations on the ultimate selection of a borrow/disposal bid.

We note that the only case of which we are aware that directly dealt with these issues, reached a similar conclusion regarding the applicability of Section 106 to borrow sites. In The Hopi Tribe v. Federal Highway Administration, et al., (Civ-98-1061), the U.S. District Court for the District of Arizona stated that "an agency's responsibilities under Section 106 ... extend to any historic properties that an undertaking could potentially affect, regardless whether the property is located within the right-of-way." In that case, the Hopi Tribe sought to enjoin further construction of a Federal-aid highway project because material for the project was being obtained from Woodruff Butte, a historic property of traditional cultural and religious significance to it. Damage to the Butte included the removal of a large amount of aggregate, and the destruction of a number of Hopi shrines and archaeological remains. On July 9, 1998, the Court enjoined the Federal Highway Administration from reimbursing the Arizona Department of Transportation for the \$6 million project without first complying with the requirements of Section 106, despite the fact that the Butte is privately-owned and a commercial operation. The Court found that even where the location of a material source is not reasonably foreseeable at the time the Federal agency approves a project, the agency has a continuing obligation to consider the project's effects on historic properties under the post-review discovery provisions of the Section 106 regulations.

Other Considerations

There are various factors related to specific application of the Council's regulations regarding borrow and disposal lands including, among others: (a) whether the borrow/disposal lands are privately or publicly owned, (b) whether the undertaking will create a new source of borrow material or a new disposal site, (c) whether the lands will be exclusively used for the

undertaking or will be accommodating various other projects, and (d) the amount of fill or disposed material connected to the undertaking. While these factors may rightfully influence effect determinations and/or how adverse effects are resolved, they still do not eliminate the basic requirements to identify historic properties on the borrow or disposal lands and consider them in the Section 106 process. As stated above, Section 106 requires Federal agencies to take into account direct or indirect effects to historic properties, and does not limit consideration according to location of the sites.

I hope you find this advice helpful in your discussions with Federal agencies about the applicability of Section 106 review to borrow and disposal sites in Vermont. We will be glad to discuss our position with you further at your convenience.

If you have any questions, do not hesitate to call either Dr. Tom McCulloch in Washington (202-606-8505), or Ms. Carol Gleichman in our Denver office (303-969-110).

Sincerely,



John M. Fowler
Executive Director

Lara Bjork

From: Angoon Airport EIS mailist@angoonairporteis.com
Sent: Monday, October 22, 2012 11:39 AM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (10/22/12)

FAA is pleased to announce that we have posted the October Website Project Update to our [Angoon Airport project website](#). You can view the update by clicking on the link below:

[October Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page.

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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October 2012 Project Update

We know that progress on the Angoon Airport EIS is a topic of high interest and concern for Angoon residents. Look for an updated schedule in our next newsletter coming in November 2012.

As the lead federal agency, the FAA is responsible for the preparation of this EIS. At this point, approximately half of the sections that go into an EIS have been completed. The FAA also conducts extensive content and legal review on the EIS to ensure a strong, legally defensible document. Once all sections are finalized, the cooperating agencies will review the EIS and provide feedback. This takes time, but it is worth the wait because it allows us to get the EIS right in the beginning, which reduces the amount of revisions and changes required later and ultimately saves us time in the long term.

Want to know more about what goes into an EIS? Check out the FAA's guidance here:

- [FAA Order 5050.4B](#)
- [FAA Order 1050.1E](#)
- [FAA Desk Reference](#)

This month we also want to thank Alberta Saleem, Juanita Silva, and Sharon Powers for their support during our last visit to Angoon. Thanks as well to Alan Zuboff for sharing the Deisheetaan story with us. We always enjoy hearing everyone's questions and ideas. If you have additional thoughts to share, please call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov. Thank you for your interest in the project!

Best regards,

Leslie Grey

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Lara Bjork

From: Angoon Airport EIS [mailto:maillist@angoonairporteis.com]
Sent: Wednesday, November 14, 2012 1:22 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News, Announcements, & Updates (11/14/12)

We are excited to announce that the latest version of the Angoon Airport Environmental Impact Statement Newsletter, published by the Federal Aviation Administration - Alaskan Region Airports Division, is now available on our website. Please visit www.angoonairporteis.com or click the link below to check it out!

Click [HERE](#) for the November 2012 Newsletter

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page.

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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ANGOON AIRPORT

Environmental Impact Statement



A Message from the FAA

Hello Angoon Community!

As we wrap up this year's visits to Angoon, we want to thank everyone for their warm hospitality and all the concerns, comments, and stories shared with me, Amanda Childs, Jamie Young, and Mike Edelmann during our last visit in September. We always enjoy our visits and want to give a special thanks to everyone who stopped in to talk with us, as well as to the ACA for letting us use their facility during our stay.



We will continue to use this newsletter to address the questions we receive about the project. But, as you read through this quarter's newsletter, you'll notice we've also added a few new sections on regional and local news, as well as some community interviews. We hope you'll enjoy these new additions and share your own news and points of view in coming months.

We'll be back next year and look forward to seeing everyone then!

Best wishes,

*Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager*

Project Update

As many of you know, we visited Angoon in September for our last community visit of the year. We got lots of good questions while we were there, with one of the main concerns being, "when will the airport be built?" Construction of the airport is dependent on the completion of the EIS, which we are currently working hard to complete. At this point we're over halfway done with the analysis, writing, and review of the Draft EIS. Once the Draft EIS is complete, we will send it to agencies such as the U.S. Forest Service and the U.S. Army Corps of Engineers for their review and comment. Once their comments are addressed, the Draft EIS will then be made available for public review and comment. Following this public review, FAA will address your comments, produce a Final EIS and publish a Record of Decision that determines whether or not to authorize construction of the airport. Next quarter's newsletter will provide a schedule with anticipated dates for these key milestones and we'll be sure to keep you up-to-date as the project progresses.

Stay Involved with the Project!

As always, you can submit comments online through our website, www.angoonairporteis.com, or you can contact Leslie Grey, the FAA project manager, directly via email: Leslie.Grey@faa.gov or phone: 907-271-5453. We will be in touch with the community at important milestones in the project as well as other times just to check in. We are also on Facebook and are posting small updates as often as possible. Join the conversation!

www.facebook.com/AngoonAirportEIS



Life in Angoon

During our September visit we met **Anji Gallanos**, who works as the Juneau School District Grants Coordinator and Tlingit Haida Head Start Coordinator. She shared her perspective on Angoon's Head Start program and the challenges associated with current transportation options.



Anji Gallanos (left), meeting the Angoon Airport EIS team (Jamie Young, Leslie Grey, and Mike Edelmann) at the seaplane base.

Q: How long have you served in this role and what does it involve?

I've been travelling through Southeast Alaska for 5 years providing educational consultation, teacher training, and program support.

Q: What services do you provide to Angoon?

When I was in Angoon in September, I provided teacher training, addressed classroom-based issues, and collaborated on a special needs program with the local Head Start teachers.

Q: Can you tell me more about the Head Start program in Angoon?

The program provides preschool education to local children. Right now, it has 18 kids and three teachers in a nice building space and is well supported by local officials. The program shut down a few years ago due to lack of enrollment but has since picked back up. The program also provides home visits, nutritional counseling, meals, and other support services. I'm currently also working with the local Head Start teachers. The teachers are all in distance education

programs, and I help them with the documentation and observations they need to meet their educational goals.

Q: Are there any services you cannot provide or that are difficult to provide to Angoon?

The difficulties with working in Angoon are seasonal and locational. I have a contract with the Tlingit Haida Head Start program to go to Angoon four times per year. My new role is to help provide Angoon with more supervision and support, since Head Start hasn't been able to go there more than once per year. And when you can't work consistently with a program, it makes change more difficult to implement. The best way to work is on-site.

But I know that it's going to be challenging. I can only travel [to Angoon] by ferry or floatplane, so it can be hard to get out there due to the remoteness and time involved with travel. I've worked previously in other childcare fields and taught remotely and haven't been able to travel due to conditions, so that is a concern. Plus, it adds another day of travel on both sides of my trip. Programmatically, Head Start is paying my hourly salary for travel and per diem and ferry or floatplane costs—so any delays or lengthy travel time extends the costs and can increase the potential for scheduling conflicts that cause me to spend less time in Angoon than I'd like.

It's also difficult to provide support when you don't have strong online communications. For example, I can communicate with the teachers via email, and all of Head Start's programs use online planning tools, but if there are internet problems and [Angoon's] system is down I can't review their planning forms.

Q: What else should we know about Angoon?

It's difficult to get classroom supplies to Angoon. Recently, the vacuum broke, and it happened that there was a teacher that was in Juneau that could take a vacuum back to Angoon. Otherwise I would have had to ship it out, and, if the floatplane or ferry weren't running or it was winter, it could take a long time to get delivered. It can be really costly and is not very feasible to send supplies other than via floatplane, so what do you do when you can't fly? Wait? All those small, needed items, like paper towels, add up and can be a real challenge to get during the winter.

To follow up on the topic of education and transportation in Angoon, we also interviewed **Les McCormick**, who has served as the principal for Angoon Schools for the past 3 years. He also serves as the special education director for the Chatham School District, food service director, transportation director, and federal grants coordinator for title programs.

Q: What are Angoon schools like?

We currently have 67 kids from grades K–12 and eight staff members. Our school population is shrinking, however. Six years ago we had a school population of 180 kids, and we're down six students from last year (a 10% decrease). We are picking up numbers in our preschool and kindergarten programs, but those parents don't tend to stick around. Families are moving out so that they can find employment.

Our school works with the Tlingit Haida preschool program and provides special services and testing. If it's out there, we have the ability to offer it. We have interactive classrooms and diversified staff trained in the latest teaching techniques. So our kids get a full education.

Q: What do you see as the biggest successes for Angoon schools?

It's not a particular program or anything, but I think we're making kids feel accountable for the things they're doing. We used to have huge discipline and academic issues. For the first time in our history we only had two Fs given out in the latest grading period. That's unheard-of. But our teachers are dedicated, and I think there's a cultural change going on that shows that we care—which makes the kids care. We've brought in testing, a supplemental reading program, and a structured, sequential language arts program. A structured, sequential math and science program is coming on board soon. Plus, we have a very supportive board that is unified regarding the need to have the same curriculum and consistency in what is offered.

Q: Are Angoon schools meeting state educational standards?

Historically, we never met the adequate yearly progress (AYP) targets, but from 2009 to 2010 we passed. Last year we missed the AYP by one student in math, so we're actively working to see what needs to be addressed. The proof will be in this year's testing.

Q: What is the biggest challenge for Angoon schools?

Our greatest challenge is the ability to offer live classes at different sites at the same time. Right now our classes are delayed so you don't get the full enrichment of the class. We're about a year away from offering those classes simultaneously, however.



Angoon High School. Photo credit to Alaska Department of Commerce, Division of Community and Regional Affairs © 2012

Q: How would the proposed airport affect education in Angoon?

The airport would help us with transportation for schools and keeping kids involved. Transportation is the single biggest expense we've got, and relying on the state marine highway system is fine but not something we really like. Ground airports have greater reliability as opposed to water planes. There have been times we've had to cancel going places because the ferry or floatplanes don't come in. I think the airport will also provide long-term economic stability and give us the opportunity to offer new programs at the school, such as aviation, because we now have a place that kids can go to and get instruction. All of these are key components to improving our educational system.

Q: What else should we know about Angoon schools?

We're proud of what we're doing, proud of our accomplishments, and excited about the future.

We hope you enjoyed this section. If you have a response to these interviews or suggestions for someone else to interview next time, please let us know!

Regional News

As part of its analysis of project effects, the Angoon Airport EIS will consider energy and natural resource usage, as well as the abundance and availability, access, and competition for subsistence resources. The following news articles provide some context and background information for these topics.

Tracking Energy and Fuel Prices in Alaska

Rising fuel and energy costs are an ongoing challenge for many rural Alaska communities and households. To help people understand fuel price trends, the Alaska Department of Commerce, Community, and Economic Development collects and reports fuel prices for communities across Alaska on a bi-annual basis. The latest report, available as of July 2012 at

http://commerce.alaska.gov/dcra/pub/Fuel_Report_2012_July.pdf

provides the following findings and trends for Angoon, Southeast Alaska, and the state of Alaska as a whole:

- Heating fuel and gasoline prices in Alaska remain consistently higher than national averages (e.g. \$5.83 versus \$4.10 per gallon for heating fuel and \$6.10 versus \$3.48 per gallon for gasoline).
- Since 2005 Alaska's average cost for heating fuel has increased 68%, while gasoline has increased 59%.
- Alaska heating fuel and gasoline prices increased 5% and 6%, respectively, from last year's prices. However, Southeast Alaska has experienced stable to slightly declining prices over the same period of time.
- Excluding northern communities (many of which have subsidized fuel costs for residents), Southeast Alaska had the lowest average heating fuel and gasoline prices in July of 2012.
- Angoon's reported heating fuel costs were \$5.32 per gallon in July of this year; reported gasoline prices were \$5.09 per gallon. These prices are 9% and 17%, respectively, below the statewide average cost, and are identical or slightly elevated (2% increase for heating fuel) over reported January 2012 prices in Angoon.

Subsistence and the Kanalku Environmental Assessment

The Secretary of Agriculture's and Secretary of Interior's recent decision to defer action on Kootznoowoo Inc.'s petition for extraterritorial jurisdiction in favor of working toward a negotiated solution represents the latest milestone regarding salmon fishing and subsistence concerns in state-managed waters near Angoon. The decision, found here

<http://alaska.fws.gov/asm/pdf/etj/secletter.pdf>

concur with the recommendations of the Federal Subsistence Board to address these issues at the local level using a mediator, but it requests that twice-yearly status reports be made to the board to demonstrate progress. Failure to make progress could result in alternative measures.

In related news, U.S. Forest Service authorized construction of fish passage improvements to ease fish passage to Kanalku Lake, a subsistence area used by Angoon residents for sockeye salmon fishing, in February of this year with their release of the Kanalku Environmental Assessment and finding of no significant impact. More on this project can be found on the U.S. Forest Service website here:

<http://www.fs.fed.us/nepa/fs-usda-pop.php/?project=26177>



Kanalku Falls

Community Highlights

We love visiting with the community when we travel to Angoon, and always enjoy our time at the Senior Center. Our September visit was no exception. We want to particularly thank Alan Zuboff for sharing the Deisheetaan story with us and Frances Daniels for providing us with her recipe for her delicious strawberry bread. We've included the recipe, below, so that everyone else can enjoy it as much as we did!



Frances Daniels and Leslie Grey at the Angoon Senior Center

Frances' Strawberry Bread

Step 1: Combine the following ingredients in a bowl.

- 3 c. flour
- 2 c. sugar
- 1 Tbsp. baking soda
- 1 tsp. cinnamon
- 1 tsp. salt
- 1 c. walnuts (optional)

Step 2: Make a well in the dry ingredients and add in the following:

- 3 eggs, lightly beaten
- 1 ¼ c. vegetable oil
- 2 pints strawberries, thawed including juice

Step 3: Stir until mixture is well mixed. Pour into two greased bread pans. Bake 1 hour at 350 degrees. Cool and serve with butter or cool whip.

Do you have a favorite recipe you'd like to let others know about? If so, send it our way and we'll publish it in the next newsletter. We also welcome any other community information, events, stories, or news that you'd like to share.

How to Contact Us

If you have any questions about the proposed project or the EIS, please contact Leslie Grey.



FAA Project Manager

Leslie Grey – AAL 614
Angoon Airport EIS
222 West 7th Avenue
Box #14
Anchorage, AK 99513-7587
Telephone: 907-271-5453
Fax: 907-271-2851
Email: Leslie.Grey@faa.gov

Lara Bjork

From: Angoon Airport EIS [mailto:maillist@angoonairporteis.com]
Sent: Tuesday, November 20, 2012 8:07 AM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



November Newsletter Correction

The November newsletter incorrectly stated that a fish ladder would be constructed to Kanalku Lake. The newsletter has been updated to fix this error.

Click [HERE](#) for the November 2012 Newsletter

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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Lara Bjork

From: Jamie C. M. Young
Sent: Tuesday, January 08, 2013 5:07 PM
To: Lara Bjork
Subject: Angoon HazMat: capacity of existing sewage treatment facility

On 11/28/12 I spoke with Albert Kookesh III, Angoon City Grants Administrator, and he confirmed that the existing sewage treatment facility has sufficient capacity to accommodate the additional human waste that would be generated during construction. We estimated a maximum of 2 construction seasons (184 days total) with a maximum of 88 workers using a port-a-potty that would need to be emptied periodically at the treatment facility.

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎ F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Friday, January 25, 2013 8:41 AM
To: Lara Bjork
Cc: Amanda Childs; Kari Chalker; Sue Wilmot (swilmot@swca.com)
Subject: Angoon: status of barge landing improvements project

On November 28, 2012, I spoke with Albert Kookesh III (City Grants Administrator). He said that the barge landing improvements project is currently in the planning/design phase and is likely 1-2yrs away from construction. I also noted this in the list of reasonably foreseeable future projects for the Cumulative Impacts chapter.

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
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 Please consider the environment before printing this email

Lara Bjork

From: Jamie C. M. Young
Sent: Thursday, November 29, 2012 3:17 PM
To: Sue Wilmot (swilmot@swca.com); Lara Bjork
Cc: Amanda Childs; Kari Chalker
Subject: Angoon Socioeconomics: livability of abandoned homes

The Census says that there are 88 abandoned homes in Angoon. I spoke with Albert Kookesh III (City Grants Administrator). In his opinion 10-15% of the abandoned/dilapidated homes could be repaired to be livable, but in their current condition he wouldn't consider any of them livable.

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎ F 907.279.7922



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See us on LinkedIn: <http://www.linkedin.com/company/swca-environmental-consultants>

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Lara Bjork

From: Angoon Airport EIS [mailto:mailist@angoonairporteis.com]
Sent: Tuesday, December 11, 2012 1:35 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (12/11/12)

FAA is pleased to announce that we have posted the December Website Project Update on our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[December Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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December 2012 Project Update

As we get ready to say goodbye to 2012 and welcome a new year, I would like to thank you all for your comments, questions, and support as we work on the public draft EIS. We've made good progress and are looking forward to continuing this work in the coming year!

To close out this year, we wanted to briefly discuss the concept of a "preferred alternative." The Council on Environmental Quality defines the preferred alternative as "the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors" (see answers to Questions 4 and 5 in [NEPA's 40 Most Asked Questions](#)). Designation of a preferred alternative allows the public and agencies to know which alternative the FAA is likely—but not guaranteed—to select for the record of decision. The FAA does not take the identification of a preferred alternative lightly.

We have been asked which alternative the FAA is likely to choose. At this time, the FAA does not intend to identify a preferred alternative in the public draft EIS. Because of the complexities of this project, the FAA intends to solicit feedback from the public and agencies before making this identification. The airport sponsor, the Alaska Department of Transportation and Public Facilities, has identified a proposed action (Airport 3a with Access 2). But the FAA could choose any of the alternatives in the final EIS.

We hope this information is useful to you. And, as always, we enjoy hearing from everyone. If you have any additional thoughts to share, please call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov. Thank you for your interest in the project!

Best regards,

Leslie Grey



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RECORD OF CONVERSATION	Time:	Date: 11/28/12 and 12/17/12
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TYPE	<input type="checkbox"/> In-person Conversation	<input type="checkbox"/> Meeting/Conference	<input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	<input type="checkbox"/> E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)
-------------	---	---	---	--

Location of In-person Conversation, Meeting, or Conference:

Name of Persons Contacted or in Contact with You Albert Kookesh III, City Grants Administrator	Organization City of Angoon	Telephone No.
--	---------------------------------------	----------------------

Subject: Use of Angoon area streams for drinking water

Summary of Conversation

Albert Kookesh III confirmed via telephone on 11/28/12 that there are approximately 3 private landowners in the vicinity of alternative Airport 12a with Access 12a that could be using the small streams on that peninsula as drinking water supply. On 12/17/12 he provided names for M.K. Getgood and Dan Salyer, but wasn't sure if there was a third landowner.

Action Required:

Name of Person Documenting Conversation: Jamie Young

Lara Bjork

From: Jamie C. M. Young
Sent: Monday, February 04, 2013 8:38 PM
To: Lara Bjork
Subject: 12/18/12: Angoon City Council approved use of Auk'Tah Lake water for dust suppression/concrete mixing
Attachments: Angoon City Council meeting minutes december 2012.docx

On 12/18/12 the Angoon City Council voted unanimously to allow the use of water from Auk'Tah Lake for dust suppression and concrete mixing during construction of the airport and access road. See attached approved meeting minutes obtained from Albert Kookesh III (City Grants Administrator) on 2/4/13.

Angoon City Council meeting

December 18, 2012

- Opening Prayer 310pm by Richard George
 - Roll Call – Jesse Daniels, Matthew Kookesh, Richard George, Ed Jack, Kevin Frank
 - Approval of Agenda – 5 yea
 - Approval of Minutes – November 20, 2012 – question to approve 5 yea
 - Councilmen Randall Gamble arrived 320pm
 - Persons to be heard
1. Lauren Sill from the Division of Fish and Game. Quantify Subsistence data. Last time in Angoon 1996-got approval to do 5 communities in Southeast Alaska with Angoon being one of the five - Voluntary survey-ID numbers are used for houses-no names will be used on subsistence survey - Come back between January and March will hire 3 people from Angoon to work with us to collect data. Also included is a mapping component to see where people are gathering or harvesting subsistence – the fall we will share the data we collected. We are asking for council approval to conduct surveys and when would be a good time to return to community. Survey will cover 2012 year and data will be used for Boards of Fisheries or Forest Service if something comes up but it is also good to have this data available. Motion to allow F&G to survey Angoon this February made by Matt Kookesh – 2nd Jesse Daniels - 6 y 0 n Will contact Mayor to finalize dates
 2. Lynn Kenealy – RUBA Assessment helps get funding for water projects-assesses management quality. Assessment can help get funding but it is also valuable for managing water. Working with finance staff and finally met water operators. Will come back next quarter to do Water Utility Rate Study-determine per customer how much water truly cost.
1. Reports
 - VPSO Report – need to get a disaster plan together-VPSO received authorization to get a 6500-7500 watt generator for disaster relief. Wants to create a safe zone by Assembly of God Church. Working on Disaster plan. Needs to improve 911 phone lines or get a GPS phone for constant contact. Talked with School in regards to Connecticut school shooting to develop an emergency plan for schools. Would like an upgrade to radio in cruiser. Needs to find a place to store generator-needs a disaster building.
Report Approved
 - Planning and Zoning – wanted to thank council for employment and is available for labor work.
 - Grant Writer – Capital Improvement Projects – Look at previous year’s list and determine this year’s needs. Think we should leave Thayer Lake Hydro should drop Ruth Lake Hydro-Kootznoohoo Inc. did not share EIS and if Kootz is willing to share EIS on Thayer then we can apply for funds also but will not turn in CIP without Kootz EIS. Mayor will check with Kootz to see if they are willing to share. CIP list should be on agenda for next few months. Cut Ruth Lake. Rec’d Front Street Money – Mayor would

like to ask for more money for Front Street. Need to get an MOA with Tribe and Corporation.

Report Approved

- Accounting Department
 1. Rose Williams – Oral Report – just returned will be ordering tax material so we can get w2 out before end of next month.
 2. Minnie Mercurief
 3. Christel Silva – Oral Report – filled in for Minnie and Rose – figured out QuickBooks and updated program without spending money. Finished Costco card application.
- City Clerk
- Mayor’s Report – SEACC letter regarding Greens Creek-Councilmen Kookesh wants city to be careful when dealing with environmental lobby.
- Wants to renovate old clinic building-\$1000. For supplies-need to determine full cost-labor-installation. Need a plan for building. Decided to table this pending more information. Will need to amend budget to pay for renovation-be best to wait until after winter for renovation.
- EIS for Auk Tah Lake – FAA is seeking more information regarding the water of Auk Tah Lake-they are requesting water from the lake for Dust Suppression and concrete mixing. Anything that we at city can do to allow an airport is built in Angoon as soon as possible. Council approves usage of water for Dust Suppression and Concrete mixing 6 yes 0 no
- ATM information tabled pending council inquiry
- Christmas Bonus – Roll Call vote for \$200 Christmas bonus for employees who have worked for city for more than one calendar year. Motion for Christmas bonus made by councilmen Daniels- JD yes – MK no – RG(mayor) No – RG no – EJ no – KF no 1 yes 5 no
- Adjournment motion made by MK

Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, January 09, 2013 4:02 PM
To: Lara Bjork
Subject: FW: Angoon Airport: final Construction Methods and Issues Report
Attachments: Construction_Methods_and_Issues_01-03-13.pdf; bridge_effects_01-03-13_DOT&PF.docx

From: Jamie C. M. Young
Sent: Thursday, January 03, 2013 3:52 PM
To: Verne Skagerberg (verne.skagerberg@alaska.gov); Pat Carroll (Pat.carroll@alaska.gov); Janet Schempf (Janet.schempf@alaska.gov)
Cc: Greg Swenson; Hanson, Brian; 'Leslie.Grey@faa.gov'; Amanda Childs
Subject: Angoon Airport: final Construction Methods and Issues Report

Hello Verne, Pat, and Janet,

We have completed revisions to the Angoon Construction Methods and Issues Report based on your comments and our meetings with you in-person and over the phone. Included in these revisions are edits to the permanent bridge discussion and addition of the temporary bridge discussion, as well as updated cost and quantity estimates. This is our final version of this deliverable.

Also, I've attached our bridge_effects.docx. These are the assumptions that we're using for our EIS analysis regarding effects from the permanent and temporary bridge construction. If you see that we've missed potential effects that should be analyzed in the EIS, please provide that input at your earliest convenience.

Thank you for your time, sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
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CONSTRUCTION METHODS AND ISSUES

ANGOON AIRPORT ENVIRONMENTAL IMPACT STATEMENT

Prepared for:

SWCA Environmental Consultants
1205 East International Airport Road, Suite 103
Anchorage, Alaska 99518

Prepared by:

DOWL HKM
4041 B Street
Anchorage, Alaska 99503

DOWL Project Number 1123.59761.02

January 2013

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	ALTERNATIVES	1
2.1	Airport Alternative 3a.....	2
2.2	Airport Alternative 4	3
2.3	Airport Alternative 12a.....	3
3.0	CONSTRUCTION MATERIALS AND TYPICAL SECTIONS.....	7
3.1	Construction Materials	7
3.2	Typical Section.....	7
3.3	Right-of-Way.....	9
3.4	Bridge.....	9
3.5	Area Affected by Fill.....	15
3.6	Quantities	16
4.0	MATERIAL SOURCES	17
5.0	MATERIAL PLACEMENT	18
5.1	Construction Equipment and Fueling.....	18
5.2	Construction Techniques	19
5.3	General Work Sequence	20
5.4	Hauling Material	21
5.5	Temporary Bridge	22
5.6	Drainage	22
5.7	Erosion and Sediment Control	23
5.8	Hazardous Materials.....	23
6.0	HAUL ROUTE	24
6.1	Barge Unloading Area.....	24
6.2	Haul Route Maintenance.....	25
7.0	CONSTRUCTION STAGING	25
8.0	CONSTRUCTION SCHEDULE.....	25

LIST OF FIGURES

Figure 1: Airport and access road alternatives..... 5
Figure 2: Typical section for runway..... 8
Figure 3: Typical section for access road..... 8
Figure 4: Access 2 road bridge profile.....11
Figure 5: Access 3 road bridge profile..... 13

LIST OF TABLES

Table 1: Estimated Disturbed Area 15
Table 2: Estimated Materials Required for Project..... 16
Table 3: Estimated Barge Trips..... 18
Table 4: Estimated Truck Trips..... 21

LIST OF APPENDICES

- Appendix 1: Quantities
- Appendix 2: Drainage Memo
- Appendix 3: Cost Estimates
- Appendix 4: Materials

ACRONYMS

- AASHTO: American Association of State Highway and Transportation Officials
- ADF&G: Alaska Department of Fish and Game
- ADT: average daily traffic
- ANCSA: Alaska Native Claims Settlement Act
- BMP: best management practice
- DOT&PF: Alaska Department of Transportation & Public Facilities
- EIS: environmental impact statement
- ESCP: Erosion and Sediment Control Plan
- FAA: Federal Aviation Administration
- Mph: miles per hour
- N/A: not applicable
- ROW: right-of-way
- RSA: runway safety area
- SWPPP: Storm Water Pollution Prevention Plan
- USFS: United States Forest Service

1.0 INTRODUCTION

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) to assess environmental impacts associated with the proposed and alternative locations for an airport to serve Angoon, Alaska.

The purpose of this *Construction Methods and Issues* report is to provide a brief description of the preliminary engineering work performed so far, and to discuss potential construction methods and schedules. This report was prepared to provide planning-level information to the resource specialists assessing the impacts that could result from development of the proposed airport. This report does not contain detailed engineering, but instead provides the details necessary for the EIS analysis. More detailed design engineering would be conducted independent of the EIS if the FAA approves an action for implementation.

This report has been prepared under the direction of the FAA and is being coordinated with the Alaska Department of Transportation & Public Facilities (DOT&PF) among others.

2.0 ALTERNATIVES

The EIS being prepared by the FAA includes an assessment of three airport alternative sites. Two of the three sites are within the U.S. Forest Service (USFS)–managed Admiralty Island National Monument and Kootznoowoo Wilderness Area. The other site is located on the Angoon Peninsula.

Each airport alternative would have the same criteria and be designed for airport reference code B-II. The runway would be 3,300 feet long. The specifications for the airport would be for aircraft weighing less than 12,500 pounds and have an approach visibility minimum of not less than 3/4 statute mile. The EIS being prepared for this project considers the near-term construction of a 3,300-foot-long runway, but will assess the viability of each potential airport to accommodate future expansion to 4,000 feet. The site layouts analyzed would accommodate 4,000 feet; however, impacts are only evaluated for the 3,300-foot alternatives.

Each airport alternative would require construction of an access road. Airport Alternatives 3a and 4 would each have two access road alternatives. Airport Alternative 12a would have one access road alternative. The initial road would be designed as a major access road with average daily traffic (ADT) less than 400 and a design speed of 40 miles per hour (mph). For effects, the EIS assumes that this initial road would include 9-foot lanes with 1-foot shoulders. If needed in the future, the road would be upgraded and designed as a rural, major collector with a design speed of 40 mph and an ADT greater than 400. The current standard for this type of road includes 10-foot lanes with 5-foot shoulders as well as an additional 5-foot clear zone with 4:1 slopes. Beyond the clear zone, slopes may be steepened to minimize the road's footprint.

The minimum ROW width for access roads to the airport would be 150 feet in rolling terrain. The maximum ROW width would be up to 250 feet as necessary to accommodate the roadway and related features such as drainage facilities, cut and fill slopes, rock catchment areas, driver recovery zones, snow storage, utilities, and line of sight for driver safety. The entire ROW will be cleared of all trees and vegetation.

The airport alternatives being assessed in the EIS are described below. A map showing their location is provided as Figure 1.

2.1 Airport Alternative 3a

This alternative would be located about 3 miles east of Angoon within the Admiralty Island National Monument and Kootznoowoo Wilderness Area. The runway for this alternative would be configured in a northeast-southwest direction. Constructing the airport at this location would require the longest road access from Angoon; approximately 4.5 road miles from the end of the Bureau of Indian Affairs (BIA) Road on the existing road network. This alternative is also the DOT&PF's proposed action.

Airport Alternative 3a would have two access alternatives:

1. Access Alternative 2 would be approximately 4.4 miles long, wrap around the southern end of Favorite Bay, and include one bridge over Favorite Creek.

2. Access Alternative 3 would be approximately 4.8 miles long and follow a similar path with a bridge over Favorite Creek. However, it would be located more inland and have a shorter bridge crossing.

2.2 Airport Alternative 4

This alternative would be located roughly 4.3 miles southeast of Angoon in the Admiralty Island National Monument and Kootznoowoo Wilderness Area. The runway for this site would be configured in the northeast-southwest direction. Constructing the airport at this location would require construction of approximately 3.0 new road miles from the end of the BIA Road on the existing road network.

Airport Alternative 4 would have two access alternatives:

1. Access Alternative 2 would be approximately 3.0 miles long, wrap around the southern end of Favorite Bay, and include one bridge over Favorite Creek.
2. Access Alternative 3 would be approximately 3.0 miles long and follow a similar path with a bridge over Favorite Creek. However, it would be located farther inland and have a shorter bridge crossing.

2.3 Airport Alternative 12a

This alternative would be located 2.5 miles south of Angoon on the Angoon Peninsula, on Alaska Native Claims Settlement Act (ANCSA) lands managed by Kootznoowoo Inc. The runway for this alternative would be configured in the northwest-southeast direction.

Airport Alternative 12a has one access alternative. Access Alternative 12a would be approximately 0.3 miles long. It would run southwest to the site from the BIA Road, and would be the shortest of the three alternatives.

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Figure 1: Airport and access road alternatives.

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3.0 CONSTRUCTION MATERIALS AND TYPICAL SECTIONS

Any airport and associated access road would be new construction. This would involve disturbing the terrain; removing or felling trees; excavating and disposing of peat and unusable material from the proposed site; and placing embankment, subbase, crushed aggregate base course, and asphalt pavement. The grading and dimensions of the airport would be in accordance with the standards established in FAA Advisory Circular 150/5300-13, *Airport Design*.

3.1 Construction Materials

Material required for airport and road construction would consist of embankment fill, subbase course, crushed aggregate base course, and an asphalt paving surface course. Embankment fill would likely come from either common excavation or rock excavation.

Material from common excavations would be obtained from suitable silt, sand, or gravel that does not require blasting or ripping. Material from rock excavations would be obtained from blasting or ripping rock or boulders.

Subbase course is classified as material that consists of hard durable particles or fragments of granular aggregates that are mixed with fine sand, stone dust, or similar building material.

Crushed aggregate base course and asphalt paving surface course must be clean, sound, durable particles or crushed stone or gravel. They must be free of organics, silt, or clay coatings. They must also meet specifications for wear and durability.

3.2 Typical Section

The fill section for each alternative would be similar. Material for the runway and road would consist of embankment, followed by a subbase course layer, followed by a crushed aggregate surface course, and finished off with an asphalt paving surface course.

The proposed runway for each alternative would be constructed to standards for airport reference code B-II (Figure 2). The runway would be 75 feet wide with 10-foot shoulders. The Runway Safety Area (RSA) would be 150 feet wide and would extend 300 feet beyond the runway ends.

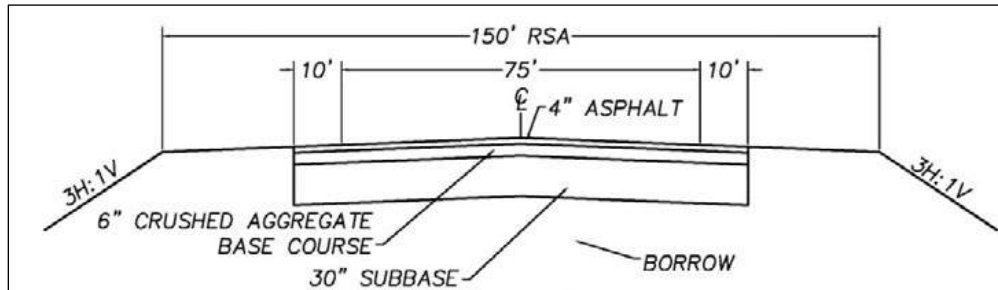


Figure 2: Typical section for runway.

Each access alternative would have the same cross section (Figure 3) with minor variations in the footprint to account for terrain. Each would be designed with two 9-foot-wide lanes and 1-foot shoulders. If warranted, the access alternative could be widened in the future to 10-foot-wide lanes with 5-foot shoulders.

Design criteria for the access road options follow the American Association of State Highway and Transportation Officials (AASHTO) publications *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT \leq 400)*; *A Policy on the Geometric Design of Highways and Streets (Green Book)*; and *The DOT&PF Alaska Highway Preconstruction Manual*.

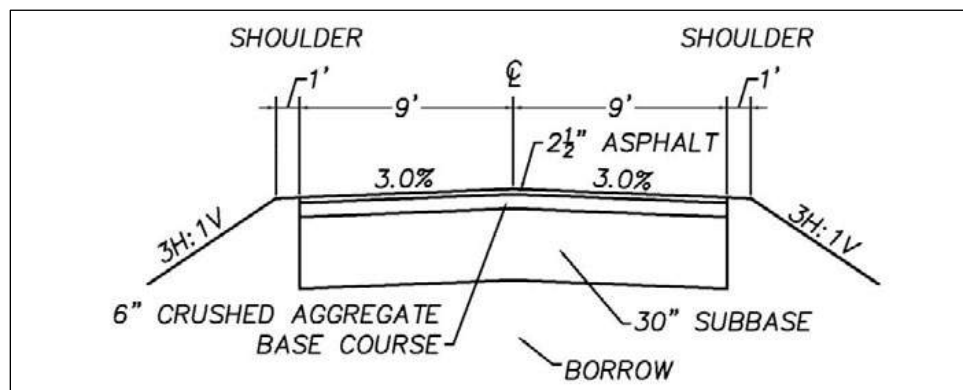


Figure 3: Typical section for access road.

3.3 Right-of-Way

As discussed in Section 2.0, the minimum ROW width for the access alternatives would be 150 feet in rolling terrain. The maximum ROW width would be up to 250 feet, as necessary to accommodate the two 9-foot lanes with 1-foot shoulders, and potential future widening of the roadway. It is assumed that the entire ROW will be cleared of all vegetation to accommodate the initial roadway and related features such as drainage, cut and fill slopes, rock catchment areas, driver recovery zones, snow storage, utilities, and line of sight for driver safety.

It is anticipated that some of the ROW would need to be acquired from Kootznoowoo Inc. to construct a portion of the access road for Alternatives 3a or 4. The other portions of the road ROW for these two alternatives would traverse the Admiralty Island National Monument and Kootznoowoo Wilderness Area.

The land for Airport Alternative 12a would have to be acquired from the City of Angoon, Kootznoowoo Inc., and potentially other land owners. Discussions to acquire this land would be required if this alternative is selected.

Temporary ROW would be required for bridge installation. This ROW is discussed below in section 3.4.

3.4 Bridge

Airport Alternatives 3a and 4 each have a proposed road bridge over Favorite Creek. The bridge would be approximately 650 feet long for both Airport 3a with Access 2 and Airport 4 with Access 2. For Airport 3a with Access 3 and Airport 4 with Access 3, the bridge would be approximately 450 feet long.

The two bridge options built to cross Favorite Creek would be constructed of precast concrete bulb tee girders with 140 foot spans and would rest on steel H piles or steel pipe piles with concrete piers and batter piles (Figure 4 & 5). Alternative Access 2 would have two piers within the stream channel and ordinary high water line, but all other piers would be well outside the ordinary high water line. The Alternative Access 3 bridge structure would not require piers be

placed in the active stream channel or within the ordinary high water line. As design progresses, approach segments could be adjusted shorter or longer and intermediate piers could be moved slightly to accommodate bridge design.

A large crane with a pile-driving hammer would be used for pile foundations. The crane would be located adjacent to the foundations and would not be in the creek during construction. Once foundation piles were in place, concrete piers and abutments could be constructed and girders would be set. Decking would be done from the top side once girders are in place.

A temporary bridge would be constructed over Favorite Creek (see section 5.5). This temporary bridge would be used to move equipment back and forth, facilitate construction of the permanent bridge over the creek, and as a haul route. At both Access alternatives the temporary bridge would likely result in temporary impacts within the active stream channel and ordinary high water. No permanent foundations would be required. A temporary access would be constructed to allow equipment to get down to the stream bed so piles could be driven at support locations. The temporary bridge would not be removed until all hauling is complete, near the end of the project. It is anticipated that the ROW would be temporarily increased in the vicinity of the permanent bridge to make room for construction equipment, the temporary access road, and construction of the temporary bridge.

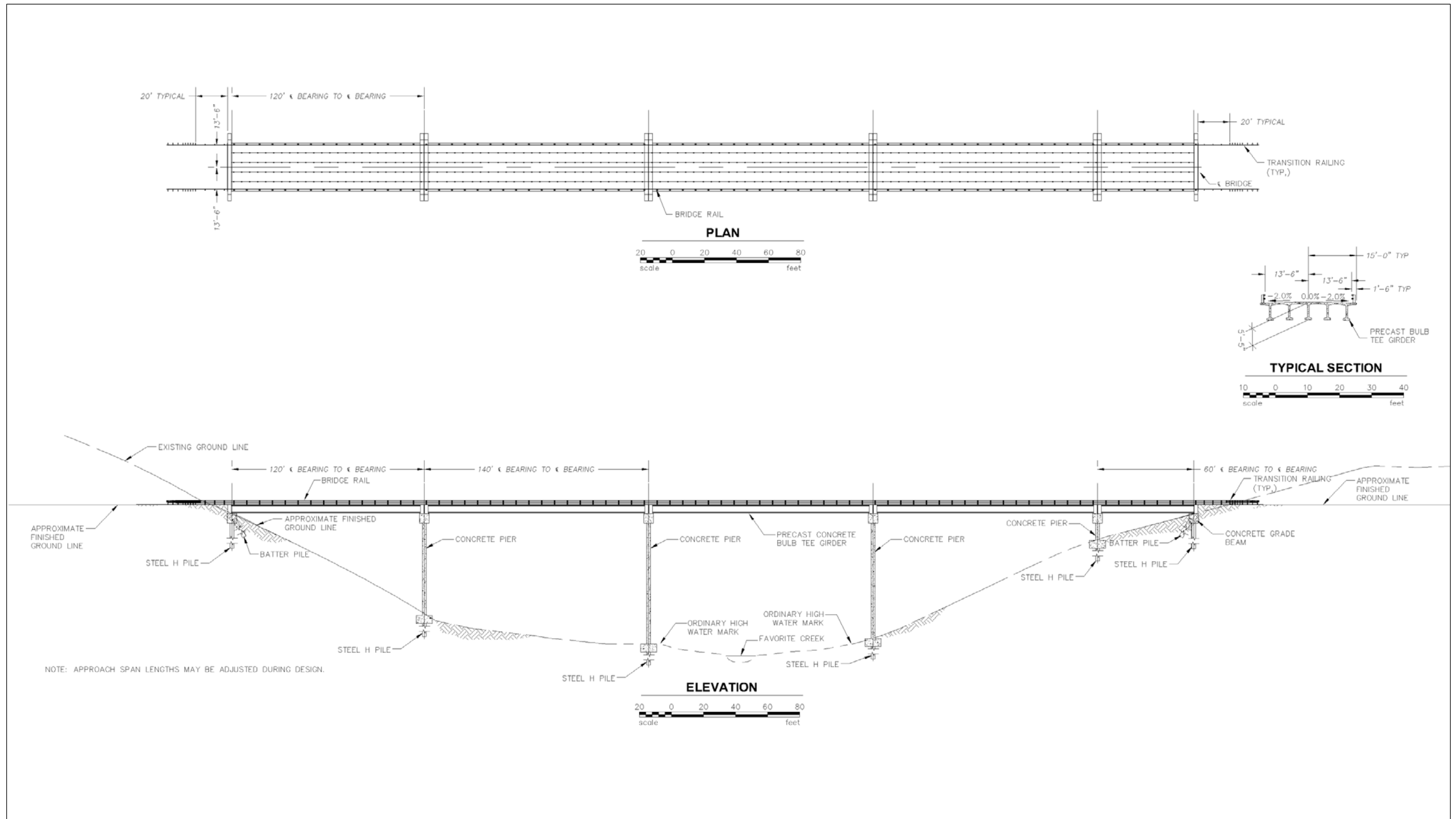


Figure 4: Access 2 road bridge profile.

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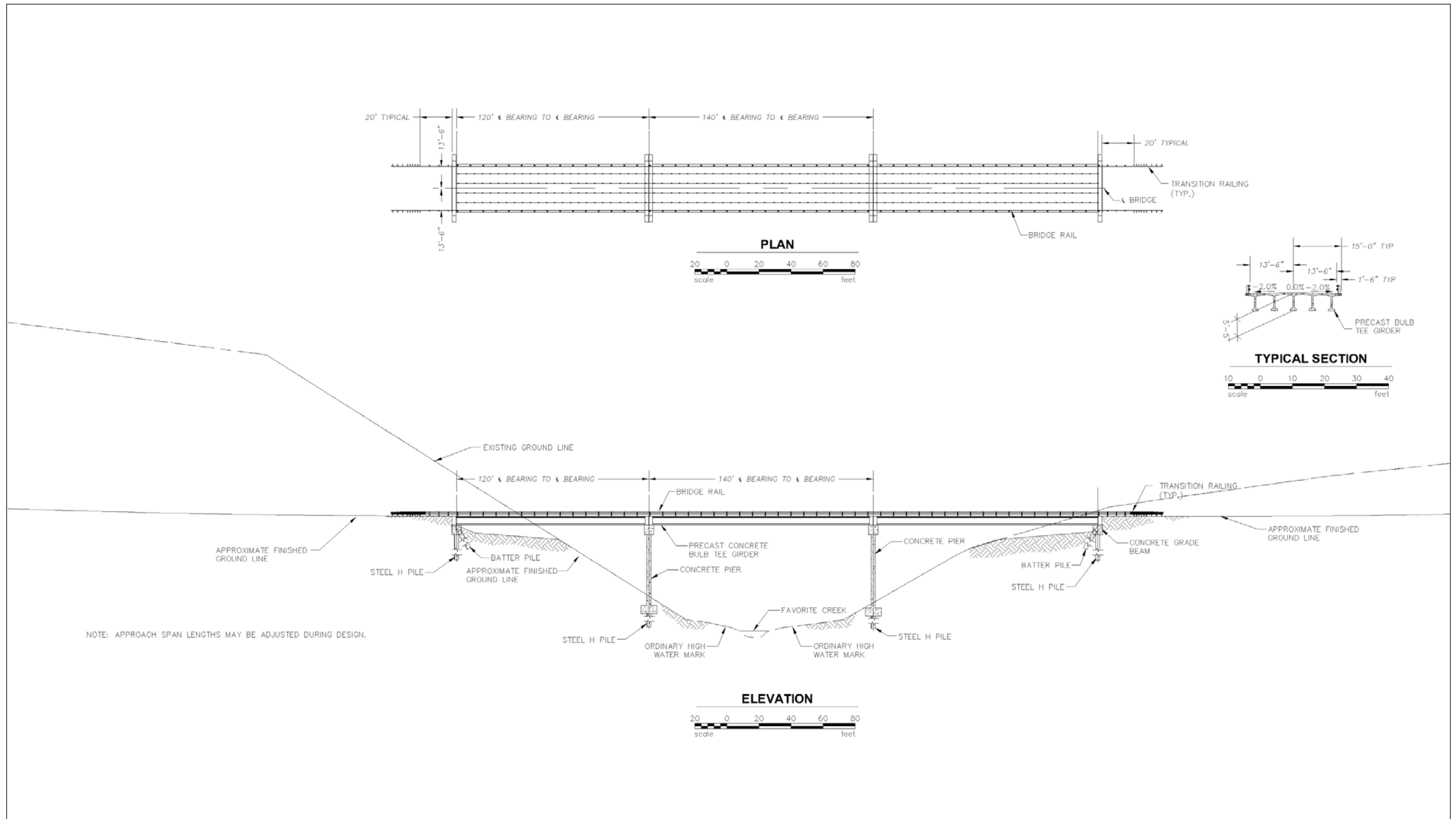


Figure 5: Access 3 road bridge profile.

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3.5 Area Affected by Fill

Disturbance areas vary according to each site and are shown in Table 1.

Table 1: Estimated Disturbed Area

Alternative	Impervious (acres)	Tree Removal (acres)	Terrain Disturbance (acres)	Tree Felling (acres)	Potential Temporary Disturbance, at Favorite Creek bridge (acres)
Alternative 3a					
Airport	18.2	54.8	74.6	64.9	
Access 2	10.4	17.1	30.5		7.0
Access 3	11.3	17.8	36.5		4.7
Alternative 4					
Airport	18.4	49.7	73.2	46.7	
Access 2	6.9	11.8	19.6		7.0
Access 3	7.7	12.7	25.7		4.7
Alternative 12a					
Airport	18.5	64.9	76.0	52.9	
Access 12a	0.5	0.7	1.5		

3.6 Quantities

Material quantities for the different sites and access roads are shown in Table 2.

Table 2: Estimated Materials Required for Project

Alternative Material	Airport Quantities (cubic yards)	Road Quantities (cubic yards)	Road Quantities (cubic yards)
Alternative 3a		Access 2	Access 3
Asphalt Paving	7,000	3,300	3,500
Aggregate Base Course	10,500	7,600	8,300
Subbase Course	52,100	38,000	41,200
Fill	154,900	254,100	224,100
Cut	190,600	280,600	985,900*
Alternative 4		Access 2	Access 3
Asphalt Paving	7,000	2,200	2,400
Aggregate Base Course	10,500	5,000	5,600
Subbase Course	52,100	25,000	28,000
Fill	452,800	100,600	101,800
Cut	380,800	269,900	905,300*
Alternative 12a		Access 12a	
Asphalt Paving	7,000	200	
Aggregate Base Course	10,500	500	
Subbase Course	52,100	2,200	
Fill	272,300	19,400	
Cut	342,200	100	
*The actual alignment will be adjusted during design and all efforts would be made to minimize the excess cut.			

Alternative Access 2 would be closely balanced. However, because not all excavated material is usable, there would be some waste material that would have to be disposed of in a waste material site. It is anticipated that there would be surplus material from the airport and access road construction if Access Alternative 3 is chosen. Excess material, whether usable or unusable, would most likely become the property of the contractor. It would then be the contractor's responsibility to use or dispose of the material in accordance with local, state, and federal regulations. Excess earthwork materials in this area would typically be disposed of at the nearest possible location on-site; ideally the contractor, Alaska DOT, or the community of Angoon would identify a need for the material locally. If waste material were placed at a site in Angoon, and assuming a waste site height of 30 feet, 1 acre could hold approximately 50,000 yards of waste material. If Alternative Access 3 were chosen, an additional 15 acres of disturbance would be required.

Trees removed for clearing could be: sold by the contractor if it were a marketable product, donated to locals for their use, or burned on-site. For the four alternatives located on the Admiralty Island National Monument and Kootznoowoo Wilderness Area, the USFS Regional Forester has the discretion to approve which method would be implemented. Clearing and grubbing would consist of clearing the ground surface in designated areas of all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials that are unsuitable for the construction of the access road and airport. Materials removed from designated construction areas to be cleared and grubbed would be disposed of either by burning or by slope flattening.

4.0 MATERIAL SOURCES

A brief evaluation of a potential material site was conducted in the summer of 2009. During the evaluation one existing material site, an existing quarry south of Angoon, was identified for use in building the airport. The site evaluation found that the material at this quarry may have a tendency to break down easily. This type of material is not adequate for constructing the surfacing for an airport or access road.

Because the site materials are either of unknown quality or may not be adequate for construction, it is assumed that some or all fill materials (including rip rap) for constructing the road and airport may need to be shipped to Angoon on a barge. Known sources for construction materials have already been developed in other locations in southeast Alaska and British Columbia, Canada. The contractor would be responsible for shipping all required fill or paving material to Angoon.

Table 3: Estimated Barge Trips

Alternative Material	Airport (barge trips)	Road (barge trips)	Road (barge trips)
Alternative 3a		Access 2	Access 3
Asphalt Paving	3	1	1
Aggregate Base Course	4	3	3
Subbase Course	18	13	14
Rip Rap		1	1
Alternative 4		Access 2	Access 3
Asphalt Paving	3	1	1
Aggregate Base Course	4	2	2
Subbase Course	17	9	9
Rip Rap		1	1
Alternative 12a		Access 12a	
Asphalt Paving	3	1	
Aggregate Base Course	4	1	
Subbase Course	18	1	

*Assumes a barge capacity of 3000 cubic yards.

5.0 MATERIAL PLACEMENT

5.1 Construction Equipment and Fueling

Based on comparable projects of this size, an estimate of roughly 35–50 pieces of equipment would be required for the general contractor. This would include typical construction-related vehicles plus one asphalt paving plant with paving equipment and one small concrete batch plant.

Housing would be required for approximately 75 individuals. Each piece of equipment would require an operator, and there would be an additional 10 on-site supervision staff members to oversee the project.

Based on the fleet listed above, the anticipated fuel usage for construction equipment projected for this project would be roughly 300,000 to 500,000 gallons of diesel fuel, and 10,000 to 20,000 gallons of gasoline. During heavy hauling, it is anticipated that fuel use could exceed 10,000 gallons a week for short durations. This would vary by the selected contractor and equipment actually on-site. The local supplier of gasoline and diesel has indicated in discussions that they have adequate resources to provide all the fueling needs for the project. It is the contractor's option as to whether they would choose to use a local supplier or barge their own fuel in.

If the existing supplier is used, all the necessary permits and equipment are already in place. Fuel would be delivered via barge on-demand dependent upon weather and tides. Fuel would be offloaded via hard-piped header system directly from the dock to their tank system, then distributed via truck as needed. The supplier indicated that roughly 55,000 gallons of total storage is available, roughly 36,000 gallons for diesel the remainder for gasoline.

If a contractor supplied the fuel, various rules and regulations would likely necessitate it be done via tanker truck placed on a barge and driven or towed off at the site. Fuel would remain in the truck until used or transferred to a contractor-supplied holding tank. Storage of hazardous materials is discussed further in section 5.8.

5.2 Construction Techniques

Excavating the unusable material and building the new embankment would be carried out through conventional means of earthmoving equipment to load trucks and haul the materials around the construction site. Embankment materials would likely be placed by end dump trucks.

The batch plants required for asphalt paving and concrete production would be shipped to Angoon by barge. This would include a batch plant that would be assembled inside the construction staging area or, if needed, the contractor would be responsible for obtaining additional staging area. Typically, oil and other chemicals used in the production of asphalt and concrete are held in self-contained tanks or drums that are barged in and staged on-site. During paving and placement of concrete, the batched material would be trucked from the batch plant

location to the site. Typically, due to the cost of production and payment procedures, no excess asphalt or concrete is produced. Concrete washout areas are required for cleaning the chutes on trucks or pumping rigs.

As indicated by the materials report, bedrock is very shallow. Rock excavation should be anticipated. Rock excavation could be accomplished by two methods: ripping with large bulldozers or blasting. It should be assumed that due to the amount of rock excavation, blasting would be the primary means for rock excavation.

5.3 General Work Sequence

The access road would most likely be constructed in stages. First the road would be cleared, grubbed, and developed as a haul road utilizing excavators, bulldozers, and trucks. Once the initial route was in place, construction of the temporary and permanent bridges would commence. For full access to Airport Alternatives 3a and 4, the bridge would need to be in place or the contractor would need to land a barge and mobilize equipment to the airport sites. The temporary bridge would provide passage for hauling material to and from the airport as well as along the road.

Excavation of unsuitable materials would occur while the initial haul road was being constructed. The contractor would stage the work so that areas of cut could be accessed and used for fill on other parts of the jobs if the material was found to be suitable.

Once clearing and grubbing were completed, the road and airport would be built in layers to accommodate the different material types required for embankment, base, subbase, and paving courses.

Final finishing of the access road and reconstruction of existing roads damaged as a result of construction would happen as the last construction step. Final paving would be required to be completed during the summer season, preferably in the June to September timeframe.

5.4 Hauling Material

It is anticipated that articulated end dump trucks would be used to haul material for most of the access road and airport construction. Articulated trucks can haul roughly 20–30 cubic yards of material per trip, depending on the model. As the project progresses, other trucks such as belly dumps or conventional dump trucks could be incorporated. The following table provides an estimated number of truck trips for the various alternatives, assuming 30 cubic yards per truck.

Table 4: Estimated Truck Trips

Alternative Material	Airport (truck trips)	Road (truck trips)	Road (truck trips)
Alternative 3a		Access 2	Access 3
Asphalt Paving	233	110	117
Aggregate Base Course	350	254	276
Subbase Course	1,737	1,267	1,374
Fill	5,164	8,470	7,470
Cut	6,354	9,354	32,864
Alternative 4		Access 2	Access 3
Asphalt Paving	233	74	80
Aggregate Base Course	350	167	187
Subbase Course	1,737	834	934
Fill	15,094	3,354	3,394
Cut	12,694	8,997	30,177
Alternative 12a		Access 12a	
Asphalt Paving	233	7	
Aggregate Base Course	350	17	
Subbase Course	1,737	74	
Fill	9,077	647	
Cut	11,407	3	

The truck trips vary for Airport Alternatives 3a and 4 because there are two access road alternatives for each. The number of trips for Airport 3a varies between 33,293 and 55,939. For Airport 4 the range is 43,534 to 64,880. Site 12a would have an estimated number of 23,552 truck trips. During hauling and compaction efforts, water would be required to control dust and maintain acceptable moisture contents for soil during compaction. For a job of this size, it is anticipated that between 2,000 M-gal and 10,000 M-gal of water would be required. Typically a pump is set up near a lake, stream ditch, or pond that is convenient for the water truck to access. The pump is an on-demand system and is only run when needed.

5.5 Temporary Bridge

A temporary bridge would likely be constructed adjacent to the permanent bridges for Access Alternatives 2 & 3. The structure would be designed by the contractor to support their specific construction technique for road and bridge construction. The bridge would act as a work platform and haul route for vehicles. Typically the temporary bridge would be of similar width to the permanent structure, in this case 30'. Construction materials could consist of steel, concrete, and wood. Support piers would likely be socketed into rock due to the loads expected. The number of supports would be dictated by the type of temporary bridge the contractor uses; however it will likely require multiple supports within the stream channel and ordinary high water line. The number of support piers could range from 3-10 for Access Alternative 2 and 2-5 for Access Alternative 3. The bridge will likely be constructed at one time rather than a staged approach so that hauling and access to the airport sites can be accomplished. The bridge will likely be constructed in the first season and be one of the last items removed prior to completion.

5.6 Drainage

The drainage for any of the access alternatives would be controlled by culverts. The culverts would range in size from 36 to 72 inches in diameter. It is anticipated that corrugated aluminum or polyethylene pipe would be used for the culverts. Where existing drainages cross the proposed road, culverts would be installed to convey the drainage under the roadway. About 6 additional culverts would be installed per mile along access roads. This would result in approximately 27 culverts for Airport 3a with Access 2; 31 culverts for Airport 3a with Access 3; 18 culverts for Airport 4 with Access 2; 18 culverts for Airport 4 with Access 3; and one culvert for Airport 12a.

The drainage at the airport would be controlled by rerouting existing drainage channels around the runway. It is not anticipated that cross culverts would be installed under the proposed runway.

Rerouting drainage channels would increase channel lengths for Airport Alternatives 3a, 4 and 12a. One channel would need to be rerouted for Airport 3a, increasing the drainage length by about 80 feet. One channel would need to be rerouted for Airport 4, increasing the drainage length by about 1,200 feet. Two channels would need to be rerouted for Airport 12a, increasing drainage lengths by about 2,450 feet.

Rerouting streams has the inherent potential to substantially affect the natural environment. Therefore, coordination with several agencies would be required to mitigate potential risks and ensure that the proposed airport would have minimal effects on the environment during and after construction. Rerouting streams would require coordination between the USFS, the Alaska Department of Fish and Game (ADF&G), the Alaska Department of Environmental Conservation, the U.S. Army Corps of Engineers, and the Alaska Department of Natural Resources to facilitate environmental permitting. Construction would need to be coordinated with USFS and ADF&G biologists to ensure that work was properly phased to minimize effects on resident and anadromous fish as well as other local wildlife.

5.7 Erosion and Sediment Control

During design, an Erosion and Sediment Control Plan (ESCP) would be developed. The ESCP would detail required project-specific best management practices (BMPs) to ensure protection from erosion. In addition, the ESCP would provide direction on how to keep sediment from moving off the construction site. The ESCP would also be used as a guide when the contractor prepared the Storm Water Pollution Prevention Plan (SWPPP) for construction. This SWPPP would identify BMPs to minimize environmental construction effects. BMPs that could be used include straw wattles, compost socks, silt fences, check dams, sediment basins, seeding, etc. It would be the contractor's responsibility to identify and implement BMPs effective in controlling erosion and sedimentation during construction.

The contractor would also be required to permanently stabilize the construction site prior to terminating the SWPPP. Permanent stabilization means all disturbed areas would be stabilized to prevent erosion and sedimentation after construction. The effort could include seeding, bioswales, and/or rip rap to protect culvert outlet areas.

5.8 Hazardous Materials

Hazardous materials used by the contractor must be stored in a suitable manner to avoid release into the environment. This should include measures such as the use of secondary containment for fueling areas, adequate storage areas, and proper disposal containers. Precautions should also be taken when construction personnel handle hazardous materials.

Hazardous materials that could be used include diesel fuel, gasoline, oils, grease, hydraulic fluids, petroleum-contaminated materials (such as used oil filters, rags, etc.), antifreeze, solvents, cleaners, and lead/acid batteries. The Angoon landfill does not take hazardous materials. These types of materials used for the airport would be barged off and disposed of at an approved facility.

The contractor would be required to develop and implement a hazardous materials control plan. The plan would specify the use, containment, cleanup, and disposal of hazardous material. This would include petroleum products generated by construction activities and equipment. The plan would also specify the contractor's methods for handling accidental spills of hazardous materials that could occur during construction.

The contractor would be required to implement concrete waste management procedures and practices where concrete was used as a construction material, where concrete dust and debris resulted from demolition activities, and where concrete trucks and other concrete-coated equipment were washed on-site. These are common procedures and practices designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.

The contractor would be required to implement sanitary/septic waste management practices for the use of temporary or portable sanitary/septic waste systems.

6.0 HAUL ROUTE

Figure 1, the Airport and access road alternatives, indicates the potential haul routes. The haul route for the project would be along the BIA Road, south of Angoon. The route would most likely include Kootznahoo Road, which leads to Killisnoo Harbor.

6.1 Barge Unloading Area

Having the ability to offload material directly from the barges would require the least amount of material re-handling and would reduce overall cost. Killisnoo Harbor is about 3 miles south of Angoon on Kootznahoo Road. There is a makeshift barge landing at the harbor.

The City of Angoon is in the planning stages of improving the landing from a makeshift berth to a permanent facility. It is anticipated that the area will be properly designed as a permanent barge loading and unloading location within the next few years.

6.2 Haul Route Maintenance

The general contract provisions contain standard requirements for haul route maintenance. Contract provisions generally state that portions of the haul route may require improvement to support the contractor's operations and that the contractor is responsible for improving the route as required. Improvements would likely be required due to the large number of truck trips needed to construct the airport and access road.

Haul routes would be restored to at least their original condition after airport and access road construction. If the contractor was required to improve the road for construction activities, these improvements would remain. The condition of the haul route would be documented prior to as well as after construction. The documentation would be used to determine whether or not the contractor's activities damaged the road during hauling operations.

7.0 CONSTRUCTION STAGING

Due to limited public lands available, it would be the contractor's responsibility to obtain the use of private lands for construction staging, material stockpiling, fueling area and fuel storage, and equipment storage. It is anticipated that 2 acres would be needed.

8.0 CONSTRUCTION SCHEDULE

DOT&PF would develop a construction schedule and phasing plan with the airport design. Currently, there is no specific completion date for airport and access road construction. It is anticipated that the work would take no less than two construction seasons. For Airport Alternatives 3a and 4, with larger quantity requirements, construction is estimated to take no more than three construction seasons.

The first season would likely involve development of the material sites if sites in the Angoon area were used, construction of the access road and temporary bridge, and preparation of the

airport site. The second and third (if required) seasons would be composed of airport, road, bridge construction and final completion.

Because of the mild climate in Angoon, construction could occur year-round. The construction contractor would likely be given the option to cease work during the winter months. The only scheduling impacts for construction would be weather related. Embankment may not be placed if the ground is frozen. Asphalt paving and concrete placement operations are subject to both temperature and precipitation limitations, so those activities would have to occur during the summer season.

APPENDIX 1: QUANTITIES

Quantity Estimate

P-151 Clearing & Grubbing, Clearing, and Tree Removal (Pavement Option)

PROJECT ELEMENT	(A) CLEARING & GRUBBING * (from C3D) (ACRE)	(B) CLEARING ** (from C3D) (ACRE)	(C) Selected Tree Removal *** (from C3D) (EACH)
RUNWAY, TAXIWAY, AND APRON			
SITE 3A	92.8	54.8	5,192
SITE 4	91.7	49.7	3,736
SITE 12A	93.9	60.3	4,648
ROAD			
SITE 3A - ROAD ALT 2	41.2	17.4	-
SITE 3A - ROAD ALT 3	48.0	17.8	-
SITE 4 - ROAD ALT 2	26.6	12.3	-
SITE 4 - ROAD ALT 3	33.5	12.8	-
SITE 12A - ROAD	2.3	0.7	-

*Clearing & grubbing includes the total terrain disturbance plus a 10-foot offset for the road alternatives and the total terrain disturbance plus a 25-foot offset for the airport alternatives (this includes runway, taxiway, apron, and roadway pavement areas)

**Clearing includes a 100' clearing limit minus the total terrain disturbance with a 10-foot offset

***Select tree removal assumed 80 trees per acre required for tree felling

Quantity Estimate

P-152 Excavation & Embankment (Pavement Option)

PROJECT ELEMENT	(A) UNCLASSIFIED EXCAVATION (from C3D) (CY)	(B) EMBANKMENT REQUIRED (from C3D) (CY)	
RUNWAY			Material Balance*
SITE 3A	188,836	128,219	(60,617)
SITE 4	357,622	448,992	91,370
SITE 12A	342,030	227,283	(114,747)
TAXIWAY			
SITE 3A	0	12,818	12,818
SITE 4	848	3,386	2,538
SITE 12A	39	8,837	8,798
APRON			
SITE 3A	1,736	13,789	12,053
SITE 4	22,271	409	(21,862)
SITE 12A	65	36,154	36,089
ROAD			
SITE 3A - ROAD ALT 2	280,558	254,017	(26,541)
SITE 3A - ROAD ALT 3	985,853	224,047	(761,806)
SITE 4 - ROAD ALT 2	269,858	100,580	(169,278)
SITE 4 - ROAD ALT 3	905,270	101,776	(803,494)
SITE 12A - ROAD	18	19,365	19,347

AIRPORT SUMMARY	Cut	Fill Needed	
SITE 3A	190,600	154,900	(35,700)
SITE 4	380,800	452,800	72,000
SITE 12A	342,200	272,300	(69,900)

ROAD SUMMARY	Cut	Fill Needed	
SITE 3A - ROAD ALT 2	280,600	254,100	(26,500)
SITE 3A - ROAD ALT 3	985,900	224,100	(761,800)
SITE 4 - ROAD ALT 2	269,900	100,600	(169,300)
SITE 4 - ROAD ALT 3	905,300	101,800	(803,500)
SITE 12A - ROAD	100	19,400	19,300

*Negative value indicates excess excavation

Road ALT 3 for Site 3A and Road ALT 3 for Site 4 require substantial cut in order to reduce the bridge length across Favorite Creek

Quantity Estimate

P-154 Subbase Course (Pavement Option)

PROJECT ELEMENT	Volume (CY)
RUNWAY	
SITE 3A	29,028
SITE 4	29,028
SITE 12A	29,028
TAXIWAY	
SITE 3A	2,661
SITE 4	2,656
SITE 12A	2,547
APRON	
SITE 3A	20,371
SITE 4	20,371
SITE 12A	20,371
ROAD	
SITE 3A - ROAD ALT 2	38,022
SITE 3A - ROAD ALT 3	41,135
SITE 4 - ROAD ALT 2	25,038
SITE 4 - ROAD ALT 3	27,917
SITE 12A - ROAD	2,132

AIRPORT SUMMARY	
SITE 3A	52,100
SITE 4	52,100
SITE 12A	52,100

ROAD SUMMARY	
SITE 3A - ROAD ALT 2	38,000
SITE 3A - ROAD ALT 3	41,200
SITE 4 - ROAD ALT 2	25,000
SITE 4 - ROAD ALT 3	28,000
SITE 12A - ROAD	2,200

Quantity Estimate

P-180a Riprap, Class II

SITE	Height (ft)	Width (ft)	Length (ft)	Volume/Pier (CY)	Volume (CY)
Site 3A - Road ALT 2 - Long Bridge Span	5	20	170	315	630
Site 3A - Road ALT 3 - Short Bridge Span	5	20	40	74	148
Site 4 - Road ALT 2 - Long Bridge Span	5	20	170	315	630
Site 4 - Road ALT 3 - Short Bridge Span	5	20	40	74	148
Site 12A - Road	-	-	-	-	-

Quantity Estimate

P-209 Crushed Aggregate Base Course (Pavement Option)

PROJECT ELEMENT	Volume (CY)
RUNWAY	
SITE 3A	5,806
SITE 4	5,806
SITE 12A	5,806
TAXIWAY	
SITE 3A	532
SITE 4	532
SITE 12A	510
APRON	
SITE 3A	4,074
SITE 4	4,074
SITE 12A	4,074
ROAD	
SITE 3A - ROAD ALT 2	7,605
SITE 3A - ROAD ALT 3	8,227
SITE 4 - ROAD ALT 2	5,008
SITE 4 - ROAD ALT 3	5,584
SITE 12A - ROAD	427

AIRPORT SUMMARY	
SITE 3A	10,500
SITE 4	10,500
SITE 12A	10,500

ROAD SUMMARY	
SITE 3A - ROAD ALT 2	7,600
SITE 3A - ROAD ALT 3	8,300
SITE 4 - ROAD ALT 2	5,000
SITE 4 - ROAD ALT 3	5,600
SITE 12A - ROAD	500

Quantity Estimate

P-401 Hot Mix Asphalt

PROJECT ELEMENT	HMA		Asphalt Cement, PG 52-28	
	Volume (CY)	Weight (TONS)	AC Content (%)	Weight (TONS)
RUNWAY				
SITE 3A	3,870	7,837	6.0%	470
SITE 4	3,870	7,837	6.0%	470
SITE 12A	3,870	7,837	6.0%	470
TAXIWAY				
SITE 3A	355	719	6.0%	43
SITE 4	354	717	6.0%	43
SITE 12A	340	689	6.0%	41
APRON				
SITE 3A	2,716	5,500	6.0%	330
SITE 4	2,716	5,500	6.0%	330
SITE 12A	2,716	5,500	6.0%	330
ROAD				
SITE 3A - ROAD ALT 2	3,259	6,599	6.0%	396
SITE 3A - ROAD ALT 3	3,490	7,067	6.0%	424
SITE 4 - ROAD ALT 2	2,177	4,408	6.0%	265
SITE 4 - ROAD ALT 3	2,389	4,838	6.0%	290
SITE 12A - ROAD	178	360	6.0%	22

AIRPORT SUMMARY	HMA Volume (CY)	HMA Weight (Tons)	AC Weight (Tons)
SITE 3A	7,000	14,175	851
SITE 4	7,000	14,175	851
SITE 12A	7,000	14,175	851

ROAD SUMMARY	HMA Volume (CY)	HMA Weight (Tons)	AC Weight (Tons)
SITE 3A - ROAD ALT 2	3,300	6,685	405
SITE 3A - ROAD ALT 3	3,500	7,090	430
SITE 4 - ROAD ALT 2	2,200	4,455	270
SITE 4 - ROAD ALT 3	2,400	4,860	295
SITE 12A - ROAD	200	405	25

ACP Unit Weight:

150 lb/ft3

Quantity Estimate

S-145 Bridge, Super and Sub-Structure

SITE	from STA	to STA	Length (ft)	Area (sf)
Site 3A - Road ALT 2	588+00	594+50	650	19500
Site 3A - Road ALT 3	601+50	606+00	450	13500
Site 4 - Road ALT 2	588+00	594+50	650	19500
Site 4 - Road ALT 3	601+50	606+00	450	13500
Site 12A - Road	-	-	-	-

Bridge Width 30 ft

APPENDIX 2: DRAINAGE MEMO



PRELIMINARY MEMORANDUM

To: Amanda Childs
From: Brian Hanson, P.E.
Date: July 13, 2012
Subject: Angoon Airport Drainage, Revised

Drainage Criteria and Methodology

The DOT&PF Alaska Preconstruction Manual (APCM) requires a minimum culvert diameter of 24 inches for cross-drainage culverts, unless culvert length exceeds 100 feet, in which case the minimum culvert diameter is 36 inches. A minimum culvert diameter of 36-inches is also recommended for areas with potential for icing or debris fouling. It was assumed for this preliminary drainage plan that all culverts will be a minimum of 36 inches in diameter. Culverts were sized assuming a headwater to depth (HW/D) ratio of 1.0 at the design flood flow in accordance with APCM criteria. All pipe sizing was carried out under the assumption that corrugated steel pipe (CSP) culverts would be installed, as they are generally the most cost effective and readily available type of culvert in rural areas of Alaska. If corrosive soils are present, the use of corrugated aluminum pipe (CAP) or corrugated polyethylene pipe (CPP) should be used for cross culverts, as these materials are corrosion resistant.

The APCM lists a 50-year return period (2% exceedance probability) as the design flood for bridges on all highways and culverts on primary highways and secondary highways of high importance. Culverts and bridges in designated flood hazard areas shall be designed for the 100-year return period (1% exceedance probability); however, there are no mapped Flood Hazard areas in this project area. Due to the remoteness of the project area and the high costs associated with any necessary repairs, it is recommended that the 100-year return period be considered for the design flood frequency on a site-by-site basis during the design period. Any additional costs required to up-size drainage structures to pass the 100-year flows may be warranted by the high costs associated with any necessary repairs and the potential for reduced maintenance demands resulting from debris blockage and ice.

The USGS Regional Regression Equations developed from stream gauge data collected in Southeast Alaska were used to estimate the 100-year peak flows along the road alternatives. Drainage area sizes were estimated from available topographic data. Drainage areas, surface storage, mean annual precipitation data, and the mean January temperature are input into the equations, which use empirically derived equations to predict peak flow for varying recurrence intervals. The DOT&PF Alaska Highway

Drainage Manual (AHDM) indicates that Regression Equations have a higher order of preference than the other approved hydrologic methods listed, even though the majority of the analyzed drainage basins fall outside of the contributing area limitations of the regression equations due to fewer required assumptions related to surface land cover, rainfall data, and time of concentration.

Culvert Frequency and Location

Minor drainage crossings are those streams and drainages that can be conveyed in a 36-inch diameter or smaller culvert and do not typically require a detailed hydrologic and hydraulic analysis. Accurately determining the number of minor drainage crossings would typically require a site investigation along the proposed alignment to identify local drainage features and patterns not necessarily apparent from topographic data or aerial imagery. For the purpose of estimating the number of cross culverts along the proposed corridors, including minor drainage crossings, a recent roadway project on Prince of Wales Island was referenced to establish an “average” number of drainage crossings per mile of roadway. Based upon the frequency of culverts observed at the referenced project, which was 12.2 miles long and including 76 minor drainage culverts, 6 drainage crossings are assumed per mile of roadway for the access road alternatives. The approximate locations of cross culverts were determined where possible from available topographic data and stream mapping. As culvert locations are approximate, reported stations are rounded to the nearest 50-foot interval. It is assumed additional minor drainage crossings will be required at undetermined locations under the assumption of 6 culverts per mile of roadway.

Drainage for Airport Alternative 3A, Road Alternative 2

Road Alternative 2 is approximately 4.4 miles in length, resulting in 27 culverts on the assumption of 6 culverts per mile of roadway. Assuming inlet control at all crossings, culverts up to 72 inches in diameter will be necessary to convey the 100-year peak flow at roadway crossings. In addition to the drainage crossings shown below, it is assumed that 2 additional 36-inch culverts will be necessary at undetermined locations along the roadway to address minor drainage crossings. A 640-foot swale will be necessary to convey runoff around the proposed runway at Airport Alternative 3A. The swale would convey a drainage from the southeast corner of the runway toward the northeast and then into a stream east of the runway.

Road Alternative 2 Culverts			
Station	Diameter (in.)	Station	Diameter (in.)
501+50	36	643+50	36
513+00	36	645+50	36
517+50	48	647+00	36
526+00	60	654+50	36
533+50	36	663+50	36
547+00	48	668+50	36
549+50	36	689+00	36
554+50	72	707+50	48
572+50	36	714+50	36
597+00	36	718+00	36
601+00	48	726+50	36
607+00	36	734+00	36
629+00	72		

Drainage for Airport Alternative 3A, Road Alternative 3

Road Alternative 3 is approximately 4.9 miles in length, resulting in 31 culverts on the assumption of 6 culverts per mile of roadway. Assuming inlet control at all crossings, culverts up to 72 inches in diameter will be necessary to convey the 100-year peak flow at roadway crossings. In addition to the drainage crossings shown below, it is assumed that 5 additional 36-inch culverts will be necessary at undetermined locations along the roadway to address minor drainage crossings. A 640-foot swale will be necessary to convey runoff around the proposed runway to maintain existing drainage patterns. The swale would convey a drainage from the southeast corner of the runway toward the northeast and then into a stream east of the runway.

Road Alternative 3 Culverts			
Station	Diameter (in.)	Station	Diameter (in.)
501+50	36	639+00	36
514+50	36	642+50	36
520+50	48	647+00	36
526+50	60	652+50	36
544+00	36	660+00	36
550+00	36	683+50	36
563+00	60	691+50	36
574+00	36	708+00	36
596+50	36	723+50	36
610+00	36	731+50	36
622+50	36	737+00	36
631+50	36	743+00	36
635+00	36	750+50	36

Drainage for Airport Alternative 4, Road Alternative 2

Road Alternative 2 is approximately 3.0 miles in length, resulting in 18 culverts on the assumption of 6 culverts per mile of roadway. Assuming inlet control at all crossings, culverts up to 72 inches in diameter will be necessary to convey the 100-year peak flow at roadway crossings. In addition to the drainage crossings shown below, it is assumed that 1 additional 36-inch culverts will be necessary at an undetermined location along the roadway to address minor drainage crossings. The proposed runway is located along a relative high point where runoff typically drains away from the runway. Drainage swales are expected to be sufficient to handle local runoff. To convey runoff around the runway, a swale approximately 2300 feet long will need to be constructed around the east end of the runway.

Road Alternative 2 Culverts	
Station	Diameter (in.)
501+50	36
513+00	36
517+50	48
526+00	60
533+50	36
547+00	48
549+50	36
554+50	72
572+50	36
610+50	36
615+50	36
619+00	36
622+50	36
626+50	36
632+00	36
637+00	36
647+00	36

Drainage for Airport Alternative 4, Road Alternative 3

Road Alternative 3 is approximately 3.0 miles in length, resulting in 18 culverts on the assumption of 6 culverts per mile of roadway. Assuming inlet control at all crossings, culverts up to 72 inches in diameter will be necessary to convey the 100-year peak flow at roadway crossings. The proposed runway is located along a relative high point where runoff typically drains away from the runway. Drainage swales are expected to be sufficient to handle local runoff. To convey runoff around the runway, a swale approximately 2300 feet long will need to be constructed around the east end of the runway.

Road Alternative 3 Culverts	
Station	Diameter (in.)
501+50	36
514+50	36
520+50	48
526+50	60
544+00	36
550+00	36
563+00	60
574+00	36
596+50	36
610+00	36
622+50	36
631+50	36
635+00	36
639+00	36
642+50	36
647+00	36
652+50	36
662+00	36

Drainage for Airport Alternative 12A Road

Due to the short length of Airport Alternative 12A Road, which is approximately one-quarter mile in length, only one cross culvert is required. The required culvert is a 36-inch diameter culvert at Sta. 6+50. The use of 36-inch diameter pipe is assumed to be adequate for the crossing assuming inlet control. Two swales will be required to convey drainage around the airport runway. The first swale would have a total length of approximately 2620 feet and would convey runoff around the northwest end of the

runway. The second swale would have a total length of approximately 4800 feet and would run convey runoff around the southeast end of the runway.

Airport Drainage

Managing local runoff and its impacts on the existing drainage patterns will be handled in a similar manner for each airport site alternative. The State of Alaska does not have design criteria specific to airport stormwater management, therefore the Aviation Stormwater Design Manual published by the Washington State DOT was consulted for drainage design recommendations pertaining to this project. As climatic factors in coastal Washington are similar to those encountered at the project location, the guidelines listed in the Washington DOT manual are assumed to be applicable.

Where runoff does not naturally drain away from the proposed improvements, such as in cut locations, swales will be constructed alongside the proposed runway and taxiway to convey localized runoff. Per the Washington DOT guidelines, the preferred stormwater treatment options for runoff include media filtration systems, structural systems (vaults), and biofiltration facilities. The first two options are underground facilities requiring periodic maintenance. Due to the remoteness of the project area and the inability of area residents to perform necessary maintenance on these systems, these options are not recommended. However, the Washington DOT guidelines recognize biofiltration swales (bioswales) as an acceptable pretreatment option that may be suitable to this project at the proposed airport. Although the Washington DOT recommends the use of bioswales primarily as a pretreatment measure, bioswales have been used successfully on previous highway and aviation design projects in Alaska to treat runoff for water quality. Runoff will received additional treatment through filtration provided by the natural vegetation downstream of bioswale discharge points.

APPENDIX 3: COST ESTIMATES

Summary

Site	Item	Orig 2007 Estimate
Site 3 (from 2007 Master Plan)	Airport Runway and Apron (Site 3)	\$14,606,709
	Access Road (Alternative 1)	\$15,452,219
	Right of Way*	\$4,390,000
	Total	\$34,449,000

Site	Item	2010 Gravel Est
Site 3A Road Alt 2	Airport Runway and Apron (Site 3A)	\$16,531,000
	Access Road Alternative 2	\$21,066,000
	Right of Way*	\$4,390,000
	Total	\$41,987,000

Current Pave Est	2009 Pave Est
\$26,667,000	\$18,996,000
\$30,075,000	\$58,511,000
\$4,390,000	\$4,390,000
\$61,132,000	\$81,897,000

Site	Item	2010 Gravel Est
Site 3A Road Alt 3	Airport Runway and Apron (Site 3A)	\$16,531,000
	Access Road Alternative 3	\$45,114,000
	Right of Way*	\$4,390,000
	Total	\$66,035,000

Current Pave Est
\$26,667,000
\$45,588,000
\$4,390,000
\$76,645,000

Site	Item	2010 Gravel Est
Site 4 Road Alt 2	Airport Runway and Apron (Site 4)	\$20,057,000
	Access Road Alternative 2	\$17,782,000
	Right of Way*	\$4,086,000
	Total	\$41,925,000

Current Pave Est	2009 Pave Est
\$34,876,000	\$22,237,000
\$25,292,000	\$21,398,000
\$4,086,000	\$4,086,000
\$64,254,000	\$47,721,000

Site	Item	2010 Gravel Est
Site 4 Road Alt 3	Airport Runway and Apron (Site 4)	\$20,057,000
	Access Road Alternative 3	\$38,997,000
	Right of Way*	\$4,086,000
	Total	\$63,140,000

Current Pave Est
\$34,876,000
\$39,560,000
\$4,086,000
\$78,522,000

Site	Item	2010 Gravel Est
Site 12A	Airport Runway and Apron (Site 12A)	\$19,131,000
	Access Road	\$1,809,000
	Right of Way	\$1,000,000
	Total	\$21,940,000

Current Pave Est	2009 Pave Est
\$31,562,000	\$20,850,000
\$2,009,000	\$3,411,000
\$1,000,000	\$1,000,000
\$34,571,000	\$25,261,000

**Site 3A - Runway, Taxiway, and Apron
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 1,800,000	\$ 1,800,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor	1	LS	\$ 200,000	\$ 200,000
D-701	36" Corrugated Pipe	200	LF	\$ 120	\$ 24,000
D-701	48" Corrugated Pipe	200	LF	\$ 150	\$ 30,000
F-162	Fencing	16,000	LF	\$ 55	\$ 880,000
P-151	Clearing and Grubbing	92.8	AC	\$ 5,000	\$ 464,000
P-151	Clearing	54.8	AC	\$ 3,000	\$ 164,400
P-151	Selected Tree Removal	5,192	EA	\$ 300	\$ 1,557,600
P-152	Unclassified Excavation	190,600	CY	\$ 18	\$ 3,430,800
P-152	Embankment	154,900	CY	\$ 10	\$ 1,549,000
P-152	Ditch Linear Grading	640	LF	\$ 25	\$ 16,000
P-154	Subbase Course	52,100	CY	\$ 38	\$ 1,979,800
P-156	Temp Erosion and Pollution Control	1	LS	\$ 500,000	\$ 500,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 125,000	\$ 125,000
P-180	Riprap, Class II	500	CY	\$ 150	\$ 75,000
P-209	Crushed Aggregate Base Course	10,500	CY	\$ 50	\$ 525,000
P-401	Hot Mix Asphalt	14,175	TON	\$ 155	\$ 2,197,125
P-401	Asphalt Cement (6%)	860	TON	\$ 1,200	\$ 1,032,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 161,456.25	\$ 161,456
P-603	Bituminous Prime Coat	53	TON	\$ 1,000	\$ 53,000
P-620	Runway Markings	1	LS	\$ 100,000	\$ 100,000
P-681	Geotextile Fabric	65,000	SY	\$ 5	\$ 325,000
L-100	Runway Edge Lighting	18	EA	\$ 1,500	\$ 27,000
L-101	Beacon	1	EA	\$ 80,000	\$ 80,000
L-107	Windcone	2	EA	\$ 10,000	\$ 20,000
L-108	Misc. Cabling	15,000	LF	\$ 15	\$ 225,000
L-109	Lighting Building	1	EA	\$ 100,000	\$ 100,000
L-109	Electrical Panel & Main Disconnect, Lights, Wiring	1	EA	\$ 50,000	\$ 50,000
L-109	Transformers with enclosures, disconnects, etc.	3	EA	\$ 5,000	\$ 15,000
L-110	Conduit	15,000	LF	\$ 15	\$ 225,000
L-132	PAPI	2	EA	\$ 50,000	\$ 100,000
L-132	REILs (pair)	2	EA	\$ 15,000	\$ 30,000
L-858	Airport Signs	4	EA	\$ 4,200	\$ 16,800
L-861	Taxiway Edge Lights	30	EA	\$ 1,500	\$ 45,000
L-862	Runway Edge Lights	40	EA	\$ 1,500	\$ 60,000
L-862	Runway Threshold Lights	16	EA	\$ 1,500	\$ 24,000
	Utility Line Extension (4.5 miles)	1	LS	\$ 500,000	\$ 500,000
	Electrical Service Connection	1	LS	\$ 30,000	\$ 30,000
T-901	Seeding	1	LS	\$ 10,000	\$ 10,000
S-142	SRE Building	1	LS	\$ 750,000	\$ 750,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 19,516,981
Contingency (15%)					\$ 2,927,547
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 1,952,000
ICAP (5.0%)					\$ 1,270,000
Total					\$ 26,667,000

Site 3A - Road Alternative 2

Pavement Option

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 2,100,000	\$ 2,100,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor (3%)	1	LS	\$ 600,000	\$ 600,000
D-701	36" Corrugated Pipe	1,250	LF	\$ 120	\$ 150,000
D-701	48" Corrugated Pipe	510	LF	\$ 150	\$ 76,500
D-701	60" Corrugated Pipe	50	LF	\$ 180	\$ 9,000
D-701	72" Corrugated Pipe	325	LF	\$ 210	\$ 68,250
F-162	Fencing	1	LS	\$ 5,000	\$ 5,000
P-151	Clearing and Grubbing	41.2	AC	\$ 5,000	\$ 206,000
P-151	Clearing	17.4	AC	\$ 3,000	\$ 52,200
P-152	Unclassified Excavation	280,600	CY	\$ 18	\$ 5,050,800
P-152	Embankment	254,100	CY	\$ 10	\$ 2,541,000
P-154	Subbase Course	38,000	CY	\$ 38	\$ 1,444,000
P-156	Temp Erosion and Pollution Control	1	LS	\$ 425,000	\$ 425,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 106,250	\$ 106,250
P-180	Riprap, Class II	630	CY	\$ 150	\$ 94,500
P-209	Crushed Aggregate Base Course	7,600	CY	\$ 50	\$ 380,000
P-401	Hot Mix Asphalt	6,685	TON	\$ 155	\$ 1,036,175
P-401	Asphalt Cement (6%)	410	TON	\$ 1,200	\$ 492,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 70,808.75	\$ 70,809
P-603	Bituminous Prime Coat	40	TON	\$ 1,000	\$ 40,000
P-620	Traffic Markings	1	LS	\$ 100,000	\$ 100,000
P-681	Geotextile Fabric	500	SY	\$ 5	\$ 2,500
P-661	Standard Signs	1	LS	\$ 5,000	\$ 5,000
T-901	Seeding	1	LS	\$ 20,000	\$ 20,000
S-145	Bridge, Super and Sub-Structure (30ft x 650ft)	19,500	SF	\$ 360	\$ 7,020,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 22,114,984
Contingency (15%)					\$ 3,317,248
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 2,211,000
ICAP (5.0%)					\$ 1,432,000
Total					\$ 30,075,000

**Site 3A - Road Alternative 3
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 3,100,000	\$ 3,100,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor (3%)	1	LS	\$ 600,000	\$ 600,000
D-701	36" Corrugated Pipe	2,875	LF	\$ 120	\$ 345,000
D-701	48" Corrugated Pipe	65	LF	\$ 150	\$ 9,750
D-701	60" Corrugated Pipe	150	LF	\$ 180	\$ 27,000
F-162	Fencing	1	LS	\$ 5,000	\$ 5,000
P-151	Clearing and Grubbing	48.0	AC	\$ 5,000	\$ 240,000
P-151	Clearing	17.8	AC	\$ 3,000	\$ 53,400
P-152	Unclassified Excavation	985,900	CY	\$ 18	\$ 17,746,200
P-152	Embankment	224,100	CY	\$ 10	\$ 2,241,000
P-154	Subbase Course	41,200	CY	\$ 38	\$ 1,565,600
P-156	Temp Erosion and Pollution Control	1	LS	\$ 650,000	\$ 650,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 162,500	\$ 162,500
P-180	Riprap, Class II	150	CY	\$ 150	\$ 22,500
P-209	Crushed Aggregate Base Course	8,300	CY	\$ 50	\$ 415,000
P-401	Hot Mix Asphalt	7,090	TON	\$ 155	\$ 1,098,950
P-401	Asphalt Cement (6%)	430	TON	\$ 1,200	\$ 516,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 80,747.50	\$ 80,748
P-603	Bituminous Prime Coat	43	TON	\$ 1,000	\$ 43,000
P-620	Traffic Markings	1	LS	\$ 105,000	\$ 105,000
P-681	Geotextile Fabric	500	SY	\$ 5	\$ 2,500
P-661	Standard Signs	1	LS	\$ 5,000	\$ 5,000
T-901	Seeding	1	LS	\$ 20,000	\$ 20,000
S-145	Bridge, Super and Sub-Structure (30ft x 450ft)	13,500	SF	\$ 360	\$ 4,860,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 33,934,148
Contingency (15%)					\$ 5,090,122
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 3,393,000
ICAP (5.0%)					\$ 2,171,000
Total					\$ 45,588,000

**Site 4 - Runway, Taxiway, and Apron
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 2,400,000	\$ 2,400,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor	1	LS	\$ 200,000	\$ 200,000
D-701	36" Corrugated Pipe	200	LF	\$ 120	\$ 24,000
D-701	48" Corrugated Pipe	200	LF	\$ 150	\$ 30,000
F-162	Fencing	16,000	LF	\$ 55	\$ 880,000
P-151	Clearing and Grubbing	91.7	AC	\$ 5,000	\$ 458,500
P-151	Clearing	49.7	AC	\$ 3,000	\$ 149,100
P-151	Selected Tree Removal	3,736	EA	\$ 300	\$ 1,120,800
P-152	Unclassified Excavation	380,800	CY	\$ 18	\$ 6,854,400
P-152	Embankment	452,800	CY	\$ 10	\$ 4,528,000
P-152	Ditch Linear Grading	2,300	LF	\$ 25	\$ 57,500
P-154	Subbase Course	52,100	CY	\$ 38	\$ 1,979,800
P-156	Temp Erosion and Pollution Control	1	LS	\$ 500,000	\$ 500,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 125,000	\$ 125,000
P-180	Riprap, Class II	500	CY	\$ 150	\$ 75,000
P-209	Crushed Aggregate Base Course	10,500	CY	\$ 50	\$ 525,000
P-401	Hot Mix Asphalt	14,175	TON	\$ 155	\$ 2,197,125
P-401	Asphalt Cement (6%)	860	TON	\$ 1,200	\$ 1,032,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 30,000	\$ 30,000
P-603	Bituminous Prime Coat	53	TON	\$ 1,000	\$ 53,000
P-620	Runway Markings	1	LS	\$ 100,000	\$ 100,000
P-681	Geotextile Fabric	65,000	SY	\$ 5	\$ 325,000
L-100	Runway Edge Lighting	18	EA	\$ 1,500	\$ 27,000
L-101	Beacon	1	EA	\$ 80,000	\$ 80,000
L-107	Windcone	2	EA	\$ 10,000	\$ 20,000
L-108	Misc. Cabling	15,000	LF	\$ 15	\$ 225,000
L-109	Lighting Building	1	EA	\$ 100,000	\$ 100,000
L-109	Electrical Panel & Main Disconnect, Lights, Wiring	1	EA	\$ 50,000	\$ 50,000
L-109	Transformers with enclosures, disconnects, etc.	3	EA	\$ 5,000	\$ 15,000
L-110	Conduit	15,000	LF	\$ 15	\$ 225,000
L-132	PAPI	2	EA	\$ 50,000	\$ 100,000
L-132	REILs (pair)	2	EA	\$ 15,000	\$ 30,000
L-858	Airport Signs	4	EA	\$ 4,200	\$ 16,800
L-861	Taxiway Edge Lights	30	EA	\$ 1,500	\$ 45,000
L-862	Runway Edge Lights	40	EA	\$ 1,500	\$ 60,000
L-862	Runway Threshold Lights	16	EA	\$ 1,500	\$ 24,000
	Utility Line Extension (2.9 miles)	1	LS	\$ 300,000	\$ 300,000
	Electrical Service Connection	1	LS	\$ 30,000	\$ 30,000
T-901	Seeding	1	LS	\$ 10,000	\$ 10,000
S-142	SRE Building	1	LS	\$ 750,000	\$ 750,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 25,772,025
Contingency (15%)					\$ 3,865,804
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 2,577,000
ICAP (5.0%)					\$ 1,661,000
Total					\$ 34,876,000

Site 4 - Road Alternative 2
Pavement Option

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 1,700,000	\$ 1,700,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor (3%)	1	LS	\$ 600,000	\$ 600,000
D-701	36" Corrugated Pipe	875	LF	\$ 120	\$ 105,000
D-701	48" Corrugated Pipe	165	LF	\$ 150	\$ 24,750
D-701	60" Corrugated Pipe	50	LF	\$ 180	\$ 9,000
D-701	72" Corrugated Pipe	170	LF	\$ 210	\$ 35,700
F-162	Fencing	1	LS	\$ 5,000	\$ 5,000
P-151	Clearing and Grubbing	26.6	AC	\$ 5,000	\$ 133,000
P-151	Clearing	12.3	AC	\$ 3,000	\$ 36,900
P-152	Unclassified Excavation	269,900	CY	\$ 18	\$ 4,858,200
P-152	Embankment	100,600	CY	\$ 10	\$ 1,006,000
P-154	Subbase Course	25,000	CY	\$ 38	\$ 950,000
P-156	Temp Erosion and Pollution Control	1	LS	\$ 350,000	\$ 350,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 87,500	\$ 87,500
P-180	Riprap, Class II	630	CY	\$ 150	\$ 94,500
P-209	Crushed Aggregate Base Course	5,000	CY	\$ 50	\$ 250,000
P-401	Hot Mix Asphalt	4,455	TON	\$ 155	\$ 690,525
P-401	Asphalt Cement (6%)	270	TON	\$ 1,200	\$ 324,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 50,726	\$ 50,726
P-603	Bituminous Prime Coat	27	TON	\$ 1,000	\$ 27,000
P-620	Traffic Markings	1	LS	\$ 65,000	\$ 65,000
P-681	Geotextile Fabric	500	SY	\$ 5	\$ 2,500
P-661	Standard Signs	1	LS	\$ 5,000	\$ 5,000
T-901	Seeding	1	LS	\$ 20,000	\$ 20,000
S-145	Bridge, Super and Sub-Structure (30ft x 650ft)	19,500	SF	\$ 360	\$ 7,020,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 18,470,301
Contingency (15%)					\$ 2,770,545
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 1,847,000
ICAP (5.0%)					\$ 1,204,000
Total					\$ 25,292,000

**Site 4 - Road Alternative 3
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 2,700,000	\$ 2,700,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor (3%)	1	LS	\$ 600,000	\$ 600,000
D-701	36" Corrugated Pipe	1,775	LF	\$ 120	\$ 213,000
D-701	48" Corrugated Pipe	65	LF	\$ 150	\$ 9,750
D-701	60" Corrugated Pipe	150	LF	\$ 180	\$ 27,000
F-162	Fencing	1	LS	\$ 5,000	\$ 5,000
P-151	Clearing and Grubbing	33.5	AC	\$ 5,000	\$ 167,500
P-151	Clearing	12.8	AC	\$ 3,000	\$ 38,400
P-152	Unclassified Excavation	905,300	CY	\$ 18	\$ 16,295,400
P-152	Embankment	101,800	CY	\$ 10	\$ 1,018,000
P-154	Subbase Course	28,000	CY	\$ 38	\$ 1,064,000
P-156	Temp Erosion and Pollution Control	1	LS	\$ 575,000	\$ 575,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 143,750	\$ 143,750
P-180	Riprap, Class II	150	CY	\$ 150	\$ 22,500
P-209	Crushed Aggregate Base Course	5,600	CY	\$ 50	\$ 280,000
P-401	Hot Mix Asphalt	4,860	TON	\$ 155	\$ 753,300
P-401	Asphalt Cement (6%)	300	TON	\$ 1,200	\$ 360,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 55,665	\$ 55,665
P-603	Bituminous Prime Coat	30	TON	\$ 1,000	\$ 30,000
P-620	Traffic Markings	1	LS	\$ 75,000	\$ 75,000
P-681	Geotextile Fabric	500	SY	\$ 5	\$ 2,500
P-661	Standard Signs	1	LS	\$ 5,000	\$ 5,000
T-901	Seeding	1	LS	\$ 20,000	\$ 20,000
S-145	Bridge, Super and Sub-Structure (30ft x 450ft)	13,500	SF	\$ 360	\$ 4,860,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 29,340,765
Contingency (15%)					\$ 4,401,115
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 2,934,000
ICAP (5.0%)					\$ 1,884,000
Total					\$ 39,560,000

**Site 12A - Runway, Taxiway, and Apron
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 2,200,000	\$ 2,200,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor	1	LS	\$ 200,000	\$ 200,000
D-701	36" Corrugated Pipe	200	LF	\$ 120	\$ 24,000
D-701	48" Corrugated Pipe	200	LF	\$ 150	\$ 30,000
F-162	Fencing	16,000	LF	\$ 55	\$ 880,000
P-151	Clearing and Grubbing	93.9	AC	\$ 5,000	\$ 469,500
P-151	Clearing	60.3	AC	\$ 3,000	\$ 180,900
P-151	Selected Tree Removal	4,648	EA	\$ 300	\$ 1,394,400
P-152	Unclassified Excavation	342,200	CY	\$ 18	\$ 6,159,600
P-152	Embankment	272,300	CY	\$ 10	\$ 2,723,000
P-152	Ditch Linear Grading	7,420	LF	\$ 25	\$ 185,500
P-154	Subbase Course	52,100	CY	\$ 38	\$ 1,979,800
P-156	Temp Erosion and Pollution Control	1	LS	\$ 500,000	\$ 500,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 125,000	\$ 125,000
P-180	Riprap, Class II	500	CY	\$ 150	\$ 75,000
P-209	Crushed Aggregate Base Course	10,500	CY	\$ 50	\$ 525,000
P-401	Hot Mix Asphalt	14,175	TON	\$ 155	\$ 2,197,125
P-401	Asphalt Cement (6%)	860	TON	\$ 1,200	\$ 1,032,000.00
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 30,000	\$ 30,000
P-603	Bituminous Prime Coat	53	TON	\$ 1,000	\$ 53,000
P-620	Runway Markings	1	LS	\$ 100,000	\$ 100,000
P-681	Geotextile Fabric	65,000	SY	\$ 5	\$ 325,000
L-100	Runway Edge Lighting	18	EA	\$ 1,500	\$ 27,000
L-101	Beacon	1	EA	\$ 80,000	\$ 80,000
L-107	Windcone	2	EA	\$ 10,000	\$ 20,000
L-108	Misc. Cabling	15,000	LF	\$ 15	\$ 225,000
L-109	Lighting Building	1	EA	\$ 100,000	\$ 100,000
L-109	Electrical Panel & Main Disconnect, Lights, Wiring	1	EA	\$ 50,000	\$ 50,000
L-109	Transformers with enclosures, disconnects, etc.	3	EA	\$ 5,000	\$ 15,000
L-110	Conduit	15,000	LF	\$ 15	\$ 225,000
L-132	PAPI	2	EA	\$ 50,000	\$ 100,000
L-132	REILs (pair)	2	EA	\$ 15,000	\$ 30,000
L-858	Airport Signs	4	EA	\$ 4,200	\$ 16,800
L-861	Taxiway Edge Lights	30	EA	\$ 1,500	\$ 45,000
L-862	Runway Edge Lights	40	EA	\$ 1,500	\$ 60,000
L-862	Runway Threshold Lights	16	EA	\$ 1,500	\$ 24,000
	Utility Line Extension (1500 feet)	1	LS	\$ 30,000	\$ 30,000
	Electrical Service Connection	1	LS	\$ 30,000	\$ 30,000
T-901	Seeding	1	LS	\$ 10,000	\$ 10,000
S-142	SRE Building	1	LS	\$ 750,000	\$ 750,000
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 23,246,625
Contingency (15%)					\$ 3,486,994
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 2,325,000
ICAP (5.0%)					\$ 1,503,000
Total					\$ 31,562,000

**Site 12A - Road
Pavement Option**

Pay Item	Description	Quantity	Unit	Unit Price	Item Cost
G-100	Mob/Demob (10%)	1	LS	\$ 100,000	\$ 100,000
G-130	Engineers Field Office and Lab	1	LS	\$ 20,000	\$ 20,000
G-135	Constr. Survey By Contractor (3%)	1	LS	\$ 100,000	\$ 100,000
D-701	36" Corrugated Pipe	105	LF	\$ 120	\$ 12,600
F-162	Fencing	1	LS	\$ 5,000	\$ 5,000
P-151	Clearing and Grubbing	2.3	AC	\$ 5,000	\$ 11,500
P-151	Clearing	0.7	AC	\$ 3,000	\$ 2,100
P-152	Unclassified Excavation	100	CY	\$ 18	\$ 1,800
P-152	Embankment	19,400	CY	\$ 10	\$ 194,000
P-154	Subbase Course	2,200	CY	\$ 38	\$ 83,600
P-156	Temp Erosion and Pollution Control	1	LS	\$ 30,000	\$ 30,000
P-156	Erosion and Pollution Control, Admin	1	LS	\$ 7,500	\$ 7,500
P-180	Riprap, Class II	100	CY	\$ 150	\$ 15,000
P-209	Crushed Aggregate Base Course	500	CY	\$ 50	\$ 25,000
P-401	Hot Mix Asphalt	405	TON	\$ 155	\$ 62,775
P-401	Asphalt Cement (6%)	30	TON	\$ 1,200	\$ 36,000
P-401	Asphalt Price Adjustment (5% of HMA+AC)	1	CS	\$ 4,939	\$ 4,939
P-603	Bituminous Prime Coat	3	TON	\$ 1,000	\$ 3,000
P-620	Traffic Markings	1	LS	\$ 5,500	\$ 5,500
P-681	Geotextile Fabric	100	SY	\$ 5	\$ 500
P-661	Standard Signs	1	LS	\$ 5,000	\$ 5,000
T-901	Seeding	1	LS	\$ 5,000	\$ 5,000
S-145	Bridge, Super and Sub-Structure	0	SF	\$ 360	\$ -
	Right of Way	1	LS	\$ -	\$ -
Subtotal					\$ 730,814
Contingency (15%)					\$ 109,622
Design					\$ 500,000
Environmental					\$ 500,000
Construction Engineering (10%)					\$ 73,000
ICAP (5.0%)					\$ 96,000
Total					\$ 2,009,000

APPENDIX 4: MATERIALS

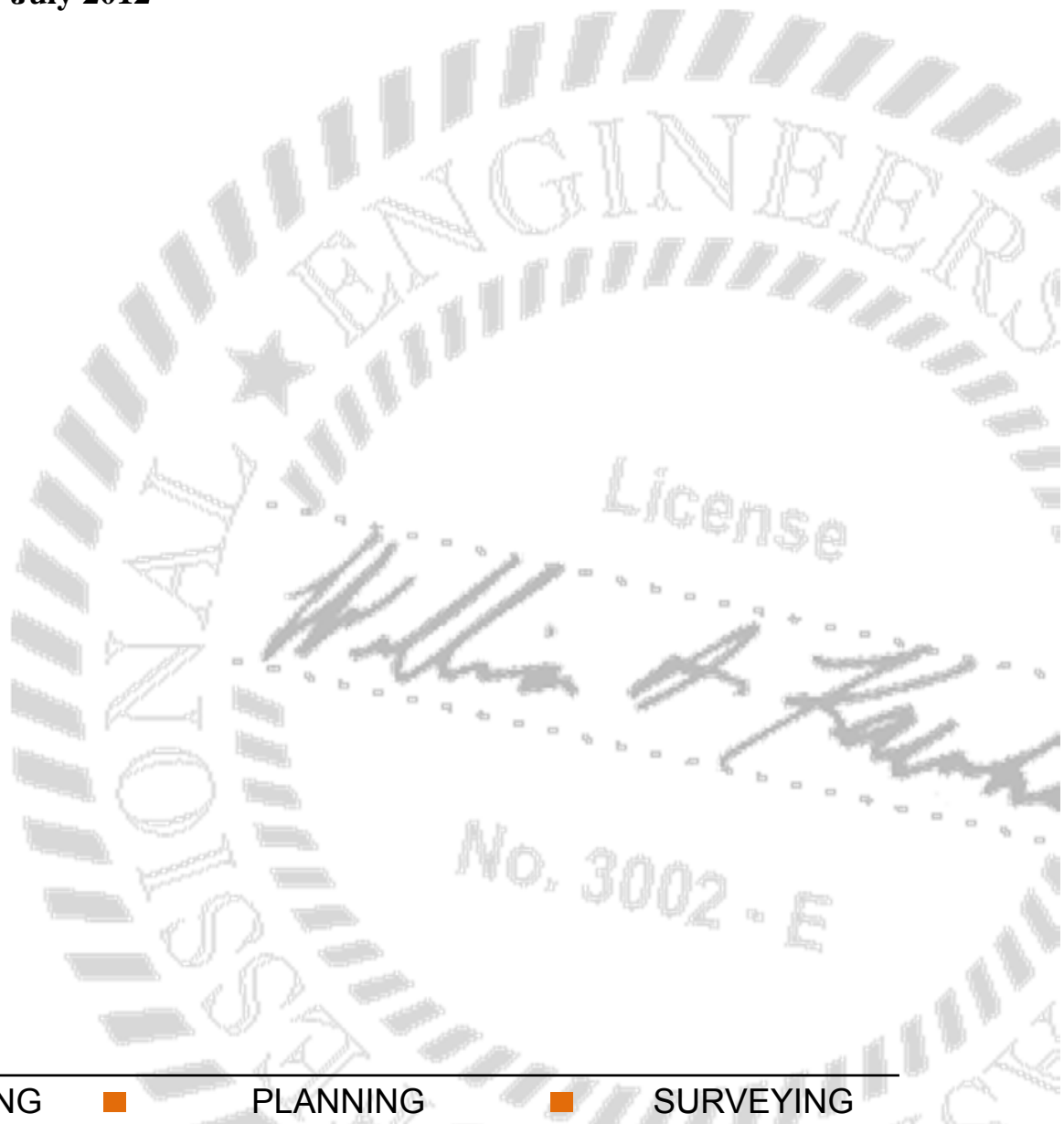


PRELIMINARY SITE EVALUATION

ANGOON AIRPORT PROJECT

ANGOON, ALASKA

July 2012



**PRELIMINARY SITE EVALUATION
ANGOON AIRPORT PROJECT
ANGOON, ALASKA**

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TABLE OF CONTENTS

	<u>Page</u>
1.0 SUMMARY	1
2.0 CONCLUSION.....	3

TABLES

Table 1: Existing Soil Conditions	2
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APPENDICES

Appendix A.....	DRAFT Geology and Soils Technical Report Environmental Impact Statement, Angoon Airport
Appendix B.....	DRAFT Preliminary Material Site Evaluation, Angoon Airport

1.0 SUMMARY

The city of Angoon is located in Southeast Alaska, on the eastern side of Admiralty Island. The Federal Aviation Administration is proposing to construct an airport in or near the city of Angoon and has narrowed down airport locations to four potential sites, referred to as Sites 3, 3A, 4, and 12. Although the locations are in different areas around Angoon and adjacent to Favorite Bay, the four sites have similar characteristics.

The soils and geology in the Angoon area are a result of several geologic processes, some of which continue to shape the area. An understanding of the soils and geology will help with proposed airport planning. Refer to Appendix A, Geology and Soils Technical Report Environmental Impact Statement, for a general overview of the soils and geology in and around the Angoon area.

Office research yielded general information regarding the general soil and bedrock conditions on Admiralty Island, but few specific studies are known to have occurred in the immediate vicinity of Angoon. Local residents and organizations were interviewed about recently constructed buildings, such as the post office. No known soils investigations were completed for those projects.

A site visit was conducted from June 8 to June 11, 2009 to visually determine the existing conditions at each proposed airport location and at potential material sites. Refer to Appendix B, Preliminary Material Site Evaluation, for a description of the proposed airport locations and material site evaluations. The proposed airport sites were evaluated for topography and drainage, access, overburden depth, soils, groundwater and presence of bedrock. Peat probes were conducted to determine overburden depth along the proposed runways. The type of vegetation was found to be an indicator of overburden depth. In general, areas of deadfall, moss, and a high canopy had relatively shallow overburden depths of one to three feet. Areas of secondary growth and high concentrations of devil's club and alders had overburden depths of two to four feet. Poorly drained and marshy areas had overburden depths of five or more feet.

During the site visit, one existing material site and two proposed material sites were identified and evaluated. These potential material sources were visually evaluated in regards to

topography, type and quality of material, estimated quantities, and access. An additional gravel site was researched for the type and quality of material being extracted.

Construction of a new airport would require a significant amount of non-frost susceptible, competent material. The use of local material will reduce construction costs, however, the information obtained to date is insufficient to adequately evaluate the subsurface conditions at the proposed airport locations. In addition, there is insufficient information regarding quality and quantity of local material. Further field exploration and laboratory testing are required to determine if the potential material sources contain quality material for the construction of the proposed airport.

The following general conclusions regarding the airport locations and material sources are based on research and observations during the site visit.

Existing Soils. The three main soil types encountered consisted of peat, silts, and granular material (sands and gravels). The following table provides general soil properties. These soils all are susceptible to erosion; therefore slope protection in the form of topsoil/seeding or riprap should be expected.

Table 1: Existing Soil Conditions

Soil Type	Frost Susceptibility	Typical In Situ Moisture Content	Bearing Capacity	Typical Slopes (H to V)	Reusable During Construction	Drainage/Percolation
Peat	High	>100	Low, highly compressible	3:1 - 4:1	Landscaping only	Wet, poorly drained
Silts	High	20 - 40	Low to moderate	2:1 - 3:1	No	Poor drainage
Sands	Moderate	10 -20	Moderate to high	2:1	Possibly	Moderate drainage and percolation
Gravels	Low	2 - 10	High	1.5:1 - 2:1	Yes	Well drained, good percolation

Bedrock. Bedrock was observed at several of the proposed airport sites. The bedrock observed consisted of schist, conglomerate, sandstone, and shale. The upper few feet of bedrock likely is weathered. Weathered bedrock often is rippable with appropriately sized excavation equipment. Once competent bedrock is encountered, excavations in rock will likely require blasting.

Construction Materials. Material required for the construction of an airport would consist of embankment fill, subbase course, crushed aggregate base course, and paving aggregates. Embankment fill would likely come from either common excavation or rock excavation. Material from common excavations are obtained from suitable material of silt, sand, or gravel that does not require blasting or ripping. Material from rock excavations are obtained from blasting or ripping rock or boulders.

Subbase course is classified as material that consists of hard durable particles or fragments of granular aggregates and mixed with fine sand, stone dust, or a similar binding material. Crushed aggregate base course and paving aggregates must be clean, sound, durable particles or crushed stone or gravel and free of organics, silt or clay coatings, and meet specifications for wear and durability.

2.0 CONCLUSION

Based on the site visit observations, gravels and sands encountered would likely be suitable for reuse as embankment fill. Bedrock and gravels on site will require testing to determine suitability for use as construction materials as well as maximum allowable slopes (such as 3V:1H for gravels and 2V:1H for rock). Based on site observations and information regarding the quality of dredged gravels in the Angoon area, it is likely that the previously used material sources sites will not meet specifications for wear and durability for surfacing. Subbase, crushed and paving aggregate will have to be barged to Angoon if these are the only sites available.

APPENDIX A

DRAFT Geology and Soils Technical Report Environmental Impact Statement, Angoon Airport

1.0	INTRODUCTION	1
2.0	GEOLOGIC SETTING	4
2.1	Organic Soils.....	4
2.2	Inorganic Soils	4
2.3	Bedrock	5
3.0	GEOLOGIC PROCESSES	7
3.1	Glacial Processes and History.....	7
3.2	Alluvial Processes	7
3.3	Wave Processes.....	8
3.4	Tectonic Processes	8
3.4.1	Seismic hazards.....	9
4.0	REFERENCES	10

FIGURES

Figure 1:	Vicinity Map.....	2
Figure 2:	Proposed Airport Location Map.....	3

TABLES

Table 1:	Angoon Soil.....	4
Table 2:	Angoon Bedrock	6
Table 3:	Angoon Seismic Hazards.....	9

1.0 INTRODUCTION

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for the proposed Angoon Airport in Angoon, Alaska (Figure 1, Vicinity Map). The EIS will evaluate the areas surrounding four potential airport location sites. The locations are identified as Sites 3, 3A, 4, and 12A (Figure 2, Proposed Airport Location Map).

This technical report describes the geologic conditions and soils near the proposed Angoon Airport. It focuses on geologic processes and soil conditions which may affect the proposed airport and includes descriptions of the geologic setting. An understanding of the local and regional geology will assist the project planning.

General Area Information. Angoon is the only permanent settlement on Admiralty Island with approximately 450 year-round residents, many of which are Native Alaskan Tlingit. It is the largest community in Southeast Alaska without an airport, limiting transportation to and from the island to boat or seaplane. The existing seaplane service available to the city is essential for health care, purchase and transport of goods, mail service, education, as well as other community needs. Although the seaplane service is on a regular schedule, weather does influence available flights. The seaplane dock is located roughly two miles southeast of the entrance of Favorite Bay into Chatham Strait.

The Kootznoowoo Native Corporation owns the majority of the Angoon area as part of the Alaska Native Claims Settlement act of 1971. This area includes approximately 1,800 acres of land around Angoon, 1,300 of which are development restricted (State of Alaska Department of Transportation and Public Facilities [DOT&PF] 1982).

The community of Angoon on Admiralty Island is located approximately 55 miles southwest of Juneau and 41 miles northeast of Sitka, Alaska (Figure 1). All proposed airport sites are located east or southeast of the city of Angoon (Figure 2).

The proposed airport is planned to consist of a 3,300-foot runway with future expansion capabilities to a 4,000-foot runway. The airport will also include an access road, parking, maintenance facilities, and a terminal building.

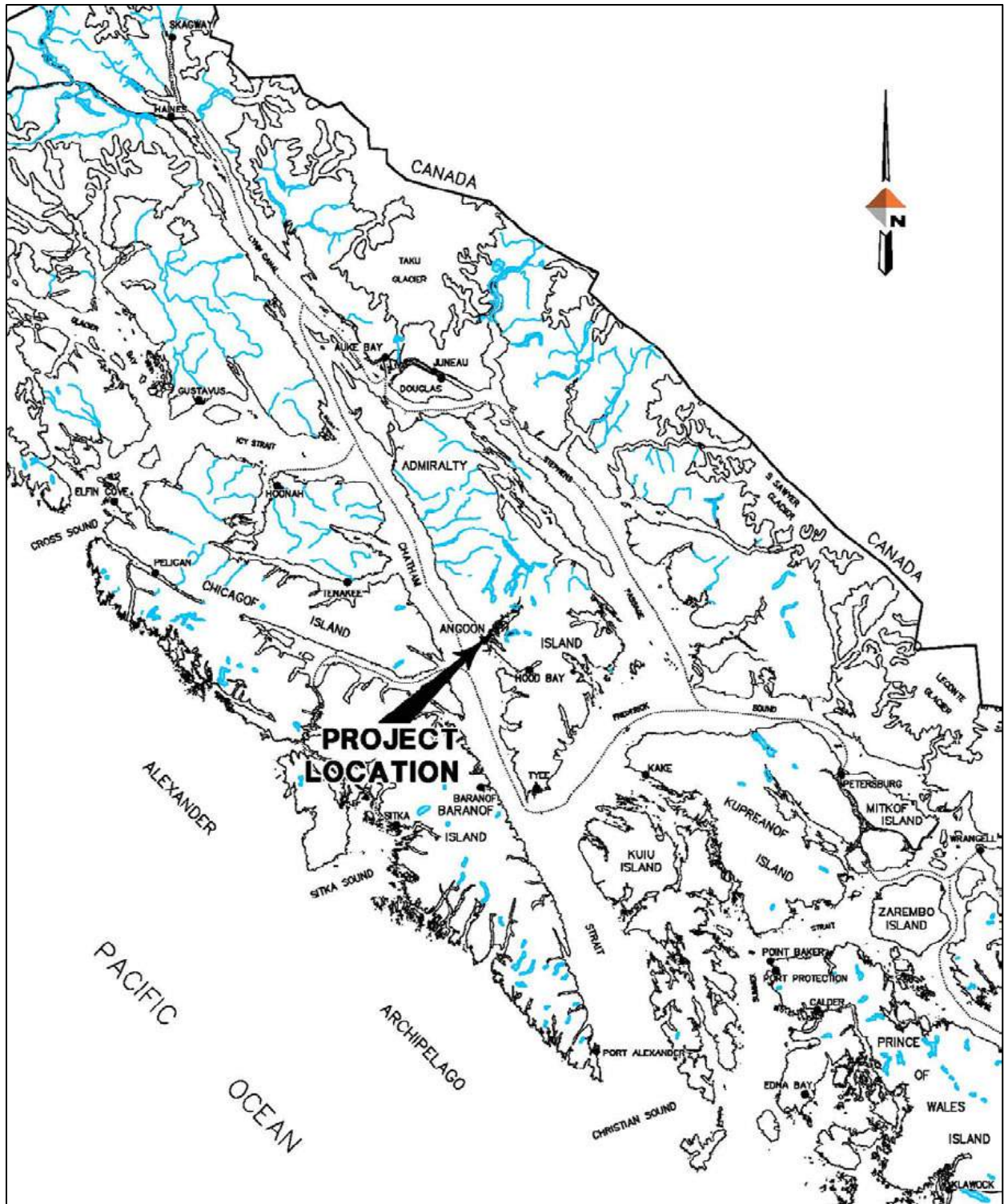


Figure 1: Vicinity Map

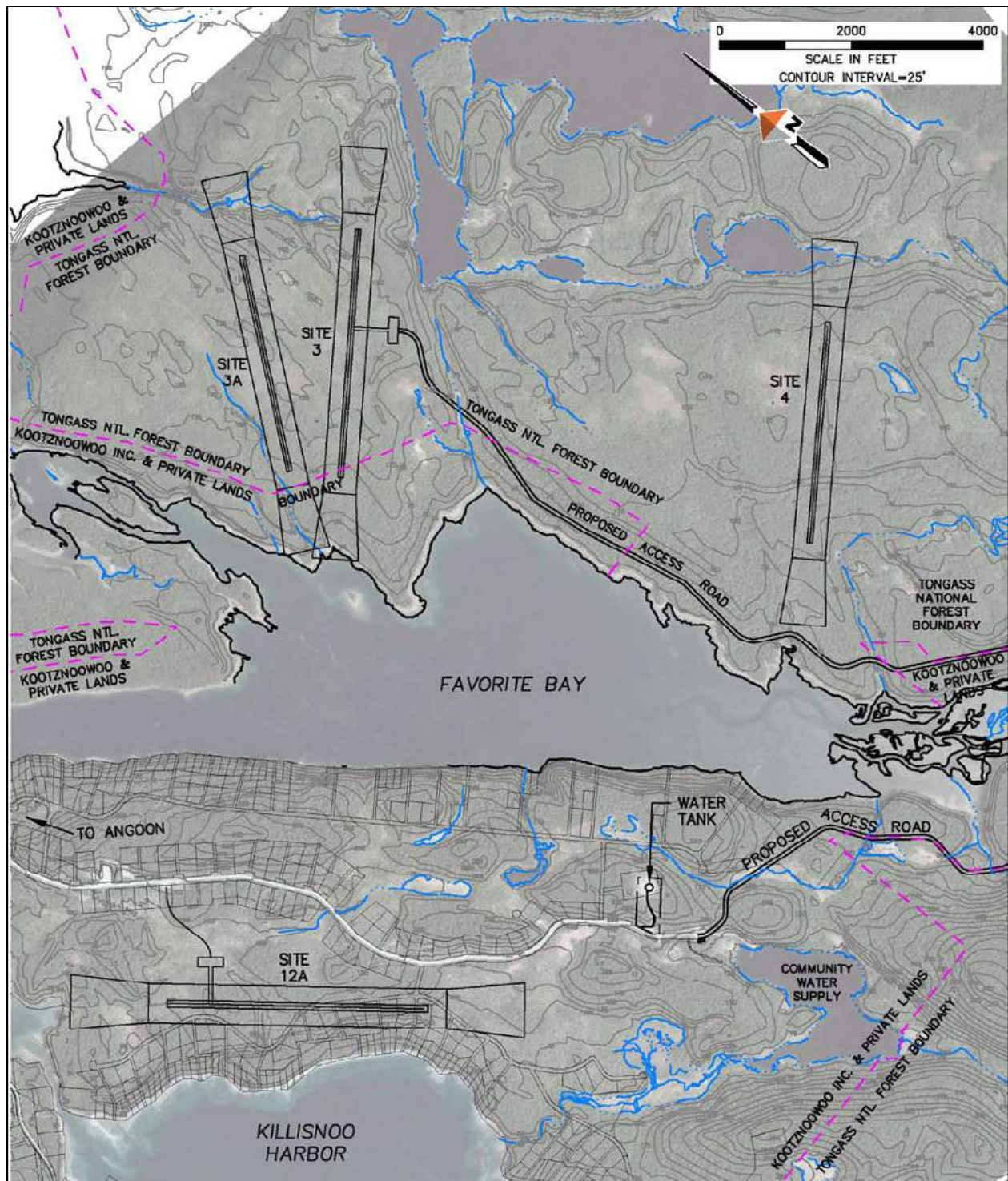


Figure 2: Proposed Airport Location Map

2.0 GEOLOGIC SETTING

Admiralty Island is part of the Coast Range in Southeast Alaska that extends from the Alaska Peninsula to California. Angoon is located on the western shore of Admiralty Island, between Kootznahoo Inlet and Chatham Strait. The geology of the area can be divided into the soils, both organic and inorganic, and the underlying bedrock (DOT&PF, 1982).

2.1 Organic Soils

Organic soils typically form in low-lying poorly drained areas and are underlain by an impermeable material. Deep organics are often indicated by little tree cover, abundance of grasses and small shrubs, and water at or near the ground surface. The depth of organics near the areas of the proposed airport locations varies from less than one foot to greater than five feet.

2.2 Inorganic Soils

Inorganic soils in this area are generally less than four feet thick and are primarily a result of recent glaciations. The inorganic soils consist of poorly graded sands and gravels and are commonly exposed along creek beds and in areas containing first and second growth hemlock and spruce trees, where the organic soils are typically thin. Often, bedrock is observed beneath the inorganic soils. Erosion of soil and bedrock materials is likely in areas where the vegetative cover has been removed, especially on steep slopes (Environmental Services Limited, 1983).

Table 1: Angoon Soil

Soil Type	Depth (feet)	Location Observed	Vegetation	Typical Soil Profile
Organic Soil (Kina and Kogish Peat)	5 to 10	Small isolated areas with inorganic soil groups	Mountain Hemlock, Alaska Cedar	5 to 10 feet of peat over inorganic soil or bedrock
Organic Soil (Staney Peat)	15 or more	Isolated areas	Grass	15 or more feet of peat over inorganic soil or bedrock
Organic Soil (Kina and Maybeso Peat)	2 to 10	Wide distribution	Scrub Cedar, Western Hemlock	2 to 10 feet of peat over inorganic soil or bedrock
Inorganic Soil	0.5 to 4	Benches, moderate side slopes, ravines	Western Hemlock, Sitka Spruce	0.5 foot organic mat, followed by 1 to 5 feet silty or sandy gravel, followed by glacial till, over gravel which is typically observed between 2 to 4 feet

2.3 Bedrock

Information on the geology of the bedrock in the area is somewhat limited. Refer to Table 2, Angoon Bedrock, for an overview of the observed formation locations, and description of the bedrock. Bedrock along the western side of Favorite Bay is of the Gambier Bay Formation consisting of schist and marble from the Devonian period (Pomeroy, Berg, and Hinckley, 1959). The thickness of the formation is unknown, but is expected to be as thick as 1,000 to 4,000 feet. Rocks within this formation have been folded and recrystallized several times (Lathram, Pomeroy, and Loney, 1965). Proposed Runway 12A is located on this formation.

Bedrock from the mouth of Favorite Bay Creek, at the southeast end of Favorite Bay, contains Paleozoic and Mesozoic undifferentiated metamorphic rocks of an unnamed formation (Pomeroy, Berg, and Hinckly, 1959). Rock types include hornblende-albite-epidote, hornfels, micaceous schist, metamorphosed chert, marble, slate, and phyllite (Nolan, 1965).

Bedrock on the eastern and northeastern side of Favorite Bay is part of the Kootznahoo Formation and is Tertiary in age. Material from the Kootznahoo Formation consists of sandstone, siltstone, shale, conglomerate, and minor amounts of coal (Pomeroy, Berg, and Hinckley, 1959). The majority of Runways 3, 3A, and 4 are located on conglomerate with lesser amounts of sandstone and shale. Large conglomerate boulders can be seen along the northeastern shore of Favorite Bay. Further inland, the bedrock consists of sandstone, siltstone, and shale, with lesser amounts of conglomerate and coal. The thickness of the formation is known to be about 5,000 feet based upon information collected from several fault zones within the areas of the proposed runway locations (Lathram, Pomeroy, and Loney, 1965).

Table 2: Angoon Bedrock

Bedrock	Location Observed	Description
Schist (Gambier Bay Formation)	2 miles south of Angoon	Chlorite-albite schist, quartz-muscovite schist
Marble (Gambier Bay Formation)	Predominate rock type	Thin to thick bedded, medium gray, fine to medium grained marble. Exposures along the west and southwest shore of Favorite Bay appear to be sheared. Marble strikes to the northwest and dips to the northeast.
Migmatite, gneiss, and schist (Unknown Formation)	Southern end of Favorite Bay	Migmatite, gneiss, and feldspathic schist
Sandstone, siltstone, shale (Kootznahoo Formation)	East of Favorite Bay, from the bay up to 3/4 miles inland	Sandstone, siltstone, and shale with minor amounts of conglomerate and coal
Conglomerate (Kootznahoo Formation)	East of Favorite Bay	Conglomerate with minor amounts of sandstone and shale

3.0 GEOLOGIC PROCESSES

Admiralty Island is subject to a number of geologic processes, some of which continue to affect the island and should be considered during the design and construction of future airport projects.

3.1 Glacial Processes and History

Glacial processes have defined much of Admiralty Island's topography as well as most of Southeast Alaska. Ice covered most of Southeast Alaska 10,000 years ago, including all but the highest peaks. Peaks that rose above the ice are rough and jagged; those below the ice tend to be round and smooth. Today there are no true glaciers on Admiralty Island, yet a permanent snowfield covers approximately one square mile of land and is located about four and a half miles southeast of Favorite Bay Creek at an elevation of approximately 2,800 feet. (SUPERSCRIPT Consultants, 1989).

The lowlands around Angoon have been shaped by glaciers that have left behind surficial deposits of sand and gravel. The melting of the glaciers also created many depressions which filled with water creating ponds and large poorly drained areas. Large boulders lie along the shore of Favorite Bay as a result of glacial activity. The glaciers carried boulders to the water and then left them behind as the glaciers melted and receded.

3.2 Alluvial Processes

As the glaciers melted and retreated, alluvial processes began to modify the topography. Runoff produced by melting glaciers carried the glacial outwash to the sea and reworked the lowlands by depositing coarse sand and gravel between the moraines and on the valley floors. Unlike glacial till, which is poorly graded, angular to subangular material, glaciofluvial deposits typically consist of well graded, subrounded to rounded deposits.

Admiralty Island's rivers and streams actively transport sediments, although the sediment load is typically far less than during deglaciation periods. Sediments of all sizes are transported from high interior ridges. As the gradient of a river lessens, the energy of the current decreases and coarser material is deposited in the river channels. Finer sediments remain suspended in the current, carried downstream, and deposited as deltas at the mouths of the rivers.

The effects of the alluvial processes can be seen along Favorite Bay Creek. Melting snowfall and rain create higher velocity flows in the creek, which picks up sediment and deposits the sediment in areas of lower velocity flow. Sediment carried downstream also erodes and carves channels in the creek bed. Subrounded to rounded sands, gravels, cobbles, and boulders create an alluvial fan at the mouth of the creek as the water carrying the sediment loses momentum. A fairly steep canyon was formed as a result of alluvial processes near the mouth of Favorite Bay Creek before it enters Favorite Bay.

3.3 Wave Processes

Angoon is largely protected from wave action. Coastal features isolate the area from the Gulf of Alaska and create a beachfront only rarely subjected to heavy wave activity. Erosion is typically a result of wave activity and is considered to be minimal in Angoon.

Like all of Southeast Alaska, Admiralty Island has two unequal high tides and two unequal low tides in a 24-hour period. Tides can fluctuate from a high of 18 feet above Mean Sea Level to a low of minus 4 feet, with the greatest range along Chatham Strait. Lesser tides are present in Favorite Bay and Mitchell Bay. The rise and fall of the tides creates currents and when combined with exposed bedrock, creates hazards for boaters traveling in and out of Favorite Bay and Mitchell Bay.

3.4 Tectonic Processes

The state of Alaska is characterized by high seismicity due to the active subduction of the Pacific Plate beneath the North American Plate in the vicinity of the Gulf of Alaska. This subduction zone, known as the “Ring of Fire,” is characterized by high seismicity and volcanic activity. Angoon is located on the boundary between Seismic Zone 3 (zone of second highest hazard) and Zone 4 (zone of highest hazard), with the majority of the community in Zone 4. The Chatham Fault is located a little over a mile west of Angoon. However, the largest threat caused by earthquakes along the fault is the potential for slope failure of steep banks/cliffs along the water front and the subsequent formation of large waves.

Although the rocks in Chaik Bay are volcanic, there are no active volcanoes in close proximity to Angoon. The closest volcano is Mount Edgecumbe on Kruzof Island that has not erupted in the

last 3,000 years and is reported as inactive. Therefore, the volcanic threat on Admiralty Island and Angoon is low (SUPERSCRIPT Consultants, 1989).

3.4.1 Seismic hazards

Over 174 earthquakes have been observed in Southeast Alaska from 1850 to 1989. The frequency of earthquakes could result in a number of potential hazards. Refer to Table 3 below for a detailed description of the seismic hazards near Angoon (SUPERSCRIPT Consultants, 1989).

Table 3: Angoon Seismic Hazards

Hazard	Effects
Surface displacement along faults	The majority of faults in the Angoon area are considered inactive. However, structures, roads, and utility lines should avoid fault traces.
Tectonic changes in elevation	Impossible to predict.
Ground shaking	May cause damage to man-made structures, but can be minimized by building on bedrock.
Compaction of sediments	Can result in sediments settling in low lying areas which can lead to flooding and differential settlement.
Liquefaction of cohesionless materials	May cause damage to man-made structures, but can be minimized by not building on cohesionless soils affected by water.
Reaction to sensitive and quick clays	May cause damage to man-made structures, but can be minimized by not building on sensitive or quick clays.
Water sediment ejection and associated subsidence and ground fracturing	May result in ground fracturing, but can be minimized by building on bedrock.
Earthquake-induced sub aerial slides and slumps	Avoid building structures on or at the base of potentially unstable slopes.
Earthquake-induced subaqueous slides	Avoid building structures on steep slopes near water. Angoon has several areas of water located on the surface, both in drainages and ponding. Groundwater is expected to be shallow.
Tsunamis, seiches, and other abnormal water waves	Poses the greatest threat and is impossible to predict.

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APPENDIX B

DRAFT Preliminary Material Site Evaluation, Angoon Airport

1.0	INTRODUCTION	1
2.0	PROPOSED AIRPORT LOCATIONS	3
2.1	Sites 3 and 3A	3
2.2	Site 4	6
2.3	Site 12A	8
2.4	Access Road Northwest of the Community Water Supply.....	10
3.0	MATERIAL SITE EVALUATION	13
3.1	Existing Material Site	15
3.2	Potential Material Source A.....	16
3.3	Potential Material Source B.....	17
3.4	Gravel Extraction Site.....	20
4.0	CONCLUSION.....	22
5.0	REFERENCES	23

FIGURES

Figure 1:	Vicinity Map.....	1
Figure 2:	Proposed Airport Location Map.....	2
Figure 3:	Peat Probe Location Map, Sites 3 and 3A.....	5
Figure 4:	Peat Probe Location Map, Site 4.....	7
Figure 5:	Peat Probe Location Map, Site 12A.....	9
Figure 6:	Access Road Peat Probe Location Map	12
Figure 7:	Material Site Location Map.....	14
Figure 8:	Existing Material Site.....	15
Figure 9:	Potential Material Source A	17
Figure 10:	Potential Material Source B	19
Figure 11:	Gravel Extraction Site	21

TABLES

Table 1:	Sites 3 and 3A Overburden Depths	4
Table 2:	Site 4 Overburden Depths.....	6
Table 3:	Site 12A Overburden Depths.....	8
Table 4:	Access Road Overburden Depths	10

APPENDICES

Appendix B.1	Photograph Log
Appendix B.2	Laboratory Test Results

1.0 INTRODUCTION

The Federal Aviation Administration (FAA) is preparing an Environmental Impact Statement (EIS) for the proposed Angoon Airport in Angoon, Alaska (Figure 1, Vicinity Map). The EIS will evaluate the areas surrounding four potential airport location sites. The locations are identified as Sites 3, 3A, 4, and 12A (Figure 2, Proposed Airport Location Map).

This technical report describes the soil conditions observed at each proposed airport location, and the observed conditions at proposed material sites. Photographs taken during the site visit are shown in Appendix B.1, Photograph Log.

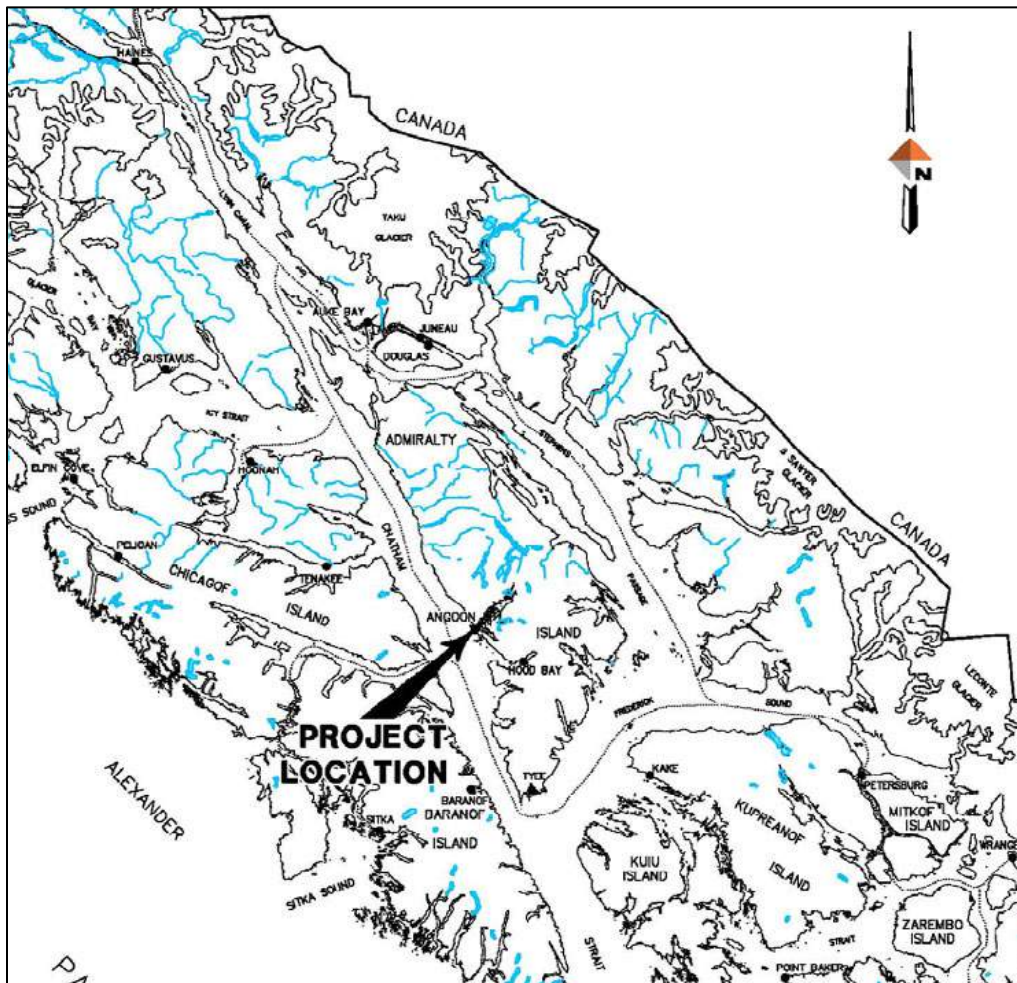


Figure 1: Vicinity Map

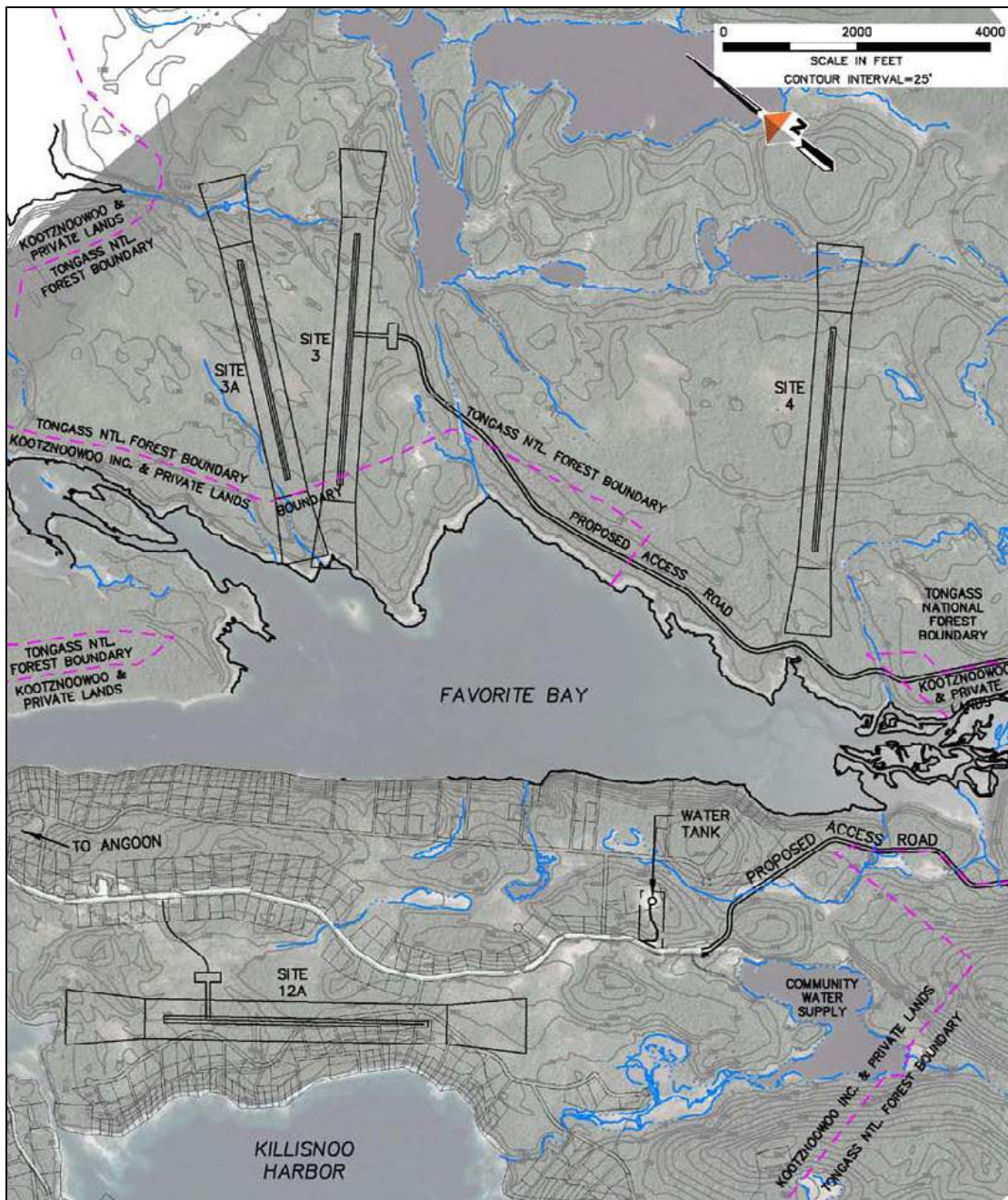


Figure 2: Proposed Airport Location Map

2.0 PROPOSED AIRPORT LOCATIONS

From 1982 to 2003, a total of 15 sites have been under investigation as potential airport locations at Angoon. Of the 15 sites, 2 were selected, and 2 additional airport locations were added by the State of Alaska Department of Transportation and Public Facilities (DOT&PF) for further investigation, resulting in a total of 4 sites to be evaluated during this preliminary investigation.

A site visit was conducted from June 8 to June 11, 2009 to evaluate the proposed airport locations and potential material sites. Samples were not collected and laboratory testing was not conducted on the subsurface material observed at the four airport sites. One surface sample was collected in the vicinity of the access road and tested for particle size distribution. Refer to Section 2.4, subsection Laboratory Testing, for further details. Airport sites were evaluated in regards to their location, topography and drainage, access, general overburden depths, bedrock and soils, and groundwater conditions.

2.1 Sites 3 and 3A

Location. Sites 3 and 3A are located east of Favorite Bay about three miles southeast of the community of Angoon. The area is currently undeveloped. The southwestern end of the proposed runways are owned by Kootznoowoo Incorporated, and the remaining section is within the Admiralty Island National Monument and owned by the Tongass National Forest (DOT&PF, 2007).

Topography/Drainage. Site 3 has an upward slope to the northeast from an elevation of 90 feet to 150 feet. Site 3A has an upward slope to the north from an elevation of 75 feet to 150 feet. The highest point along both runways is at an elevation of around 150 feet. The topography is uneven with areas of higher and lower elevations resulting from a variety of geologic processes. Drainages typically flow to the south or southwest and cut into the topography creating steep slopes, generally 10 feet or less. Some standing water was observed in poorly drained areas.

Access. Access to the sites is limited by boat to the northeastern side of Favorite Bay. Once in the area, access is via game trails and on foot through undeveloped forest. A survey cut line was present along the southwest side of the proposed runway.

Overburden Depth. The general depth of overburden at the sites range from less than one foot to three and a half feet. Areas of shallow overburden were often located in areas of deadfall, thick moss, a high canopy, and spruce trees. Areas where overburden was greater than two feet were typically observed to be peat bogs, marshy areas, or poorly drained areas. The vegetation in poorly drained areas consists of peat, shrubs, moss, and short spruce trees.

Table 1 below identifies the peat probes conducted in the vicinity of Site 3 and 3A, the associated vegetation, and underlying soils information. Refer to Figure 3 for approximate peat probe locations.

Table 1: Sites 3 and 3A Overburden Depths

Site	Peat Probe Number	Depth of Overburden (feet)	Vegetation	Soil
3	PP-17	1	deadfall, moss, high canopy	boulders (sandstone), sands and gravels
3	PP-23	1.25	deadfall, moss, medium to high canopy, open	granular soil
3A	PP-18	1	deadfall, moss, high canopy	granular soil
3A	PP-19	1	deadfall, moss, high canopy	granular soil
3A	PP-20	3.5	peat, moss, short spruce trees	boulder/cobble at 3.5 feet
3A	PP-21	1 to 1.5	deadfall, moss, spruce trees	gravel/cobble/boulder or bedrock at 1 to 1.5 feet
3A	PP-22	0.5	deadfall, moss, high canopy, open	silty sand with gravel (about 35% silt, 5% gravel, gravel subangular to 1", medium sand)

Bedrock/Soils. There was no exposed bedrock observed at Site 3 or 3A; however, bedrock was exposed along the lakeshore located about 700 feet southeast of the northern end of Site 3. Bedrock appeared to be weathered sandstone overlain by overburden and soil. Along the proposed runway, sands and gravels were observed beneath the organic mat. Boulders were present at drainages and under the root clumps of fallen trees. Shallow root systems indicate shallow overburden and possible shallow bedrock or dense sands and gravels.

Near Site 3A, several boulders were exposed near fallen trees and primarily consisted of conglomerate, sandstone, and lesser amounts of shale. Exposed soils include silty sands and gravels in areas of shallow overburden and peat and organic silts in poorly drained areas.

Groundwater. Several drainages are present near the proposed airport location. Standing water was present in poorly drained areas. No test pits or test borings were drilled/excavated to determine groundwater depth. However, given the shallow bedrock depth, only surface water is likely to be a factor during construction.

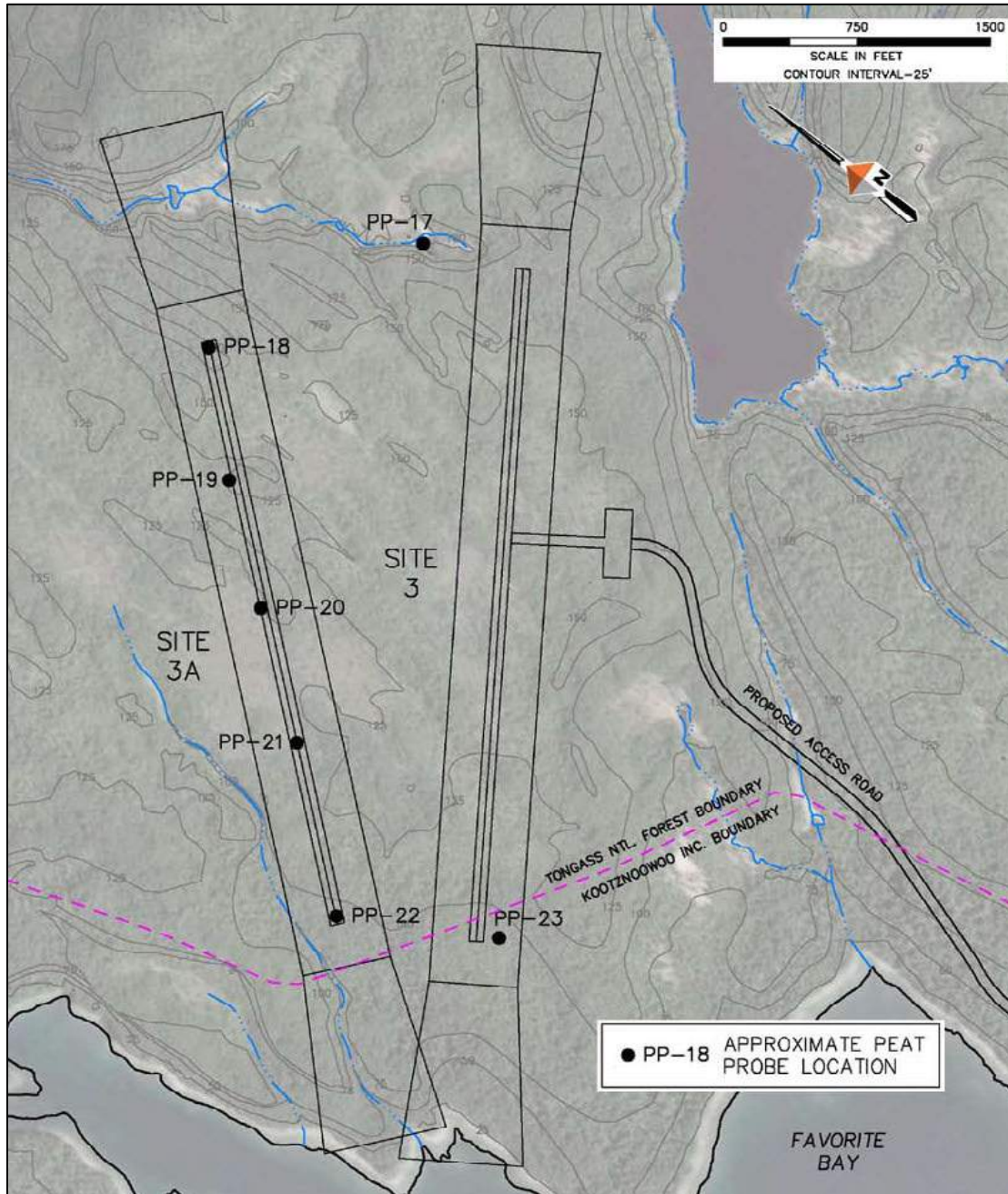


Figure 3: Peat Probe Location Map, Sites 3 and 3A

2.2 Site 4

Location. Site 4 is located east of Favorite Bay, approximately 4.25 miles southeast of the community of Angoon. This site is also undeveloped, owned by the Tongass National Forest, and is within Admiralty Island National Monument, Tongass National Forest.

Topography/ Drainage. Site 4 has an upward slope to the northeast from an elevation of 100 feet to 175 feet. The highest point along the runway is approximately 175 feet. There are a few benches created by previous glacial activity and other geologic processes. Near Peat Probe 15 (Figure 4), a creek has carved out a gully, creating slopes of 5 to 20 feet on either side. The creek drains into a small lake located to the north of the proposed runway, and ponded water was observed along the creek. Drainages located to the southwest of Peat Probe 14 typically drain to the southwest towards Favorite Bay. Creeks and drainages located to the northeast of Peat Probe 14 typically drain to the northeast towards the small lake north of the proposed runway.

Access. Access to the site is by boat to the northeastern side of Favorite Bay. Once in the area, access is limited to game trails and by foot through undeveloped forest.

Overburden Depth. The depth of overburden along Site 4 ranges from less than a foot to greater than five feet. Areas of shallow overburden were often associated with areas of deadfall, a high canopy, and thick moss. Overburden was observed to be deeper in poorly drained areas, particularly those areas containing skunk cabbage. Figure 4 shows peat probe locations taken along the runway. Table 2 below lists the peat probes conducted in the vicinity of the proposed airport, the associated vegetation, and underlying soils information, if determined.

Table 2: Site 4 Overburden Depths

Peat Probe Number	Depth of Overburden (feet)	Vegetation	Soil
PP-11	3.75	deadfall, thick moss	granular soil
PP-12	5+	deadfall, thick moss, skunk cabbage, poorly drained area	fine grained soil
PP-13	0.5 to 1	deadfall, moss	silty sands with gravel (about 35% silt, 5% gravel)
PP-14	1.5	deadfall, secondary growth trees	granular soil
PP-15	5+	skunk cabbage, poorly drained area	soil/ rock not encountered
PP-16	1	deadfall, moss, huckleberries	granular soil

Bedrock/Soils. There were no areas of exposed bedrock observed along Site 4. Large boulders were encountered and consisted primarily of conglomerate, sandstone, and shale. Soils exposed under the organic mat indicated silty sands with gravel in well drained areas, and silty sands, sandy silts and organic silts in poorly drained areas.

Groundwater. Several drainages were present in the area surrounding Site 4. No test borings or test pits were drilled/excavated to determine groundwater depth. However, given the shallow bedrock depth, only surface water is likely to be a factor during construction.

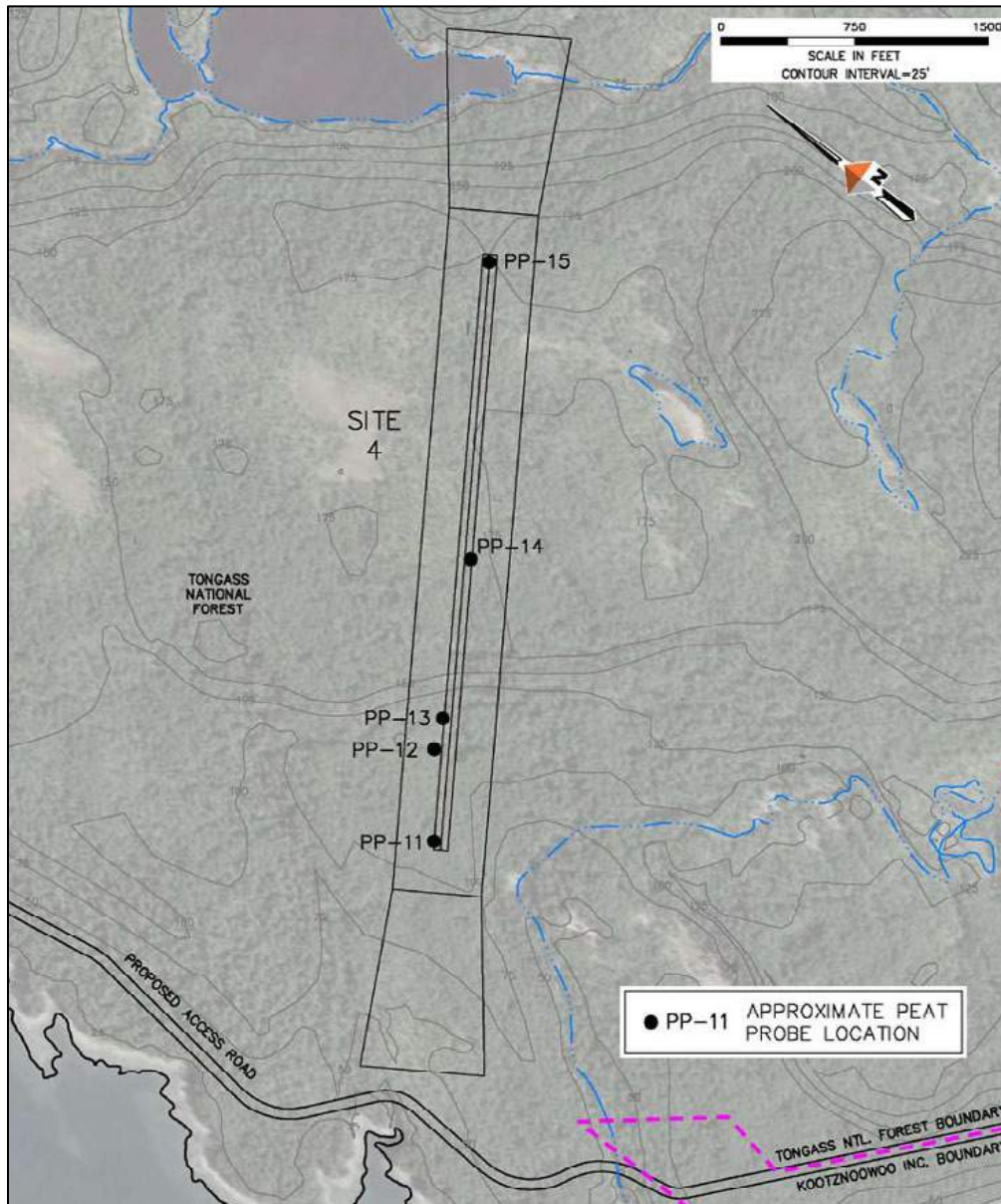


Figure 4: Peat Probe Location Map, Site 4

2.3 Site 12A

Location. Site 12A is located approximately 2.5 miles south of the community of Angoon. The site is undeveloped, and owned by Kootznoowoo Incorporated and private landowners.

Topography/Drainage. In general the topography in the vicinity of the runway alignment undulates. A series of benches, terraces, and low areas span across the runway from end to end. The elevation change across the runway is from 75 feet to 100 feet, with a high point of 125 feet, and a low point of 50 feet. The runway slopes to the west towards Killisnoo Harbor. Several drainages are present within the area of the proposed runway, and typically flow west towards Killisnoo Harbor. Standing water is present in low-lying and poorly drained areas.

Access. The site is accessible utilizing the road which leads to the community water tower and reservoir. A 4-wheeler trail extends from the water tower road at the far southern end of the proposed runway and leads to Killisnoo Harbor. The 4-wheeler trail is maintained with logs placed across the trail to help reduce erosion through the marshy areas. Beyond the 4-wheeler trail, Site 12A is accessible by game trails and on foot through undeveloped forest.

Overburden Depth. The depth of overburden along Site 12A varies from less than one foot to greater than five feet. Typically, areas of shallow overburden are associated with deadfall, and areas of deeper overburden are in marshy or large open areas with short brushy vegetation. Figure 5 shows peat probe locations taken in the vicinity of Site 12A. Table 3 below lists the peat probes conducted in the vicinity of the proposed airport, the associated vegetation, and underlying soils information, if determined.

Table 3: Site 12A Overburden Depths

Peat Probe Number	Depth of Overburden (feet)	Vegetation	Soil
PP-3	5+	short shrubs, alders, open area	soil/ rock not encountered
PP-4	2	deadfall, alders	cobble/ boulder at 2 feet
PP-5	2	deadfall, alders	NA
PP-6	2	deadfall, moss	sands at 2 feet
PP-7	1	deadfall, alders	cobble/ boulder at 1 foot
PP-8	1	deadfall, alders, moss	sands and gravels
PP-9	3	swamp	NA
PP-10	2	deadfall, moss	sands
Creek 1	1 to 1.5 feet	deadfall, moss	gravels and sands

Bedrock/Soils. One small area of exposed bedrock was observed near Peat Probe 9. The rock consisted of highly weathered and fractured schist. Moss and other organics covered the majority of the bedrock outcrop. Soils beneath the shallow overburden encountered along the airport alignment consisted of sands and gravels, and in some areas cobbles, boulders, or possibly bedrock. Soils in poorly drained areas consist of silty sands and sandy silts.

Groundwater. Several drainages and areas of standing water were present near Site 12A. Drainages exposed sand, gravel, and cobbles. No test borings or test pits were drilled/excavated to determine groundwater depth. However, given the shallow bedrock depth, only surface water is likely to be a factor during construction.



Figure 5: Peat Probe Location Map, Site 12A

2.4 Access Road Northwest of the Community Water Supply

Location. The proposed access road, which would extend from Angoon to Site 3, 3A, or 4 is located northwest of the community water supply and extends around Favorite Bay Creek. During the site visit, the portion of the road extending from the community water supply to the west side of Favorite Bay Creek was probed. Time restraints prohibited further probing.

Topography/Drainage. In general this area is very uneven. A series of benches, terraces, and low areas span the access road. A small hill with an elevation gain of 50 feet is present within the first 1,000 feet of the access road. Steep slopes with an elevation gain of 125 feet in 250 feet are present along the northern side of the existing road to the community water supply and along the northeastern edge of the community water supply reservoir. Along the southern edge of Favorite Bay, steep slopes with a decrease in elevation of 100 feet are present. Areas with little to no change in elevation are often on top of ridges. Drainages are present in the area of the access road. Standing water was observed in low-lying and poorly drained areas.

Access. The site is accessible utilizing the road which leads to the community water tower and reservoir. Beyond the water reservoir there are no access roads and the remainder of the proposed access road is accessible utilizing game trails and on foot through undeveloped forest.

Overburden Depth. Overburden depths in this area range from less than a foot to more than five feet. Areas of deeper overburden were often in poorly drained fields, whereas shallow overburden was observed in forested areas between clearings and in areas of deadfall and thick moss. Figure 6 shows peat probe locations taken near the access road and Table 4 lists the peat probes conducted in the vicinity of the proposed access road, the associated vegetation, and underlying soils information, if determined.

Table 4: Access Road Overburden Depths

Peat Probe Number	Depth of Overburden (feet)	Vegetation	Soil
PP-1	5+	grasses, short bushes, field	soil/rock not encountered
PP-2	3	thick alders, huckleberries, hemlock, spruce	sand
PP-24	5+	grass field	soil/rock not encountered
PP-25	3 to 3.5	moss, alders, hemlock, various shrubs and bushes	sands
PP-26	1	deadfall, moss, hemlock, spruce trees	sands and gravels

Bedrock/Soils. Bedrock outcrops were observed at the end of the existing community road before the City of Angoon Public Water Supply building. The bedrock consisted of moderately to highly weathered fractured shale with quartz veins. Additional outcrops were observed along the steep banks of the community water supply reservoir. The outcrops along the banks were fractured, and in many cases, covered in moss and other vegetation. Soils in the area include silts and organics in the poorly drained areas and sands and gravels with some cobbles in the areas with shallow overburden. A soil sample was collected of the sands and gravels in the side hill near the community water supply.

Groundwater. Several drainages and areas of standing water were observed along the proposed access road. No test borings or test pits were drilled/excavated to determine groundwater depth. However, given the shallow bedrock depth, only surface water is likely to be a factor during construction.

Laboratory Testing. One sample was collected along the access road to the community water supply reservoir. Laboratory testing consisted of a particle size distribution test in accordance with ASTM D422. The test consisted of mechanical sieving; the results of which is presented graphically in Appendix B.2, Laboratory Testing.

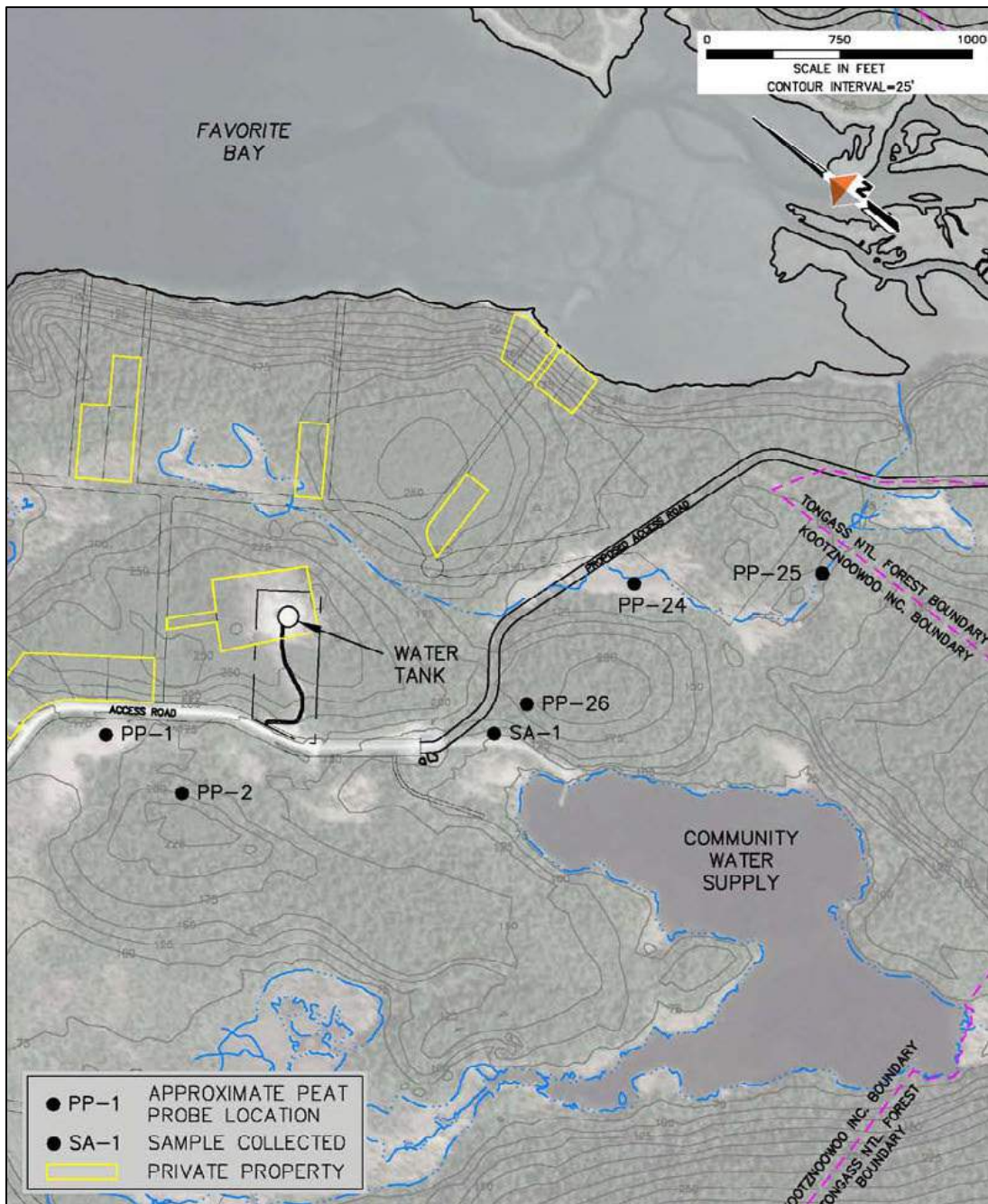


Figure 6: Access Road Peat Probe Location Map

3.0 MATERIAL SITE EVALUATION

A total of four material sites were evaluated during the site visit. Three material sites were evaluated for general site conditions, estimated quantity and quality of material, land ownership, and access. The material sites included two proposed material sources (Proposed Material Source A and B) and one existing material source (Existing Material Source). Preliminary quantities of material were calculated based on estimated site boundaries and estimated overburden depths. No laboratory testing was conducted on material obtained from the existing material site or from the proposed material sites. A fourth site consisted of an existing gravel extraction site which was researched to determine the type and quality of material being extracted. The locations of the material sites can be seen in Figure 7, Material Site Location Map.

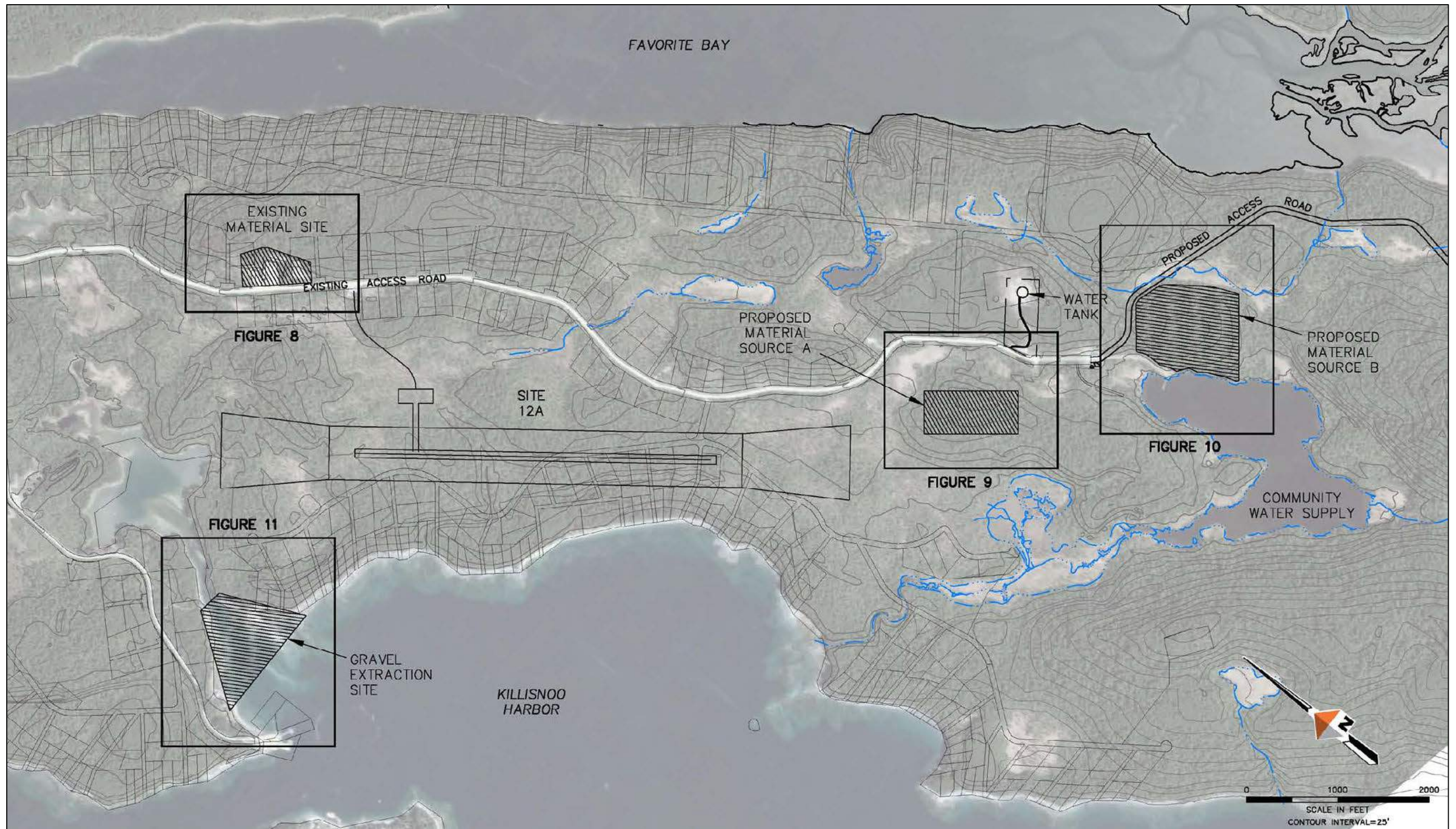


Figure 7: Material Site Location Map

3.1 Existing Material Site

Site Conditions. This site is currently used as a material site and could be the source of material for the road maintenance projects within the city of Angoon. A large portion of the site has been excavated and processed. Equipment was onsite to move extracted material around during the time of the site visit. Drill holes are present within the bedrock at the front of the material site. The holes are filled with water and covered with cones. Vegetation around the material site consists of hemlock, spruce, grasses, shrubs, and moss.

Quantity of Material. The estimated quantity of material could not be determined. Information regarding site boundaries and amount of material used must be obtained before quantities can be determined.

Refer to Figure 8 for an outline of the estimated material site boundaries.

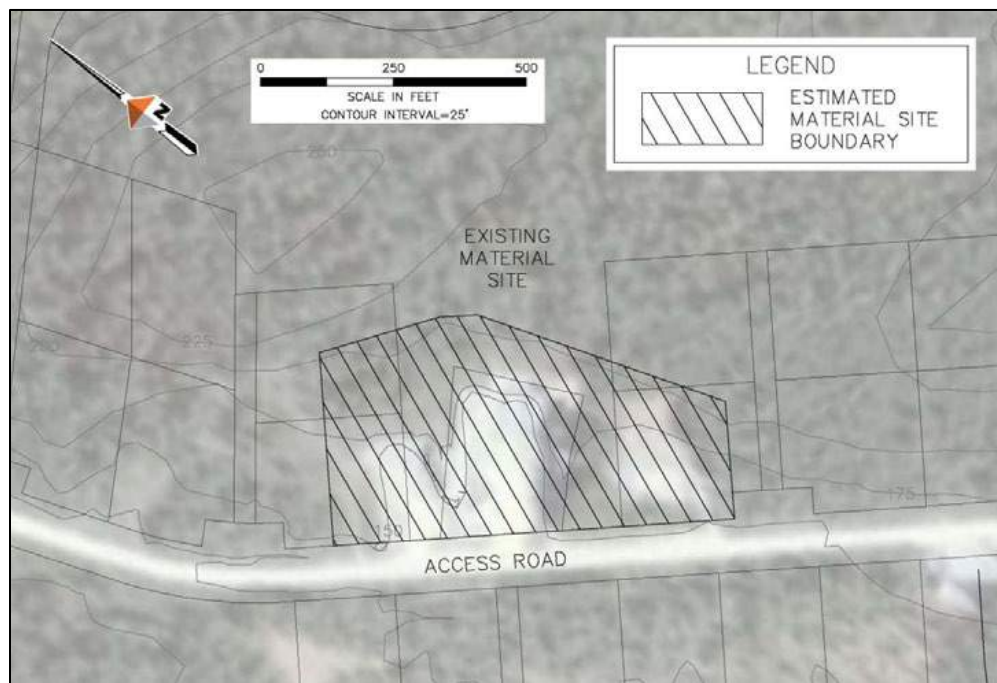


Figure 8: Existing Material Site

Quality of Material. A stockpile near the center of the existing material site contains sands, gravel, cobbles, and boulder sized material. Dust and fine grained material around the base of the pile and bedrock face indicates the material may have a tendency to break down easily. Laboratory tests will be necessary to determine the actual quality and strength of the material.

Land Ownership. The land of the existing material site is situated on both private land and land owned by Kootznoowoo Incorporated (DOT&PF, 2007). The exact boundaries and owners of the private parcels are currently unknown.

Access. The site is accessible by utilizing the road leading to the water tower and community water supply. There are currently no locks or gates blocking access to the material site.

3.2 Potential Material Source A

Site Selection. This site was chosen as a proposed material source based on a previous report done by SUPERSCRIPT Consultants in 1989 as part of the Alaska Coastal Management Program. This material source is close to the proposed access road and to Site 12A.

Site Conditions. The site is currently undeveloped and is a hill mostly surrounded by poorly-drained areas. Thick vegetation consisting of hemlock, spruce, alders, grasses, and shrubs cover the hill. There was no exposed bedrock observed at the time of the site visit.

Quantity of Material. The estimated quantity of material is based on the approximate site boundary shown in Figure 9, Potential Material Source A. The site is estimated to cover approximately 16 acres and has the potential to produce an estimated 700,000 to 900,000 cubic yards of material. The quantity mentioned above is dependent on property boundaries, an average of 3 feet of overburden, and an average estimated depth of 40 feet.

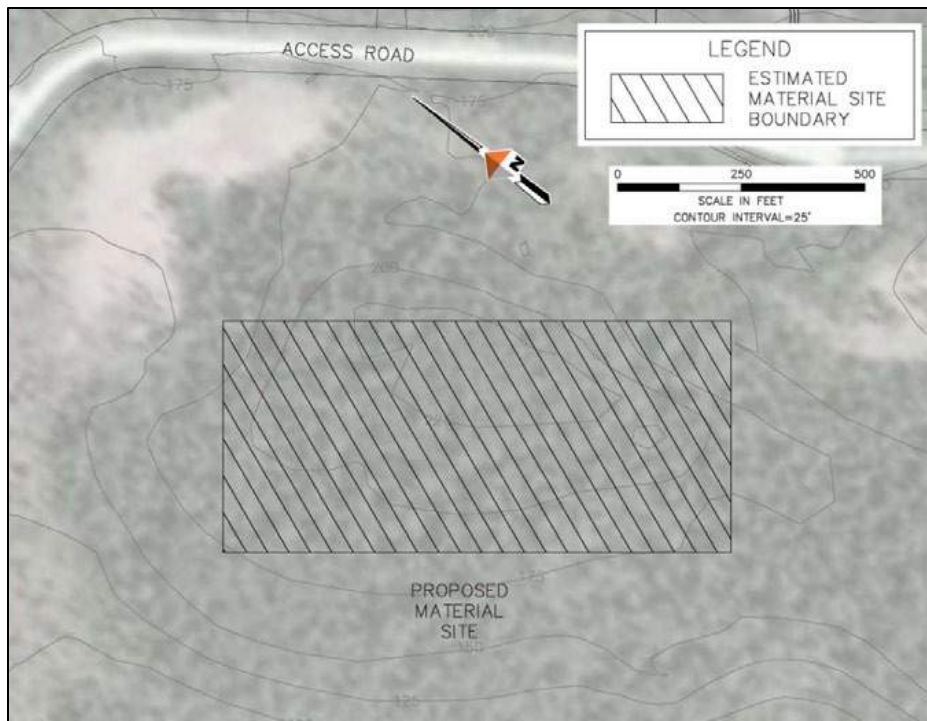


Figure 9: Potential Material Source A

Quality of Material. As no bedrock or soils were exposed at the time of the site visit, the quality of the material at this site is undetermined. Field exploration and laboratory tests are necessary to determine the quality and strength of the material. Based in the site visit and lack of information, it is unclear if this material source should remain under consideration of potential material sites.

Land Ownership. The land of the existing material site is owned by Kootznoowoo Incorporated (DOT&PF, 2007).

Access. There are no existing roads leading to this material source. A wet marshy area separates Potential Material Source A from the road leading to the community water supply. Peat probes taken in the marshy area indicate overburden depths greater than five feet.

3.3 Potential Material Source B

Site Selection. This proposed material site was chosen based on close proximity to the proposed access road and Site 12A, and relatively easy access to the site. However, the close proximity to the community water supply may pose a threat with development of this site.

Site Conditions. The site is mostly undeveloped and is a hill located northeast of the community water supply. A gravel access road to connect the City of Angoon Public Water Supply Building to the community water supply is located in the southwest corner of the estimated material source. Vegetation consisting of hemlock, spruce, moss, alders, and shrubs with ample amounts of deadfall was present in the area of the potential material source. Small sections of bedrock were observed along the northeastern border of the community water supply. There was not enough exposed bedrock to determine the general characteristics of the bedrock.

Quantity of Material. The estimated quantity of material is based on the approximate site boundary shown in Figure 10, Potential Material Source B. The site is estimated to cover approximately 73 acres and has the potential to produce an estimated 4 to 5 million cubic yards of material. The quantity mentioned above is dependent on property boundaries, an average of 3 feet of overburden, and an average depth of 50 feet.

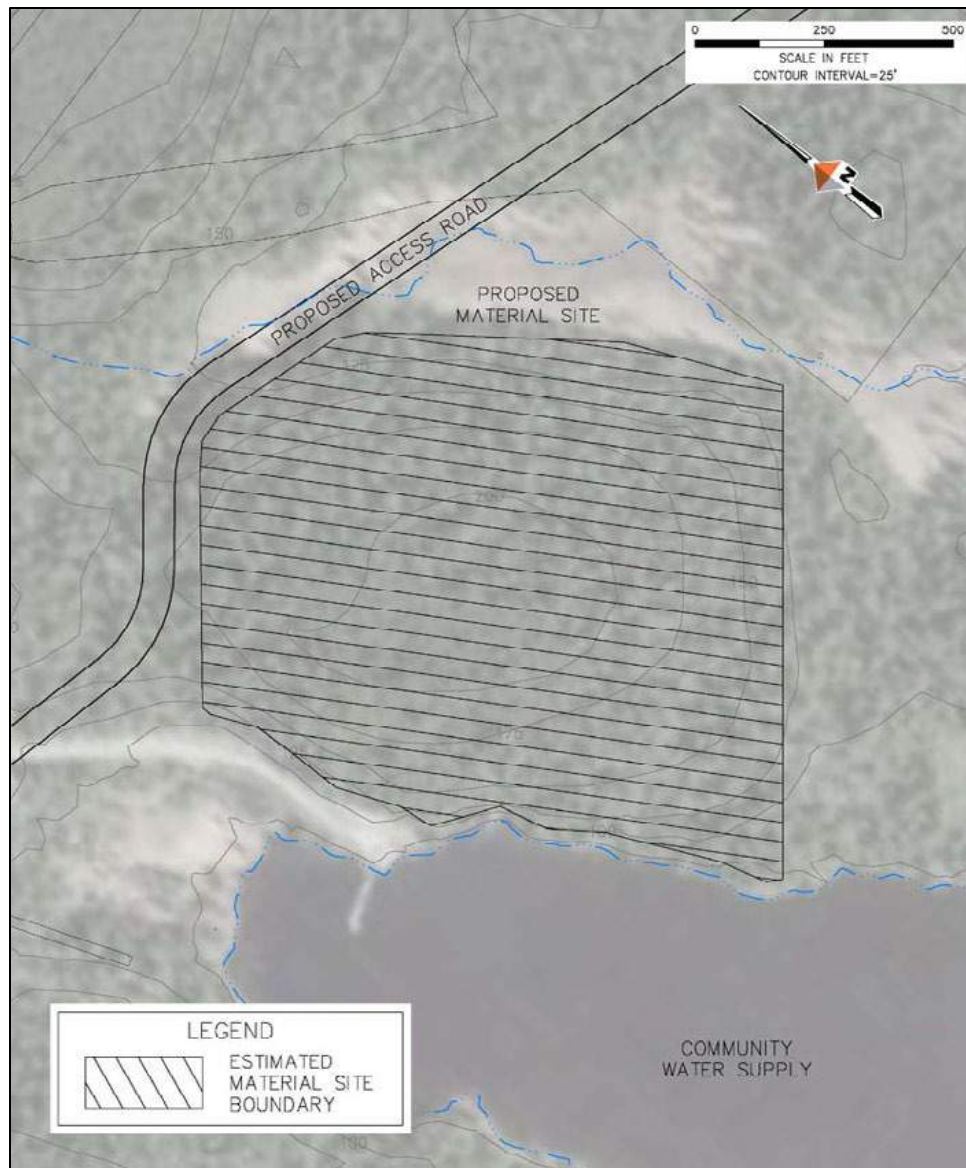


Figure 10: Potential Material Source B

Quality of Material. As minimal bedrock was exposed at the time of the site visit, the quality of the material at this site is undetermined. Field exploration and laboratory tests are necessary to determine the actual quality and strength of the material.

Land Ownership. The land of the existing material site is owned by Kootznoowoo Incorporated and the Tongass National Forest (DOT&PF, 2007).

Access. There are no existing roads leading to this material source. There is an access road leading to the community water supply located southwest of the potential material source. Peat probes taken in the marshy area indicate an overburden depth of approximately one foot.

3.4 Gravel Extraction Site

Site Conditions. It is uncertain if this site is still an active material source. Material was dredged from the mouth of the river and in a 1989 study completed by the State of Alaska as part of the coastal management program, the material was used for road improvements.

The road contains a significant amount of fines. It is unclear whether the extracted material contains the fines or if the material easily degrades.

The gravel extraction site is near the community clamming beds. Concerns have been noted that continued extraction of the material will affect the nearby clamming and cockle beds.

Quantity of Material. The estimated quantity of material is unknown. Figure 11, Gravel Extraction Site, shows a map of the material site.



Figure 11: Gravel Extraction Site

Quality of Material. The quality of the material is currently unknown; sources indicate the material is fair to poor due to high fines content.

Land Ownership. The land for the gravel extraction site is owned by Kootznoowoo Incorporated.

Access. The site is accessible using the road that leads to the ferry dock.

4.0 CONCLUSION

The depth of overburden for all four proposed airport sites ranges from less than one foot to greater than five feet. Where encountered, underlying material also varies. Further exploration is necessary to determine the types of soil, density of the soil, and depth to bedrock.

The material sources were identified through topography and surrounding conditions. A more detailed field exploration and subsequent laboratory testing program is required to determine quality and more accurate quantities.

5.0 REFERENCES

- Environmental Services Limited, 1983, *Angoon*, Department of Community and Regional Affairs, Division of Community Planning, February 1983.
- Lathram, E.H., J.S. Pomeroy, and R.A. Loney, 1965, *Reconnaissance Geology of Admiralty Island Alaska*, United States Department of the Interior, Geological Survey Bulletin 1181-R, 1965.
- Pomeroy, J.S., H.C. Berg, and D.W. Hinckley, 1959, Map of the Geology of the Kootzanhoo Inlet Area, Alaska: United States Geological Survey Bulletin 1181-R, scale 1:63,360, 1959.
- State of Alaska Department of Transportation and Public Facilities (DOT&PF), Southeast Section, 1982, *Angoon Airport Reconnaissance Study*, August 1982.
- State of Alaska Department of Transportation and Public Facilities (DOT&PF), Southeast Region, 1986, Foundation Report, Angoon Seaplane Facility, October 1986.
- SUPERSCRIPT Consultants, 1989, *Angoon Coastal Program*, June 1989.

APPENDIX B.1

PHOTOGRAPH LOG

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u> 1 </u> of <u> 6 </u>	



City of Angoon



City of Angoon from Favorite Bay



Angoon Small Boat Harbor



Road to Ferry Terminal and Landfill



Angoon Airport EIS Float Plane
 Document 0400



Danger Point

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u> 2 </u> of <u> 6 </u>	



Shore of Favorite Bay near Sites 3 and 3A



Mouth of Favorite Bay Creek



Vegetation near Site 3 and 3A



Open Area near Peat Probe 20, Site 3A



Angoon Airport Boulder near Site 3A



Vegetation near Site 3

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u> 3 </u> of <u> 6 </u>	



Small Creek at Southwest End of Site 4



Bear Print near Southwest End of Site 4



Vegetation near Site 4



Open Vegetation at Site 4



Angoon Road at Northeast End of Site 4
 Document 0400



Large Pond Northeast of Site 4

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u>4</u> of <u>6</u>	



Open Vegetation near Site 12A



Game Trail at Site 12A



Peat Probe 3 at Site 12A



Trail at South End of Site 12A



Angoon Airport Vegetation at Site 12A
 Document 0400



Thick Vegetation at Site 12A

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u>5</u> of <u>6</u>	



Existing Gravel Pit



Existing Gravel Pit



Drilled Holes Covered with a Cone at the Existing Gravel Pit



Dust on Road to Community Water Tower and Reservoir



Road to Community Water Supply



Community Water Tower

Project Name: Angoon Material Site Evaluation		
Work Order Number: D59761	Report No: 5069	Date: December 2, 2009
Contractor: SWCA Environmental Consultants		
Inspector: Callie Keller	Page <u> 6 </u> of <u> 6 </u>	



Cut on Road to Community Water Supply



Cut on Road to Community Water Supply



Cut on Road to Community Water Supply



Cut on near Water Tower



Angoon Airport Gravel Extraction Site
 Document 0400



Cut on Road to Community Water Supply

APPENDIX B.2

LABORATORY TEST RESULTS



Client: SWCA Environmental Consultants
 Project: Angoon EIS
 Work Order: D59761

Particle Size Distribution

ASTM D422

Location: Side of Hill

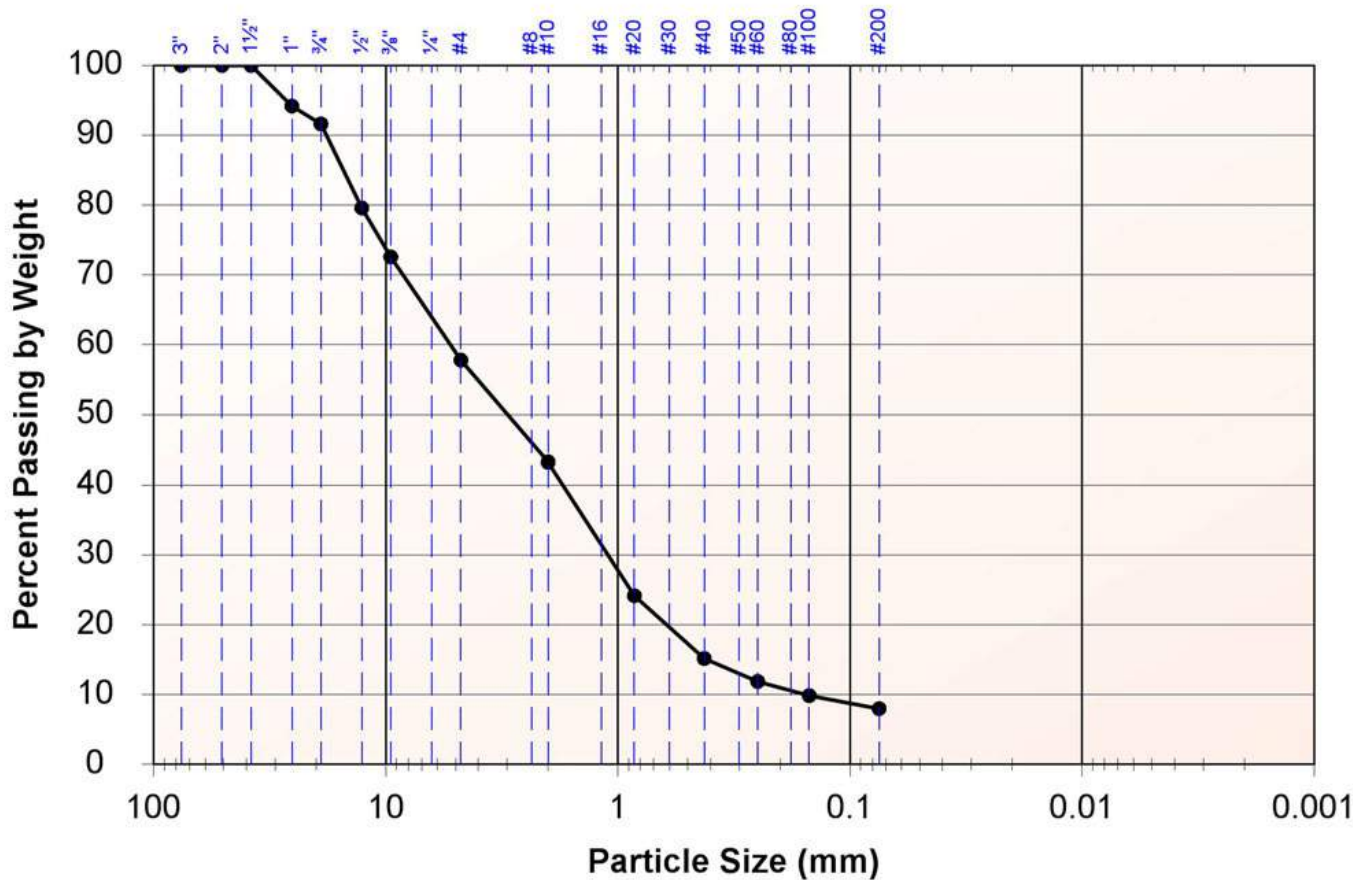
Lab Number 2009-1506

Received 11/19/2009

Reported 11/23/2009

Engineering Classification: Well Graded Sand with Silt and Gravel, SW-SM

Frost Classification: Not Measured



Size	Passing	Specification
3"	100%	
2"	100%	
1 1/2"	100%	
1"	94%	
3/4"	92%	
1/2"	80%	
3/8"	73%	
#4	58%	
Total Weight of Coarse Fraction: 5650.6g		
#10	43%	
#20	24%	
#40	15%	
#60	12%	
#100	10%	
#200	8%	
Total Weight of Fine Fraction: 369.76g		

Bridge Construction Actions:

1. Construction seasons: if the weather allows it, then construction will be conducted year-round, but for the purposes of the EIS analysis, we are assuming that construction would occur May – October (6 months) and a maximum of 3 years for Airports 3a or 4 (*DOWL Construction Report 2012*).
2. There will be a temporary staging area for construction including a temporary access road, potential temporary bridge (with temporary support piers) placed in and alongside Favorite Creek. This would all be removed at the end of construction, and not between construction seasons, ie. at the end of 3 years maximum. Example images of what this could look like are in this document:
`\\portserver\Projects\24000\24650_AngoonAirportEIS_PhaseIII_FirstHalf\04_Preliminary_Draft_EIS\z_Project_Background_and_FAA_Orders_etc\Example_EIS\HYDER\7-69070 App D. EFH Assessment.pdf`
3. Depending on the haul load the construction contractor wants to carry across the temporary bridge, there could be very short spans (approximately 20') and many supports might be required. Brian Hanson (DOWL) estimated that Access 2 could have 3-10 piers and Access 3 could have 2-5 piers. Along with the temporary bridge, the piers would be extracted at the end of construction, and the stream channel would be returned to its original existing condition.
4. The Potential Temporary Disturbance (PTD) area (created by SWCA GIS staff in September 2012) already includes the vegetation removal and terrain disturbance (from the piers) above OHWM.
5. "Pier Footprint" (PF): There will be 2 piers within OHWM for the Access 2 permanent bridge = 800 square feet/pier. This is based on Brian Hanson's estimate of 20' wide x 40' long per pier, including the total "H pile" + foundation + rip rap.
6. Based on 11/15/12 DOT call (Pat Carroll), this project assumes that if concrete will be used, that it will be precast.
7. For the analysis, we will assume that rip rap will be used at the permanent bridge surrounding the support piers (only at Access 2). No rip rap would be used at the temporary bridge location.
8. It is possible for the permanent bridge to have additional support (similar to scaffolding), so that it could serve as the temporary bridge during construction, but for this EIS we will analyze the potential for the bridges to be located separately. This will provide the construction contractor further flexibility of options.
9. Per Brian Hanson (12/5/12) the footprint of a single bridge's construction could be 50-100' wide terrain disturbance per bridge, or 100-200' wide for both the permanent and temporary bridges combined. To the existing PTD area, SWCA GIS staff added an in-stream PTD area for use in Aquatics and Water Quality analysis. This area is 50' downstream of the permanent bridges' centerlines and 150' upstream from the centerlines.
10. The total footprint disturbance area of the temporary bridge would be approximately the same area (but not in the same location) as the permanent bridge. The temporary bridge would occur adjacent to the permanent bridge location, or at a narrow spot in the creek. It

would be as small as something like a railcar (i.e., pre-fab, light duty, goes in in one piece, comes out in one piece), or as large as the permanent bridge. The PTD that is being analyzed is inclusive of the area that the smallest option (rail car) could disturb. It is not necessary to analyze this smallest option separate from the PTD.

11. NOTE: the construction contractor will have to keep the in-stream effects within the 200' wide in-stream PTD area that is being analyzed in the EIS, because this will be the only area where effects are assessed.



NOTE: the boundaries of the 10-year and 100-year floodplains are laterally coincident at both Access Alternative locations. Also at Access Alternative 3 the boundaries of the OHWM and 10-year floodplains are laterally coincident.

Short-term effects:

1. Water Quality: Upland surface erosion associated with soil disturbance: this is analyzed by using the upland PTD area.
2. Water Quality: does the temporary bridge have impervious surface (still awaiting DOWL's input on this)? If so, will need to add this to the addition of impervious surfaces analysis.
3. Water Quality: effects associated with work in streams: use the in-stream PTD area to analyze the acreage of stream directly affected by both the permanent and temporary bridges, use same # in Aquatics. Periodic flushes of sediment during construction activities, especially installation and removal of temporary bridge piers.
4. Water Quality: this analysis assumes that concrete mixing will be conducted at a permitted setback distance from all water bodies, including Favorite Creek.
5. Aquatics: effects associated with work in streams: use the in-stream PTD area to analyze the acreage of stream directly affected by both the permanent and temporary bridges, use same # in Aquatics, use same # as Water Quality.
 - o Per Alaska Anadromous Fish Act: not conducting in-water construction during typical salmon migratory or spawning periods (between June 1 and August 15).
 - o The in-stream PTD is likely much greater than what will be implemented. Work area isolation via coffer dams will likely be used. For analysis we are using this potential largest area because discreet plans and locations are not yet known.
6. Floodplains: intersect PTD area intersection with the floodplains data in GIS.
7. Wetlands: There are no wetlands located within the entire PTD, ie. no short term effects.

Long-term effects:

1. At the permanent and temporary bridge site the upland long-term effect would be vegetation removal which we analyzed using the upland PTD area:
 - a. Terrestrial: *Construction staging areas for airport, roadway, and bridge construction would be necessary as part of construction, and these are considered part of long-term habitat removal.*
 - b. Aquatics: *Riparian management area removal - Where trees would be removed for construction of the airport and access road or felled in avigation easements, portions of riparian management areas would be removed. Removal of a portion of a riparian management area would be a direct and long-term effect to that area itself because it would not revegetate to its existing quality in the long term.*
2. Aquatics: There are two piers that are partially within OHWM. The intersection of their PF area (800 sqft) will be intersected with the stream habitat to provide acreage of long term loss of stream habitat at the permanent bridge piers (only at Access 2).
3. Floodplains: Long term loss of floodplains at piers located within floodplains (Access 2 only; not at Access 3).
4. Wetlands: There are no wetlands located within the entire PTD, ie. no long term loss of wetlands at piers located outside of OHWM.

Lara Bjork

From: Jamie C. M. Young
Sent: Tuesday, February 05, 2013 1:07 PM
To: Plumley, George H (CED); Albert Kookesh III (albertkookesh@hotmail.com)
Cc: Lara Bjork; Sue Wilmot
Subject: RE: Angoon: obtaining the most current zoning information for the City?
Attachments: LU_Zoning_check.pdf

Thanks for your confirmation, Albert and George. For our Angoon Airport EIS Land Use section, we will assume that the zoning that we have displayed in the attached pdf is the most current zoning information available for the City of Angoon.

Thank you for your time, sincerely, Jamie (907.821.0404)

From: albert kookesh [mailto:albertkookesh@hotmail.com]
Sent: Tuesday, February 05, 2013 9:08 AM
To: Jamie C. M. Young
Subject: RE: Angoon: obtaining the most current zoning information for the City?

have not seen any newer ones yet-does not mean there isnt one but city might not have that around anymore-but again still looking

If your neighbor's house is on fire, you don't haggle over the price of your garden hose. - Franklin Roosevelt

Albert Kookesh III
City of Angoon
907-723-5232
albertkookesh@hotmail.com

From: Plumley, George H (CED) [mailto:george.plumley@alaska.gov]
Sent: Thursday, January 31, 2013 2:29 PM
To: Jamie C. M. Young
Cc: Albert Kookesh III (albertkookesh@hotmail.com)
Subject: RE: Angoon: obtaining the most current zoning information for the City?

Jamie,

When we did the most recent profile mapping project that included Angoon we didn't any zoning maps. I would recommend that you check with the City of Angoon to what their most recent zoning information is, hopefully its newer than the 1983 community profile.

George Plumley, Planner
Dept. of Commerce, Community & Economic Development
Division of Community and Regional Affairs
Physical Address: 550 W 7th Ave., Suite 1656
Mailing Address: 550 W 7th Ave., Suite 1640
Anchorage, AK 99501
Phone: 907-269-4546
Fax: 907-269-4539

From: Jamie C. M. Young [mailto:jyoung@swca.com]
Sent: Thursday, January 31, 2013 2:26 PM
To: Plumley, George H (CED)
Cc: Albert Kookesh III (albertkookesh@hotmail.com)
Subject: Angoon: obtaining the most current zoning information for the City?

Hello George,

We are working on the Angoon Airport EIS and need the most current zoning information that is available for the City of Angoon. Thank you for the maps that are available here: <http://www.commerce.state.ak.us/dca/profiles/profile-maps.htm>. The 2004 Angoon maps indicate lots and subdivisions, but not zoning.

Can you please confirm that the 1983 map is the most current zoning information that is available for Angoon, or direct me to someone who might be able to assist me? Thank you for your help! Sincerely, Jamie

Jamie C. M. Young

Natural Resources Specialist

SWCA Environmental Consultants

317 Forest Park Drive

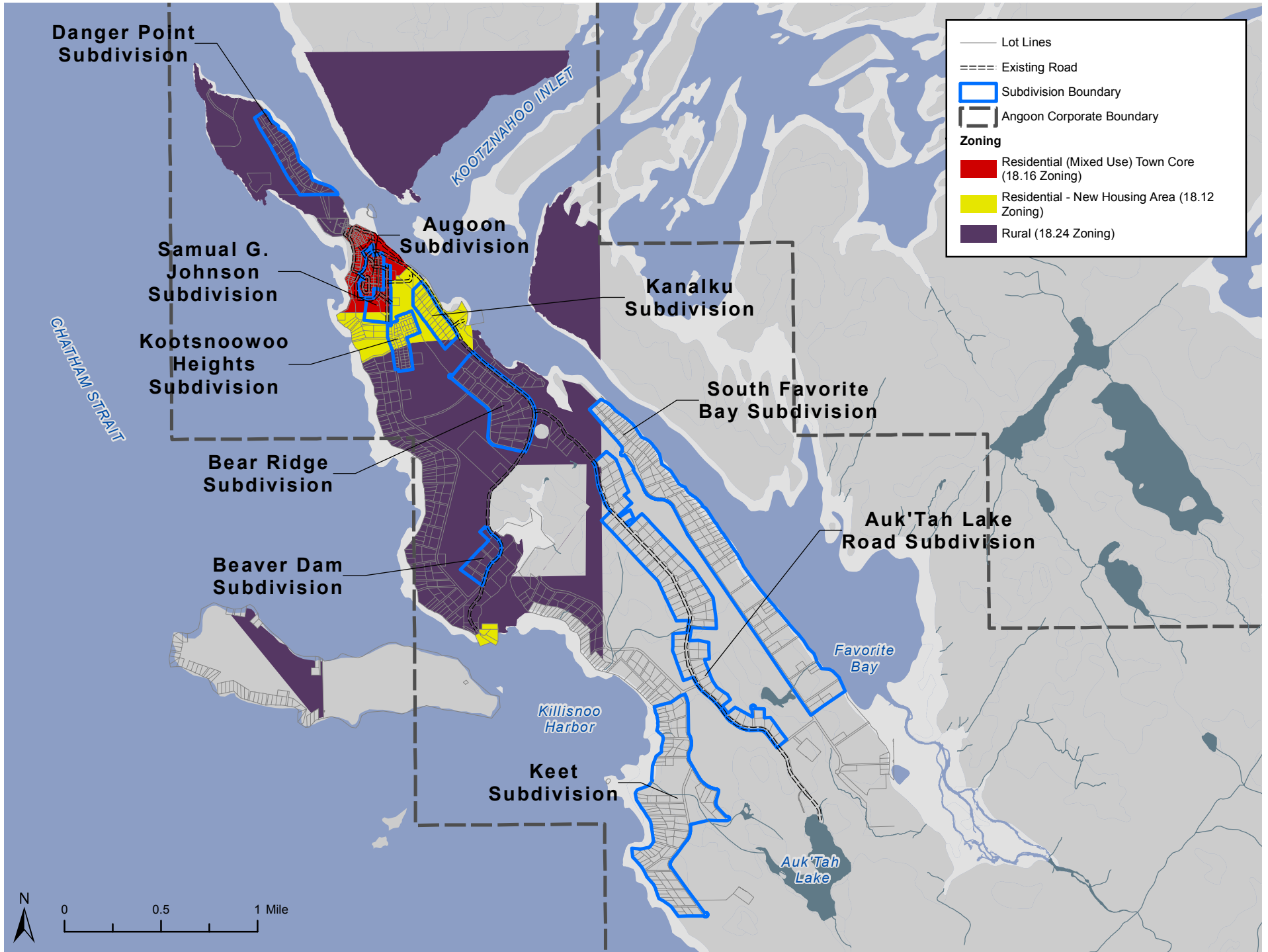
Ketchikan, Alaska 99901

P 907.220.9016 ☐ 907.821.0404 ☐ F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, February 06, 2013 5:11 PM
To: Lara Bjork
Cc: Allen Stutz
Subject: RE: Angoon: obtaining the most current zoning information for the City?
Attachments: LU_Zoning_check.pdf

This email thread is correspondence with ADCCED and City of Angoon confirming that the zoning information in SWCA's Land Use section of the EIS is the most current data available for Angoon. The accompanying PDF map was produced by SWCA Environmental Consultants using data obtained from R&M Engineering. R&M developed those zoning data for Figure 8 of the 2007 Alaska DOT&PF Angoon Airport Master Plan.

From: Jamie C. M. Young
Sent: Tuesday, February 05, 2013 1:07 PM
To: Plumley, George H (CED); Albert Kookesh III (albertkookesh@hotmail.com)
Cc: Lara Bjork; Sue Wilmot
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Thank you for your time, sincerely, Jamie (907.821.0404)

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Sent: Tuesday, February 05, 2013 9:08 AM
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Subject: RE: Angoon: obtaining the most current zoning information for the City?

have not seen any newer ones yet-does not mean there isnt one but city might not have that around anymore-but again still looking

If your neighbor's house is on fire, you don't haggle over the price of your garden hose. - Franklin Roosevelt

Albert Kookesh III
City of Angoon
907-723-5232
albertkookesh@hotmail.com

From: Plumley, George H (CED) [<mailto:george.plumley@alaska.gov>]
Sent: Thursday, January 31, 2013 2:29 PM
To: Jamie C. M. Young
Cc: Albert Kookesh III (albertkookesh@hotmail.com)
Subject: RE: Angoon: obtaining the most current zoning information for the City?

Jamie,

When we did the most recent profile mapping project that included Angoon we didn't any zoning maps. I would recommend that you check with the City of Angoon to what their most recent zoning information is, hopefully its newer than the 1983 community profile.

George Plumley, Planner
Dept. of Commerce, Community & Economic Development
Division of Community and Regional Affairs
Physical Address: 550 W 7th Ave., Suite 1656
Mailing Address: 550 W 7th Ave., Suite 1640
Anchorage, AK 99501
Phone: 907-269-4546
Fax: 907-269-4539

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Thursday, January 31, 2013 2:26 PM
To: Plumley, George H (CED)
Cc: Albert Kookesh III (albertkookesh@hotmail.com)
Subject: Angoon: obtaining the most current zoning information for the City?

Hello George,

We are working on the Angoon Airport EIS and need the most current zoning information that is available for the City of Angoon. Thank you for the maps that are available here: <http://www.commerce.state.ak.us/dca/profiles/profile-maps.htm>. The 2004 Angoon maps indicate lots and subdivisions, but not zoning.

Can you please confirm that the 1983 map is the most current zoning information that is available for Angoon, or direct me to someone who might be able to assist me? Thank you for your help! Sincerely, Jamie

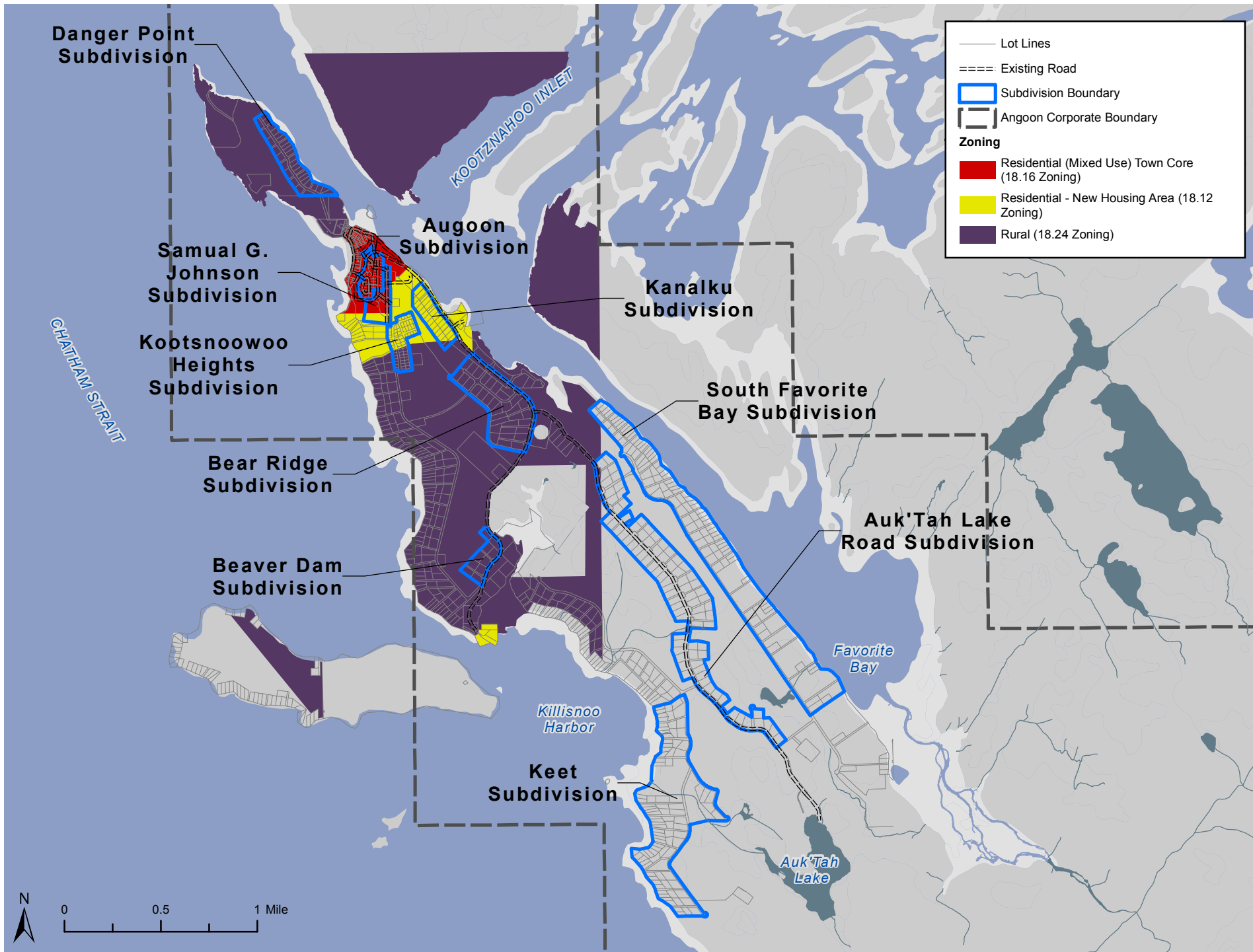
Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 | C 907.821.0404 | F 907.279.7922



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Lara Bjork

From: Angoon Airport EIS [mailto:maillist@angoonairporteis.com]
Sent: Thursday, February 07, 2013 12:51 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (02/07/12)

FAA is pleased to announce that we have posted the February Project Update to our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[February Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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February 2013 Project Update

Hello everyone! I hope you had a wonderful holiday season and transition to the New Year.

2013 will bring several milestones for the Angoon Airport EIS project that I am very excited about. These include visits to the Angoon community, outreach to interested local, regional, and national organizations, and the submittal of the EIS to government agencies for their review. This is a big step toward providing the EIS to the public, and a big step toward finalizing the EIS.

The submittal of the EIS to these agencies will also start the Alaska National Interest Lands Conservation Act (ANILCA) Title XI process. The [ANILCA](#) page on the Angoon website provides a brief overview of this act, including key steps that would be required before placement of an airport in a wilderness area. As we have detailed in our [December 2012 update](#), the FAA does not intend to identify a preferred alternative in the public draft EIS. Because of the complexities of this project, the FAA intends to solicit feedback from the public and agencies before making this identification. While all [alternatives](#) analyzed in the EIS will not require an ANILCA application, the FAA wants to ensure all alternatives receive the same level of analysis in the EIS. Therefore some of the ANILCA steps will occur at the same time as the NEPA process. Because there are strict timelines under ANILCA, these steps will influence the timing and release of the Draft and Final EIS for the Angoon Airport project. These steps include:

1. Submittal of the ANILCA application to cooperating agencies. For the Angoon project, an ANILCA application will be submitted at the same time that the EIS is provided to the agencies for review and comment. This starts what I like to call the "ANILCA clock".
2. Application Review by the cooperating agencies. ANILCA provides for a 60 day review of the application and supporting documentation by the agencies. For the Angoon Airport project, the supporting documentation will be the EIS. During this 60 day review, the agencies will determine if the application is adequate or if more information is needed. Requests for additional information will "reset" the ANILCA clock.
3. Release of the Public Draft EIS. Once the application is approved (including responding to agency comments on the EIS), the EIS will be released to the public. According to the "ANILCA clock", this must be done within 9 months of the application date (Step 1).
4. Release of the Final EIS. Following the public review, comments will be addressed and the EIS will be finalized. Under ANILCA, a Final EIS must be completed within 12 months of this application date (Step 1), or an extension has to be requested.
5. Record of Decision completed. The Record of Decision ends the NEPA process. If the FAA selects an alternative outside of the Wilderness, the ANILCA application would be withdrawn and the ANILCA process stops. If an alternative is selected within the Wilderness, the ANILCA process would continue, including approval of the project by the President of the United States and Congress.

We continue to receive questions about when the EIS will be complete. Please know that my team is working hard to ensure both a successful NEPA process and an ANILCA Title XI process. We look forward to taking large steps in both directions this year. If you have additional thoughts to share, please call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov. Thank you for your interest in the project!

Best regards,

Leslie Grey

Angoon Airport EIS
Document 0430

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Lara Bjork

From: Jamie C. M. Young
Sent: Tuesday, February 26, 2013 11:32 AM
To: albert kookesh
Cc: Lara Bjork
Subject: RE: Angoon Airport EIS: your concurrence with this Water Quality section statement

Follow Up Flag: Follow up
Flag Status: Flagged

Thanks for this confirmation, Albert!

From: albert kookesh [mailto:albertkookesh@hotmail.com]
Sent: Tuesday, February 26, 2013 9:55 AM
To: Jamie C. M. Young
Subject: RE: Angoon Airport EIS: your concurrence with this Water Quality section statement

i agree with statement on behalf of the city of Angoon-that assessment appears accurate

If your neighbor's house is on fire, you don't haggle over the price of your garden hose. - Franklin Roosevelt

Albert Kookesh III
City of Angoon
907-723-5232
albertkookesh@hotmail.com

From: jyoung@swca.com
To: albertkookesh@hotmail.com
Subject: Angoon Airport EIS: your concurrence with this Water Quality section statement
Date: Thu, 21 Feb 2013 22:07:46 +0000

Hello Albert!

Can you please confirm that you agree with this statement that we are making in our Water Quality section?

"The coastal streams surrounding Angoon are used minimally, if at all, for contact or secondary recreation."

"Contact" is swimming and "secondary recreation" is boating, kayaking, wading.

Thanks for your help, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎F 907.279.7922



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Lara Bjork

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Thursday, April 18, 2013 3:02 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News and Updates (04/18/12)

FAA is pleased to announce that we have posted the April Project Update to our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[April Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851

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April 2013 Project Update: A Plain-Language EIS

I wanted to share with you a little about the approach we're using for the Angoon Airport Environmental Impact Statement (EIS)—and why we've chosen to write a different kind of EIS for this project.

There's a common notion that EISs should be written for an eighth-grade level. I've even heard some people say they should be written at a fourth-grade level. It's an interesting idea—and a good reminder to environmental professionals that EISs are meant for the public and should be as accessible as possible. Some professionals hear the guidance "write to an eighth-grade level" and think that means "dumb it down." That's not true, and it's certainly not the intent of the National Environmental Policy Act, known as NEPA. One of the intents of NEPA is to disclose the impacts of a project to the public. We can't fully disclose impacts if we "dumb it down."

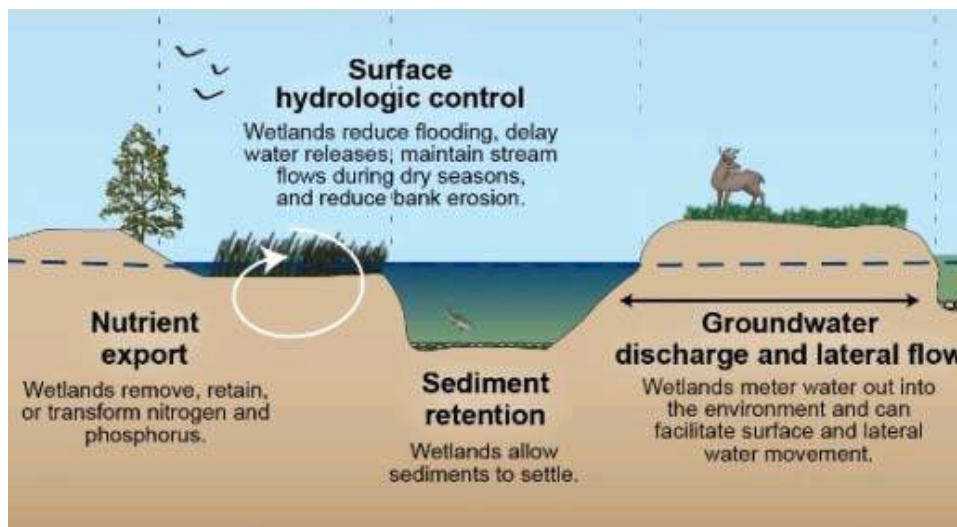
That said, many EISs are more complicated than they need to be. They tend to be technical and complex, requiring focus, concentration, and work on the readers' part. EISs are usually written by teams of scientists who are good at their research but are not necessarily trained as writers. They think and write in the terminology of their discipline—in other words, jargon—and they sometimes assume that everyone understands the same words, concepts, and information that they do. We want to do things differently.

For the Angoon Airport EIS, the FAA is working with a team of writers, editors, graphics specialists, and reviewers who know how to translate the normal complexity of an EIS into 1) plain language; 2) easy-to-understand drawings, charts, and maps; and 3) a structure readers can use to easily find the information they need.

How are we doing this?

The EIS team is using a three-pronged approach to create this plain-language EIS:

1. **Plain Language:** The Plain Writing Act, which became law in October 2010, requires that federal agencies use "clear Government communication that the public can understand and use." The editors on our team are trained in writing as well as in the environmental sciences. They work closely with each scientist to rephrase jargon into simpler terms that are still correct but easier to follow.
2. **Graphics:** The editors, graphic designers, and mapping specialists on the team work with the scientists to create maps and images that help with the "heavy lifting" of expressing scientific and technical concepts. For example, a table listing acres of vegetation removal might be layered right onto a map showing the location of the vegetation removal. This makes it easy for the reader to visualize the potential environmental effects across a project area and to compare the effects in different areas. Another example, showing the functions of a wetland by using a picture, rather than words (see figure below).



(Subset of a larger graphic)

3. **Navigability:** The EIS will be offered in two formats: as a paperback book and as a PDF available on a website and CD. The PDF will be searchable and will have hyperlinks for website-style navigation, so readers can move easily from section to section. Those with the paperback book format will have similar flexibility because all hyperlinked information will be findable by section number or page number. This format allows the reader to find key information quickly and easily, eliminates the need for repetition, and reduces length and confusion.

Through this approach, we hope to write an EIS that is accessible to the public, while still disclosing the impacts at an appropriate level.

I look forward to sharing it with you! As always, if you have thoughts to share, please call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov. I always enjoy hearing from you. Thank you for your interest in the project!

Best regards,

Leslie Grey

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From: George Weekley
Sent: Tuesday, May 14, 2013 10:15 AM
To: Amanda Childs; Lara Bjork
Subject: FW: Angoon deer harvest
Attachments: Angoon deer hrvst2004-10.xlsx

Follow Up Flag: Follow up
Flag Status: Flagged

Updated deer harvest info for Subsistence and the 810 Evaluation.

Geo Weekley
Alaska Business Development Lead

SWCA Environmental Consultants
C 801.819.3560



From: Mooney, Philip W (DFG) [<mailto:phil.mooney@alaska.gov>]
Sent: Tuesday, May 14, 2013 11:08 AM
To: George Weekley
Cc: Dennison, Holley A (DFG)
Subject: Angoon deer harvest

Hi George –

Here is the info I have for Angoon thru 2010.

Phil

regyear	deer_rescolistorder	hunters	success	pct_succes	dayshunt	bucks	does	total_harv	pct_bucks	deer_per_l	deer_succ_days_hunt	days_deer		
2010	ANGOON	1	37	37	100	330	88	44	132	67	3.6	3.6	8.9	2.5
2009	ANGOON	1	23	23	100	79	34	11	45	76	2	2	3.4	1.8
2008	ANGOON	1	38	25	66	203	38	51	89	43	2.3	3.6	5.3	2.3
2007	ANGOON	1	51	34	67	294	69	42	111	62	2.2	3.3	5.8	2.6
2006	ANGOON	1	59	59	100	448	161	25	186	87	3.2	3.2	7.6	2.4
2005	ANGOON	1	59	59	100	252	151	42	193	78	3.3	3.3	4.3	1.3
2004	ANGOON	1	53	42	79	179	105	63	168	63	3.2	4	3.4	1.1

NOTES* 2006 had record snow in November and thousands of deer were pushed to the beaches
2007 had record snow in March with the snowpack remaining into May; thousands of deer died from winterkill; NE Chichagof estimated to have lost 80-85% of population
2008-2010 has seen cold springs, above average snowpack, and cooler temperatures into May

Lara Bjork

From: George Weekley
Sent: Monday, May 20, 2013 12:55 PM
To: Lara Bjork; Amanda Childs
Subject: FW: Updated Angoon Subsistence Salmon Harvest information

Follow Up Flag: Follow up
Flag Status: Flagged

Updated subsistence salmon harvest data from ADF&G for Angoon Subsistence and 810 evaluation sections.

Also, Dave let me know that the Forest Service has a boat in Angoon this week hoping to implement the first phase of the Kanalku Falls Improvement (blasting out the plunge pool). They tried last week, but the water was too high.

Geo Weekley
Alaska Business Development Lead

SWCA Environmental Consultants
C 801.819.3560



From: Harris, David K (DFG) [<mailto:david.harris@alaska.gov>]
Sent: Monday, May 20, 2013 1:46 PM
To: George Weekley
Subject: RE: Updated Angoon Subsistence Salmon Harvest information

Hi George,

Below is the updated information from our subsistence permits. These are permits using an Angoon address. The permits fished is the total number of permits issued less those not returned and returned permits indicating they did not fish. The 2012 data is preliminary, as we will be making a trip out to the community soon to issue permits for the coming season and we typically collect a significant number of the previous year's permits at that time.

These are fish harvested from all areas by people with an Angoon address. If you are looking for harvests from a more restricted geographical area, the harvests may be different

Cheers!

Dave Harris
Area Management Biologist - Juneau
Alaska Department of Fish and Game
Division of Commercial Fisheries
Douglas, Alaska
907-465-4205

Permits using Angoon as mailing address

year	permits issued	returned permits fished	king	sockeye	coho	pink	chum
2003	102	55	0	1,496	36	6	2

2004	106	86	0	1,479	107	107	58
2005	90	35	0	261	12	25	0
2006	96	44	0	658	20	9	0
2007	86	73	1	56	47	62	0
2008	86	83	0	637	120	0	15
2009	115	96	0	942	70	55	5
2010	109	102	0	1,332	155	112	29
2011	102	60	8	997	186	10	11
2012	98	34	0	728	40	40	0

From: George Weekley [<mailto:gweekley@swca.com>]
Sent: Monday, May 20, 2013 9:21 AM
To: Harris, David K (DFG)
Subject: Updated Angoon Subsistence Salmon Harvest information

Dave,
I would like to get updated subsistence harvest numbers for 2009 to 2012 to update the following table for the Angoon Airport EIS.

Year	Permits Issued	Permits Fished	Number of Chinook	Number of Sockeye	Number of Coho	Number of Pink	Number of Chum
2003	102	39	0	1,496	36	6	2
2004	106	42	0	1,479	107	107	58
2005	90	14	0	261	12	25	0
2006	96	20	0	658	20	9	0
2007	86	14	1	56	47	62	0
2008	87	38	0	637	120	0	15

Thank you,

Geo Weekley
Alaska Business Development Lead

SWCA Environmental Consultants
C 801.819.3560





U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-614
222 West 7th Ave #14
Anchorage, AK 99513

May 22, 2013

Verne R Skagerberg
PO Box 112506
MS-2506
Juneau, AK 99811-2506

Re: Angoon Airport Environmental Impact Statement, Preferred Alternative

Verne,

Thank you for taking the time to discuss the FAA's identification of the preferred alternative. The intent of this letter is formal documentation and follow-up from our conversation.

As we discussed, the bulk of the analysis for the Angoon Airport EIS has been done, and the FAA is in the process of finalizing the agency review draft EIS. Based on the analysis that has been completed to date, the FAA has decided to move forward with identifying Airport Alternative 12a with Access 12a as the preferred alternative in the Draft EIS. There are several key factors to this decision as follows:

1. Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) requires transportation agencies to evaluate whether there are feasible and prudent alternatives to affecting lands determined to be 4(f) properties and demonstrate that planning has been done to avoid harm to the 4(f) property. The FAA has determined that the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area) is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument–Wilderness lands, leaving Airport 12a with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.
2. Section 1104(g)(2)(B) of the Alaska National Interests Lands Conservation Act states that each federal agency should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the [transportation] system through or within a conservation system unit.” Analysis in the EIS to date indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument–Wilderness lands (which are considered a conservation system).

FAA orders stipulate that FAA can identify a preferred alternative that is different from the proposed action; however, because it is DOT&PF's decision to carry out the preferred alternative, DOT&PF would need to make one of the following choices:

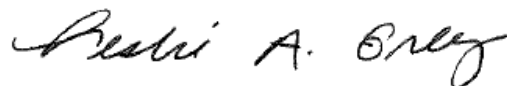
- (1) Concur with FAA's preferred alternative.
- (2) Reject FAA's preferred alternative.
- (3) Propose an alternative not previously presented.
- (4) Take no action to address the purpose and need.

If DOT&PF is comfortable concurring with the identification at this time, we request that you sign the statement below acknowledging your agreement with the FAA's identification of Airport Alternative 12a with Access 12a as the preferred alternative.

Alternatively, if you feel that you would need to see the analysis in the EIS before making a decision, we request that you withhold your decision until after you have reviewed the agency review draft EIS and provided feedback to FAA on the analysis.

If you would like to discuss these options further, please feel free to contact me at any time. It is important to FAA that the DOT&PF continues to be involved in these decision-making processes.

Sincerely,



Leslie A. Grey
 FAA – Alaskan Region Airports Division
 Angoon Airport EIS Project Manager

cc: A. Childs (SWCA Environmental Consultants)

On behalf of the Alaska Department of Transportation and Public Facilities (DOT&PF), I, the undersigned, concur with FAA's identification of Airport Alternative 12a with Access 12a as the preferred alternative in the Draft Angoon Airport EIS.

Name

Date



U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Mr. Wally Frank, Sr.
President
Angoon Community Association (ACA)
P.O. Box 328
Angoon, AK 99820

RE: Angoon Airport Environmental Impact Statement (EIS) Preferred Alternative

Dear Mr. Frank:

As you know, the Federal Aviation Administration (FAA) is preparing an EIS for a proposed land-based airport for the community of Angoon. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and tribal, public, and agency input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula on lands owned by a combination of parties, including the City of Angoon, private individuals, and Kootznoowoo, Inc. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' proposed action. The EIS analyzes and discloses the potential effects to the natural and human environment from constructing such an airport.

The intent of this letter is to inform you of the FAA's decision to identify a preferred alternative in the Draft Angoon Airport EIS. The bulk of the EIS analysis has been done, and the FAA is in the process of finalizing the agency review draft EIS. Based on the analysis completed to date, the FAA has decided to move forward with identifying Airport Alternative 12a with Access 12a as the preferred alternative. There are two key factors to this decision as follows:

1. Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) requires transportation agencies to evaluate whether there are feasible and prudent alternatives to affecting lands determined to be 4(f) properties and demonstrate that planning has been done to avoid harm to the 4(f) property. The FAA has completed a draft 4(f) evaluation and determined that the Monument–Wilderness Area is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument–Wilderness lands, leaving Airport 12a

with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.

2. Alaska National Interests Lands Conservation Act Section 1104(g)(2)(B) states that each federal agency should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the [transportation] system through or within a conservation system unit.” Analysis in the EIS to date indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument–Wilderness lands (which are considered a conservation system unit).

CEQ and FAA guidance encourage us to identify the preferred alternative as soon as we have the justification to do so—and to communicate to the public that we believe this alternative is preferable to FAA. What this means is that on balance, we feel the preferred alternative minimizes effects while best fulfilling the project’s purpose and need.

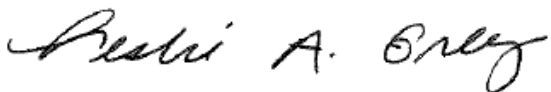
FAA’s identification of 12a means that it is most likely to choose this alternative for the Record of Decision, but it is not guaranteed. Please provide your input during the draft EIS comment period, so that the FAA can better understand project effects to local resources for each of the action alternatives. We hope that knowing the FAA’s preference helps you provide more informed comments.

As mentioned above, the FAA is currently finalizing the agency review draft EIS. At this time we anticipate that the agency review will occur during the fall of 2013, with the release of the public draft EIS in early 2014. We will continue to keep you updated on the status of the EIS as we get closer to this date.

We will be in Angoon on June 25, 2013 and we would like to meet with the ACA Tribal Council to discuss in person any concerns and questions that you have regarding the identification of this preferred alternative. Please email me by Friday, May 31, 2013, what time you would like to meet on June 25.

Should you have any questions about the project, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above. I look forward to hearing from you.

Sincerely,



Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

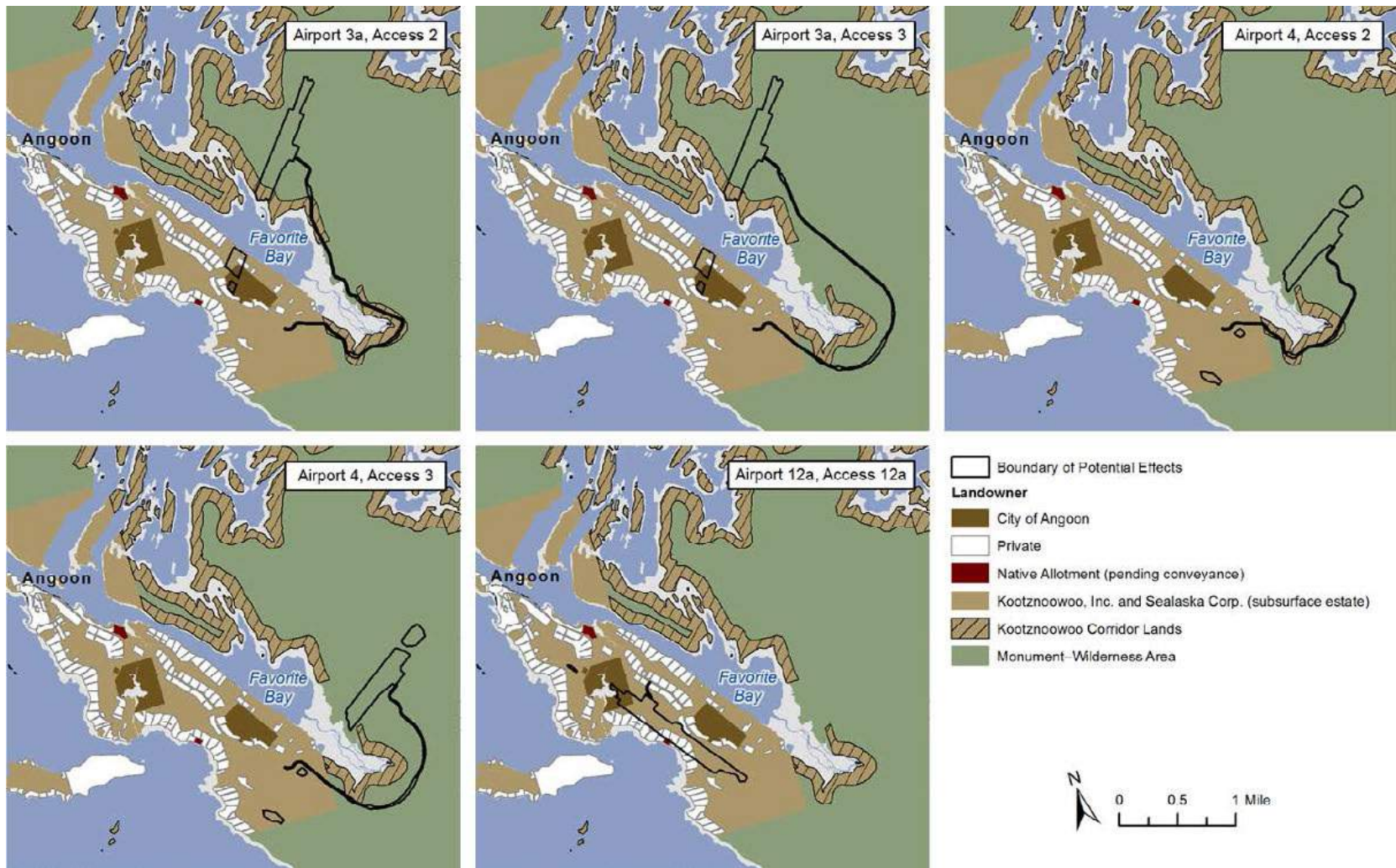


Figure 1. Alternatives analyzed in the EIS.



U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Mr. Richard George, Mayor
City of Angoon
P.O. Box 40
Angoon, AK 99820

RE: Angoon Airport Environmental Impact Statement (EIS) Preferred Alternative

Dear Mr. George:

As you know, the Federal Aviation Administration (FAA) is preparing an EIS for a proposed land-based airport for the community of Angoon. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and tribal, public, and agency input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula on lands owned by a combination of parties, including the City of Angoon, private individuals, and Kootznoowoo, Inc. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' proposed action. The EIS analyzes and discloses the potential effects to the natural and human environment from constructing such an airport.

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1. Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) requires transportation agencies to evaluate whether there are feasible and prudent alternatives to affecting lands determined to be 4(f) properties and demonstrate that planning has been done to avoid harm to the 4(f) property. The FAA has completed a draft 4(f) evaluation and determined that the Monument–Wilderness Area is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument–Wilderness lands, leaving Airport 12a with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.

2. Alaska National Interests Lands Conservation Act Section 1104(g)(2)(B) states that each federal agency should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the [transportation] system through or within a conservation system unit.” Analysis in the EIS to date indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument–Wilderness lands (which are considered a conservation system unit).

CEQ and FAA guidance encourage us to identify the preferred alternative as soon as we have the justification to do so—and to communicate to the public that we believe this alternative is preferable to FAA. What this means is that on balance, we feel the preferred alternative minimizes effects while best fulfilling the project’s purpose and need.

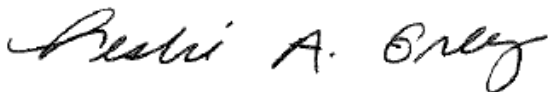
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We will be in Angoon on June 25, 2013 and we would like to meet with you and the City Council to discuss in person any concerns and questions that you have regarding the identification of this preferred alternative. Please email me by Friday, May 31, 2013, what time you would like to meet on June 25.

Should you have any questions about the project, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above. I look forward to hearing from you.

Sincerely,



Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

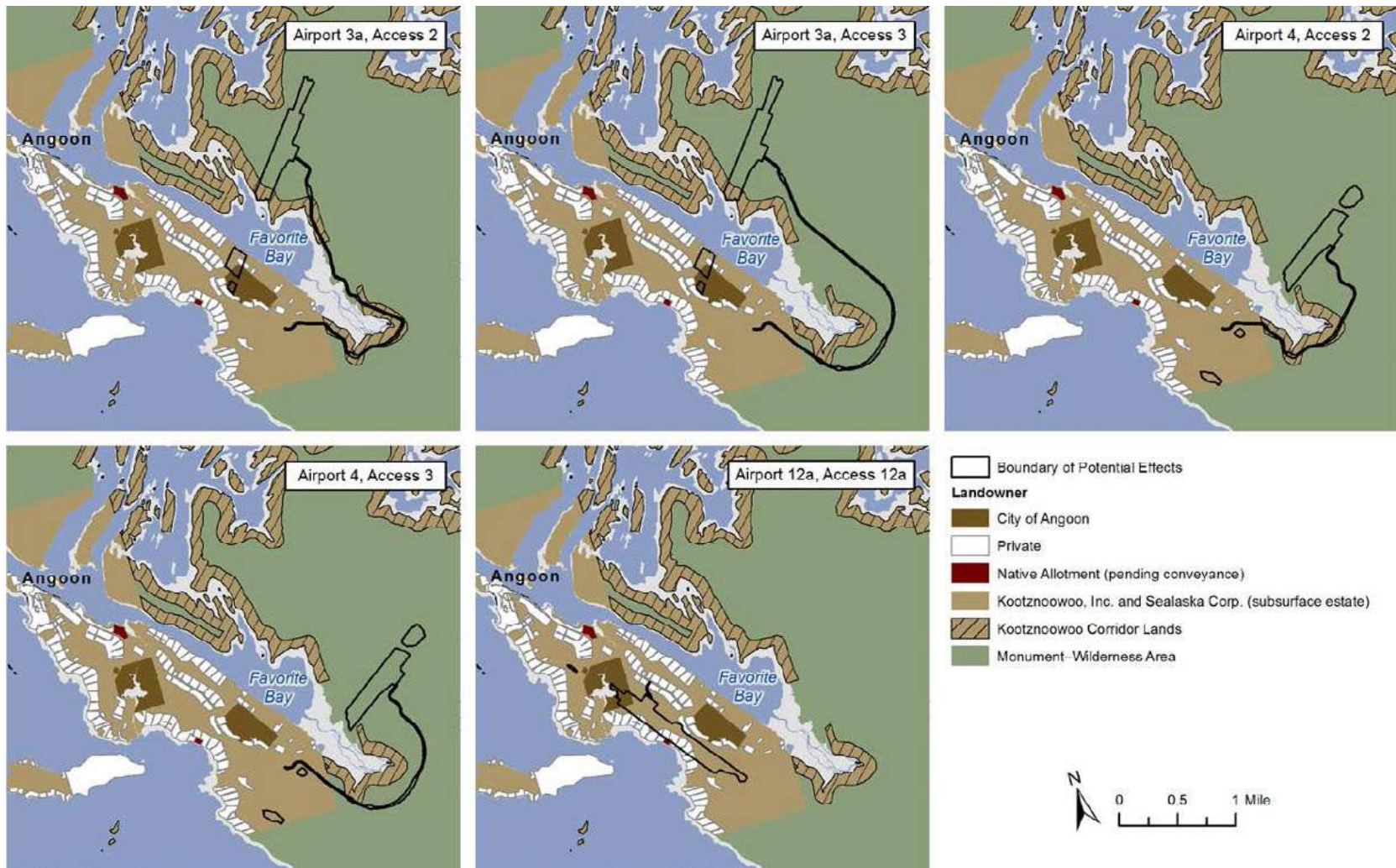


Figure 1. Alternatives analyzed in the EIS.



U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Mr. Peter Naoroz, Chief Executive Officer
Kootznoowoo, Inc.
8585 Old Dairy Road, Suite 104
Juneau, AK 99801

RE: Angoon Airport Environmental Impact Statement (EIS) Preferred Alternative

Dear Mr. Naoroz:

As you know, the Federal Aviation Administration (FAA) is preparing an EIS for a proposed land-based airport for the community of Angoon. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and tribal, public, and agency input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula on lands owned by a combination of parties, including the City of Angoon, private individuals, and Kootznoowoo, Inc. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' proposed action. The EIS analyzes and discloses the potential effects to the natural and human environment from constructing such an airport.

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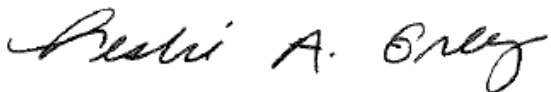
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Should you have any questions about the project, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above. I look forward to hearing from you.

Sincerely,



Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

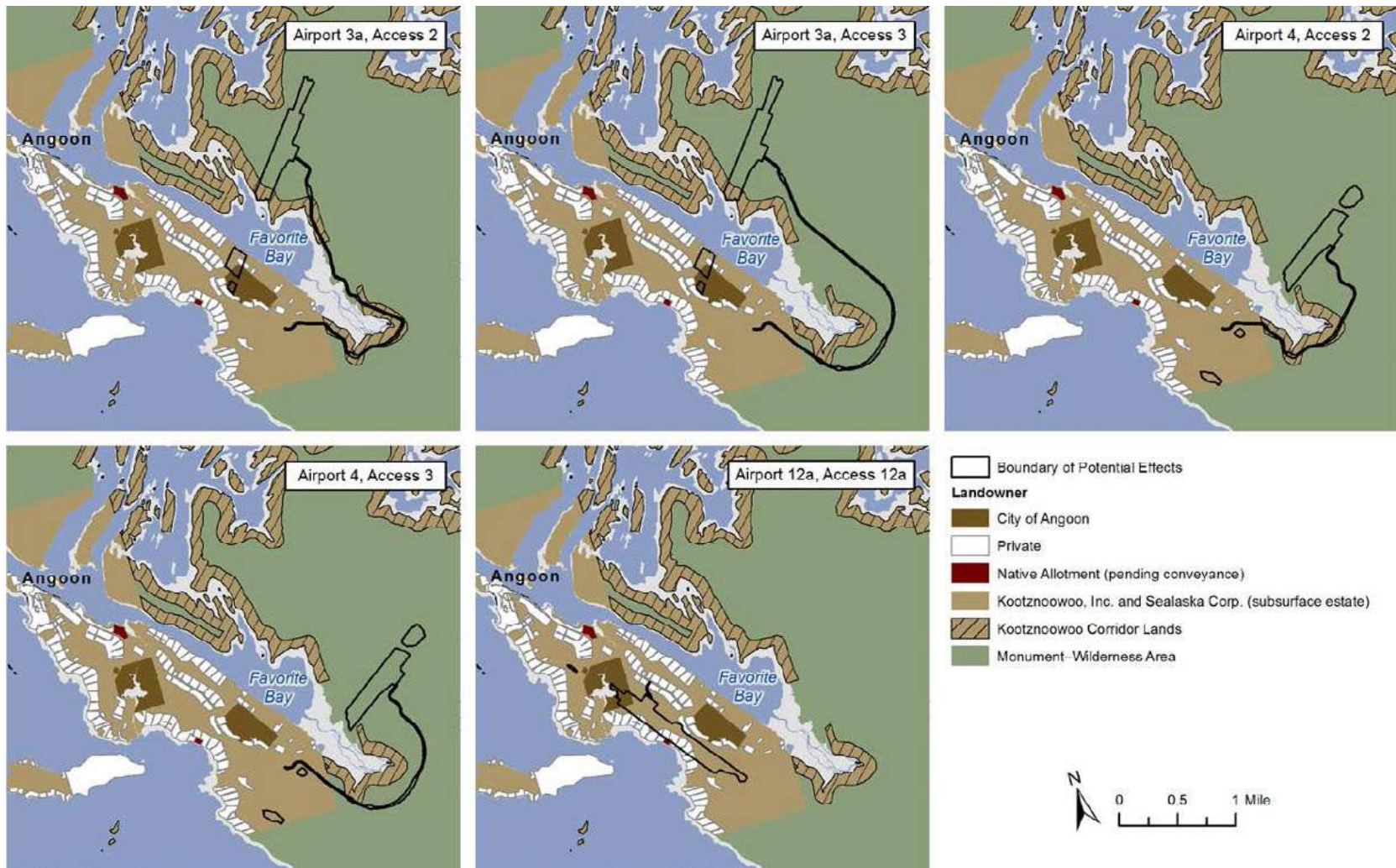


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U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Jennifer Curtis
EPA Region 10
222 West 7th Ave #19
Anchorage, Alaska 99513

Re: Angoon Airport EIS Preferred Alternative

Dear Ms. Curtis:

As you know, the Federal Aviation Administration (FAA) is preparing an environmental impact statement (EIS) for a proposed land-based airport for the community of Angoon in Southeast Alaska. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and public, agency, and tribal input as the three most viable airport locations from an aviation standpoint. Two airport locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' (DOT&PF's) proposed action.

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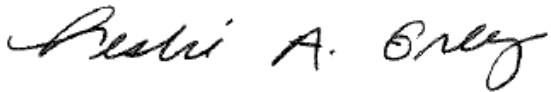
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Should you have any questions, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above.

Sincerely,

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Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

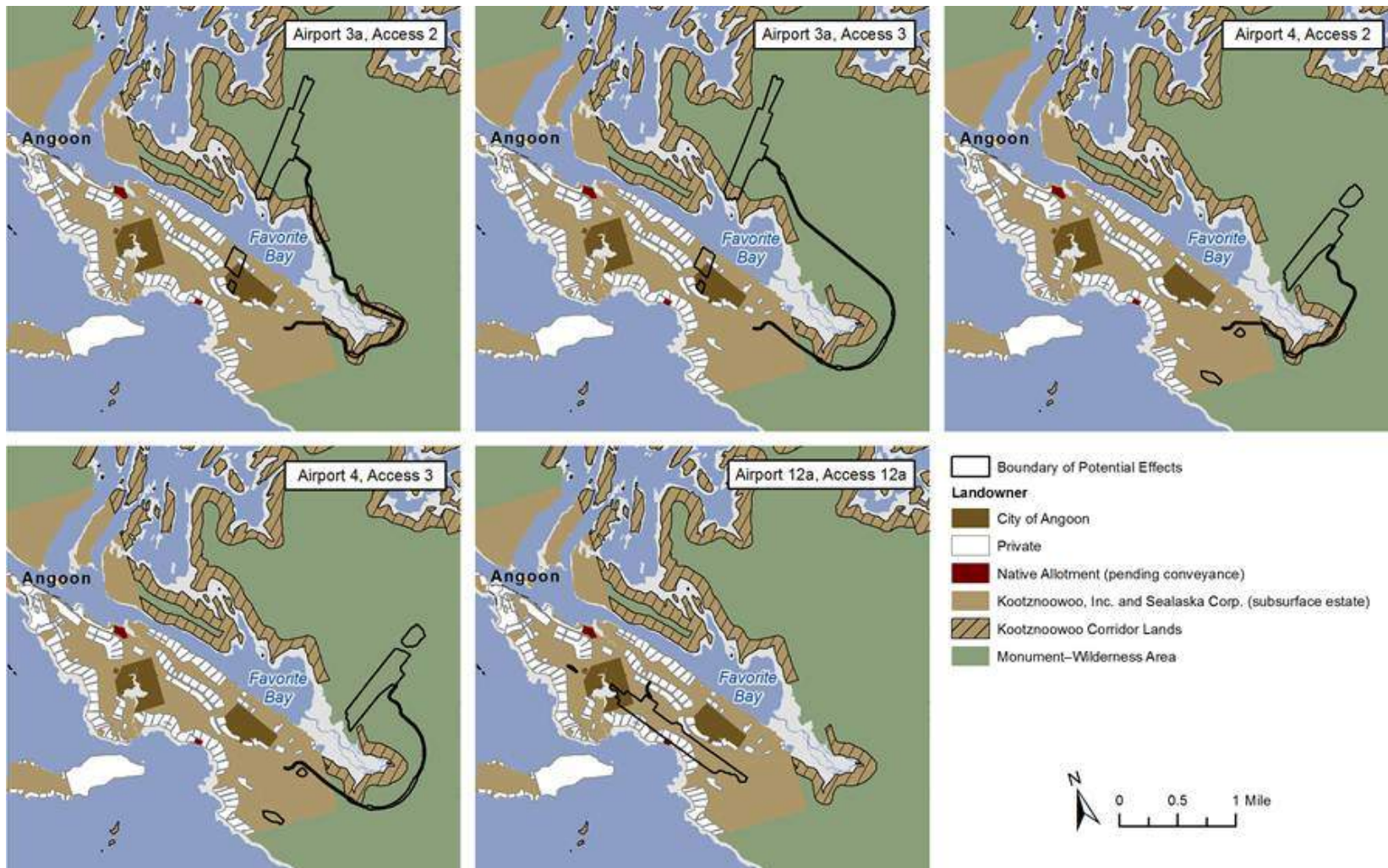


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U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Matt LaCroix
EPA Region 10
222 West 7th Ave #19
Anchorage, Alaska 99513

Re: Angoon Airport EIS Preferred Alternative

Dear Mr. LaCroix:

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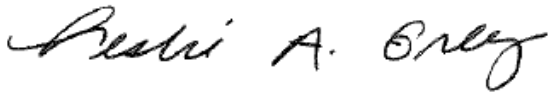
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Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

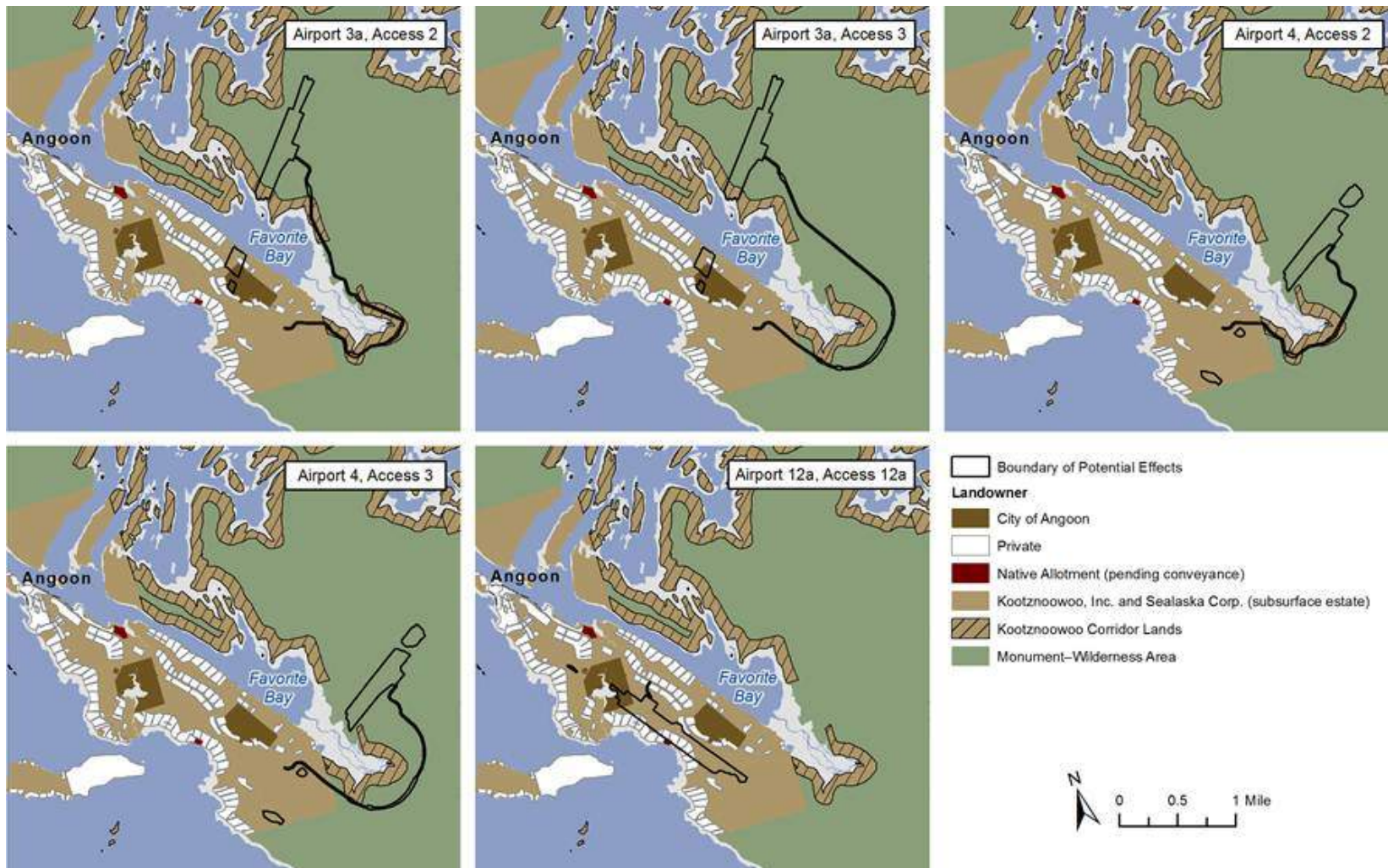


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U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Chiska Derr
NMFS Alaska Region
Protected Resources Division
P.O. Box 21668
Juneau, AK 99802

Re: Angoon Airport EIS Preferred Alternative

Dear Ms. Derr:

As you know, the Federal Aviation Administration (FAA) is preparing an environmental impact statement (EIS) for a proposed land-based airport for the community of Angoon in Southeast Alaska. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and public, agency, and tribal input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' (DOT&PF's) proposed action.

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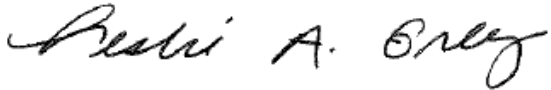
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The EIS team will be in Juneau and Angoon the week of June 24. We would like to meet with you and Ms. Savage in person to discuss your review of the agency review draft EIS and discuss future coordination. Please email your availability for Monday, June 24 or Wednesday, June 26.

Should you have any questions, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above.

Sincerely,

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Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Jon Kurland, Director
Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

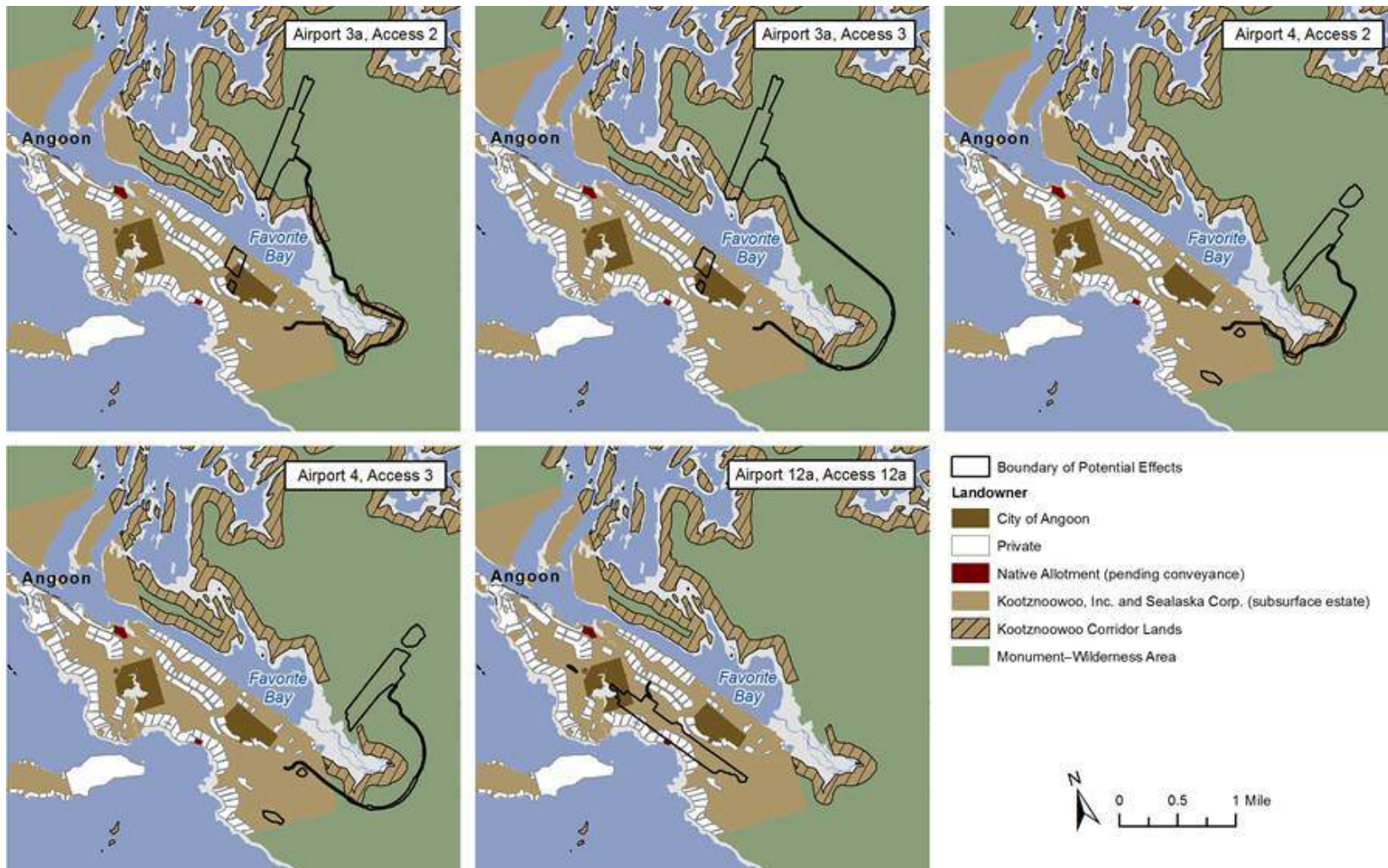


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U.S. Department
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**Federal Aviation
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Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Kate Savage, Marine Mammal Specialist
NMFS Alaska Region
Protected Resources Division
P.O. Box 21668
Juneau, AK 99802

Re: Angoon Airport EIS Preferred Alternative

Dear Ms. Savage:

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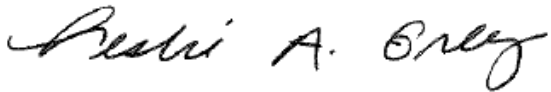
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Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Jon Kurland, Director
Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

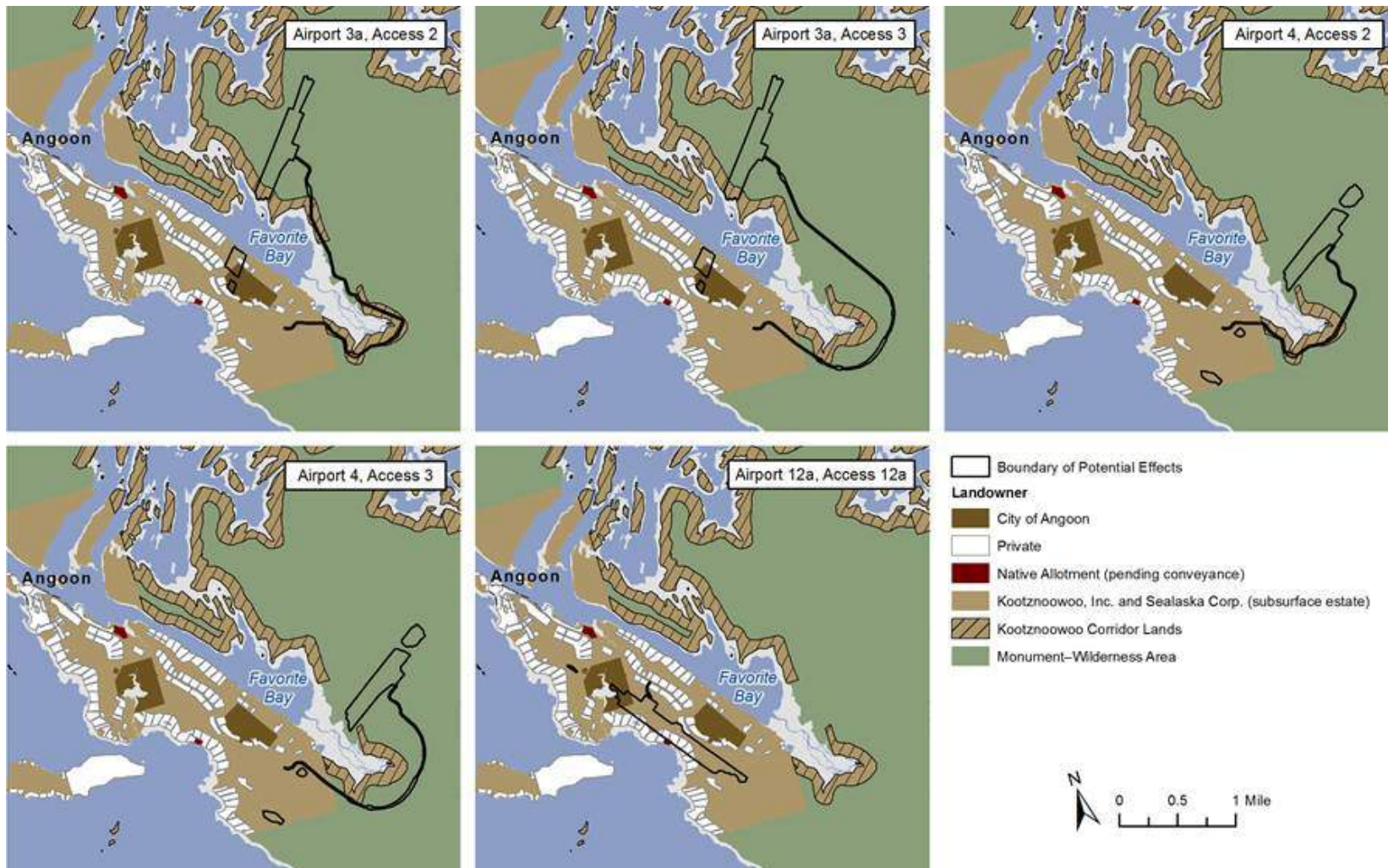


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U.S. Department
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**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Richard Enriquez
USFWS
Juneau Field Office
3000 Vintage Blvd., Suite 201
Juneau, Alaska 99801

Re: Angoon Airport EIS Preferred Alternative

Dear Mr. Enriquez:

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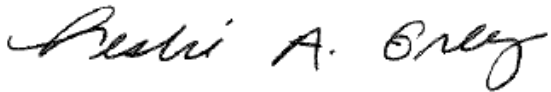
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The EIS team will be in Juneau and Angoon the week of June 24. We would like to meet with you in person to discuss your review of the agency review draft EIS and discuss future coordination. Please email your availability for Monday, June 24 or Wednesday, June 26.

Should you have any questions, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above.

Sincerely,

A handwritten signature in cursive script that reads "Leslie A. Grey".

Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

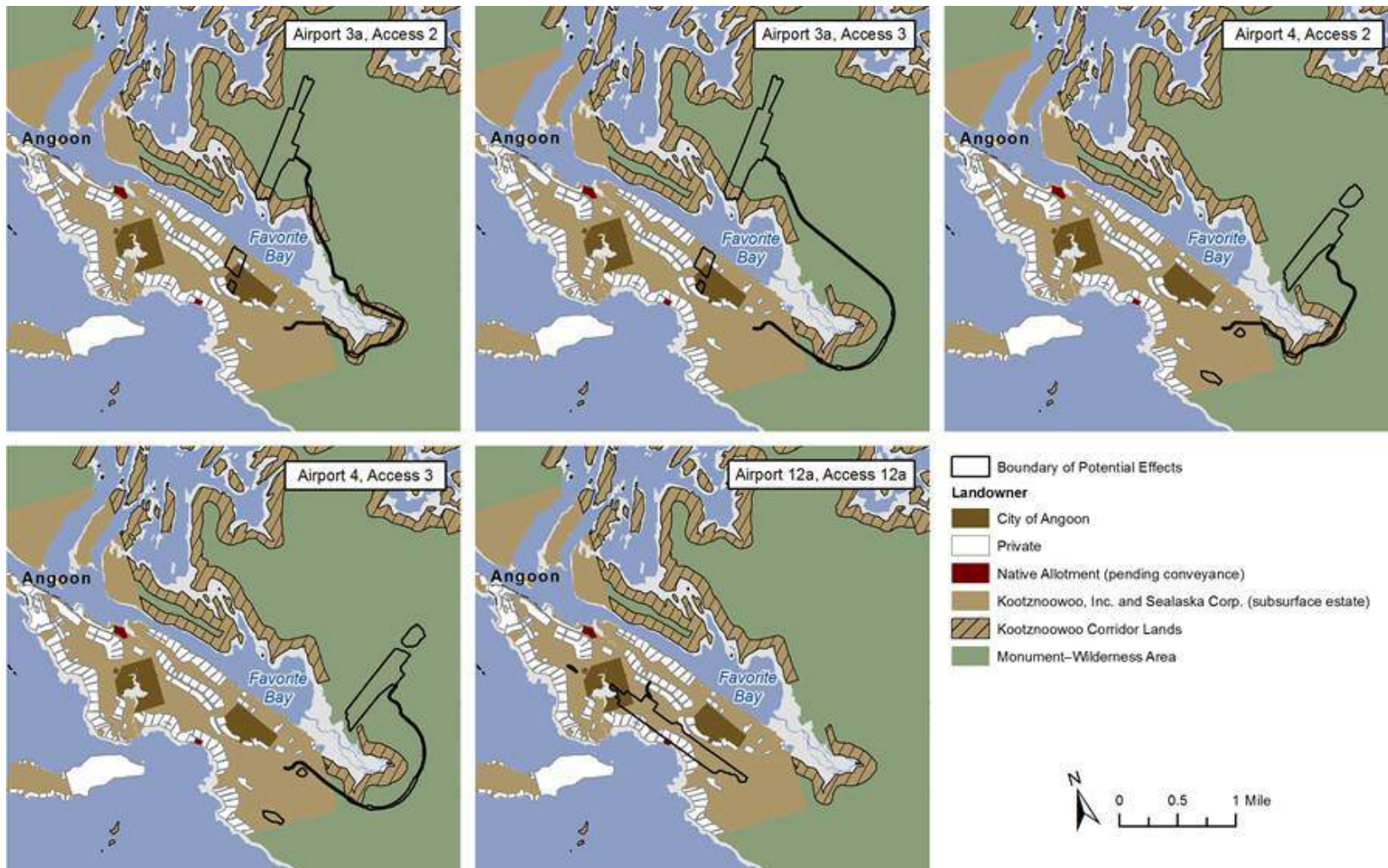


Figure 1. Alternatives analyzed in the EIS.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Randall Vigil
US Army Corp of Engineers, Alaska District
CEPOA-RD, Juneau Field Office
P.O. Box 22270
Juneau, AK 99802-9998

Re: Angoon Airport EIS Preferred Alternative

Dear Mr. Vigil:

As you know, the Federal Aviation Administration (FAA) is preparing an environmental impact statement (EIS) for a proposed land-based airport for the community of Angoon in Southeast Alaska. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and public, agency, and tribal input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' (DOT&PF's) proposed action.

The intent of this letter is to inform you of the FAA's decision to identify a preferred alternative in the Draft Angoon Airport EIS. The bulk of the analysis has been done, and the FAA is in the process of finalizing the EIS for agency review. Based on the analysis completed to date, the FAA has decided to move forward with identifying Airport Alternative 12a with Access 12a as the preferred alternative. There are two key factors to this decision as follows:

1. Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 303) requires transportation agencies to evaluate whether there are feasible and prudent alternatives to affecting lands determined to be 4(f) properties and demonstrate that planning has been done to avoid harm to the 4(f) property. The FAA has completed a draft 4(f) evaluation and determined that the Monument–Wilderness Area is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument–Wilderness lands, leaving Airport 12a with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.
2. Alaska National Interests Lands Conservation Act (ANILCA) Section 1104(g)(2)(B) states that each federal agency should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the [transportation] system through or within a conservation system unit.” Analysis in the EIS to date indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument–Wilderness lands (which are considered a conservation system).

The identification of the preferred alternative in the Draft EIS rather than the Final EIS alters several project milestones. Specifically, because the preferred alternative is not located in the Monument–

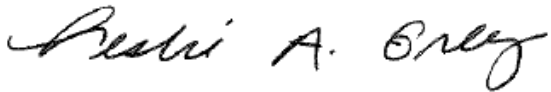
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A handwritten signature in cursive script that reads "Leslie A. Grey".

Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

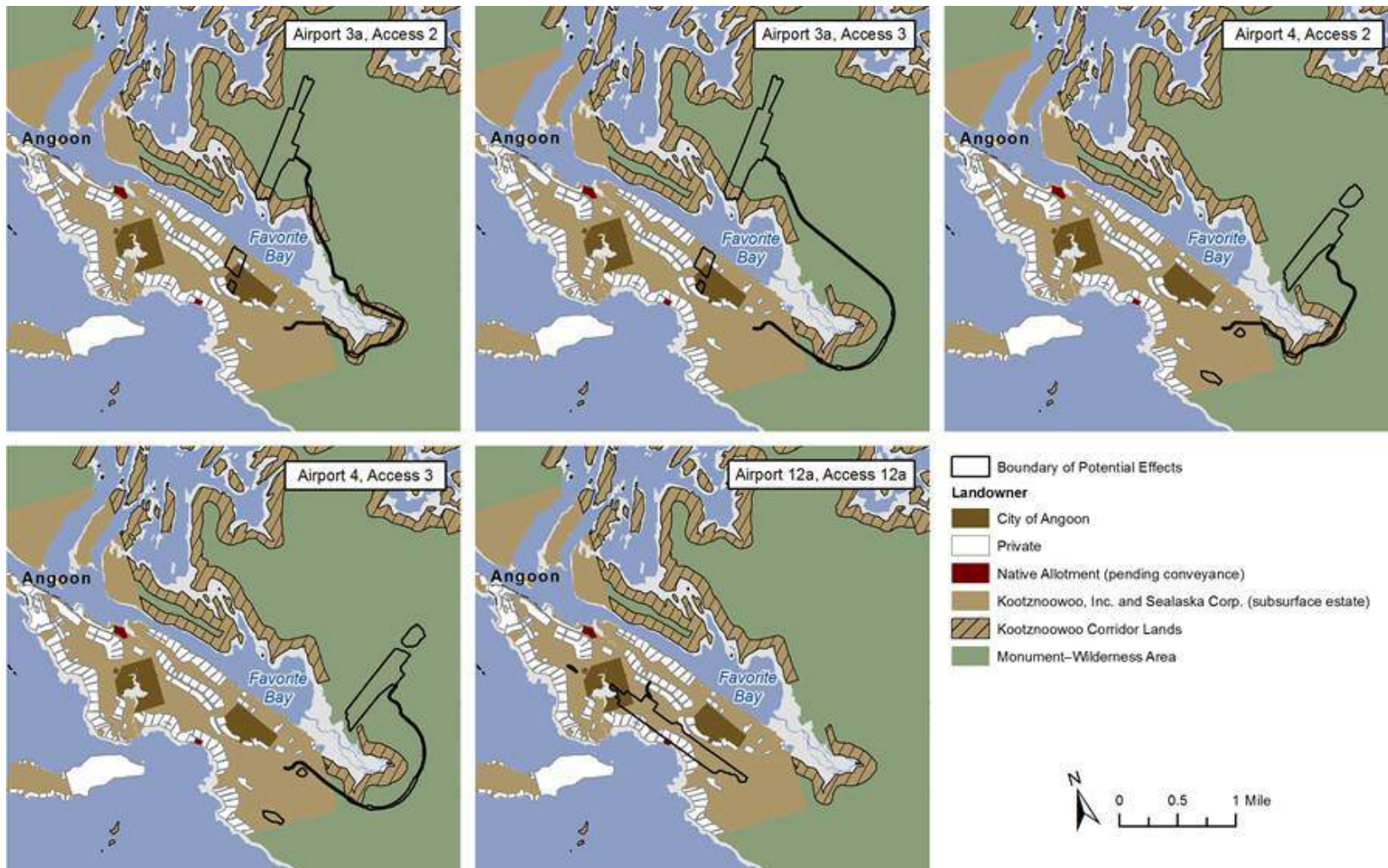


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U.S. Department
of Transportation
**Federal Aviation
Administration**

Alaskan Region Airports Division
AAL-600
222 West 7th Ave #14
Anchorage, AK 99513

May 28, 2013

Beth Pendleton, Regional Forester
U.S. Forest Service, Alaska Regional Office
P.O. Box 21628
Juneau, AK 99802-1628

Re: Angoon Airport EIS Preferred Alternative

Dear Ms. Pendleton:

As you know, the Federal Aviation Administration (FAA) is preparing an environmental impact statement (EIS) for a proposed land-based airport for the community of Angoon in Southeast Alaska. The EIS is evaluating three alternative locations for the proposed airport and three alternatives for the access roads (Figure 1). These sites were identified through technical studies and public, agency, and tribal input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the Alaska Department of Transportation and Public Facilities' (DOT&PF's) proposed action.

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2. Alaska National Interests Lands Conservation Act (ANILCA) Section 1104(g)(2)(B) states that each federal agency should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the [transportation] system through or within a conservation system unit.” Analysis in the EIS to date indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument–Wilderness lands (which are considered a conservation system).

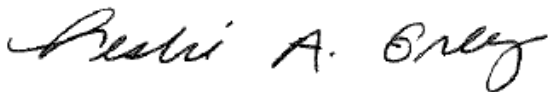
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Should you have any questions, please feel free to contact me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above.

Sincerely,

A handwritten signature in black ink that reads "Leslie A. Grey". The signature is written in a cursive style with a large, prominent "L" and "G".

Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Cc: Forrest Cole, Forest Supervisor
Chad Van Ormer, District Ranger
Jennifer Berger, Angoon Airport Project Coordinator
Verne Skagerberg, Alaska DOT&PF
Amanda Childs, SWCA

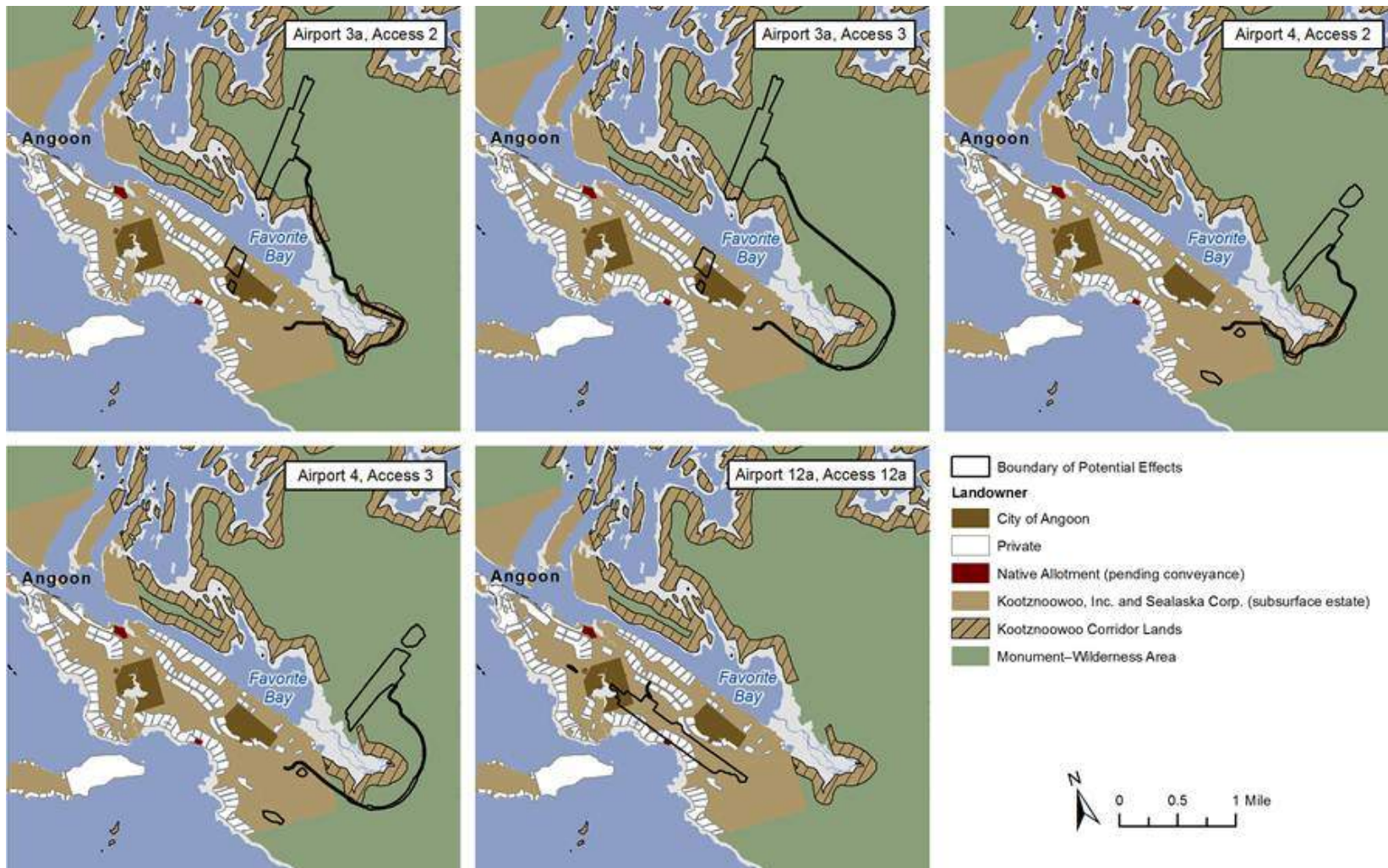


Figure 1. Alternatives analyzed in the EIS.

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Wednesday, May 29, 2013 11:50 AM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



FAA Identifies Preferred Alternative (05/29/13)

Having trouble viewing this email? Click [HERE](#) to read this announcement on our website.

Hello everyone! The calendar says summer is on its way, but I'm not quite convinced. I'm really looking forward to some warm, beautiful Alaskan days, and I'm sure you all are as well!

Our project team has recently made an important decision concerning the EIS. I would like to take the opportunity in this letter to explain the FAA's responsibilities in the EIS process, the reasons for our decision, and what it means for you.

You may remember that our December 2012 Project Update included a discussion of the concept of the "preferred alternative." This is a term used by the Council on Environmental Quality to describe "the alternative the agency [in this case, the FAA] believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors."

Until recently, our team had decided not to identify a preferred alternative in the public draft EIS. However, we have been conducting a very detailed review of the EIS chapters. It is the job of our FAA reviewers to scrutinize the quality of our data and analysis before the EIS is released to the public, and they take this responsibility very seriously.

As we come to the end of our FAA review of the document and draw closer to the release of the Public Draft EIS, our project team is confident that Airport Alternative 12a meets the criteria for a preferred alternative. CEQ and FAA guidance encourage us to identify the preferred alternative as soon as we have the justification to do so - and to communicate to the public that we believe this alternative is preferable to FAA. What this means is that on balance, we feel the preferred alternative minimizes effects while best fulfilling the project's purpose and need.

What does this identification of the preferred alternative mean to you? It means that FAA is most likely to choose this alternative after the final EIS is completed, but it is not guaranteed. We are counting on you - our stakeholders and other members of the public - to give us your input during the draft EIS comment period. Tell us your opinions on all of the alternatives, so that the FAA can better understand project effects to local resources from each of the action alternatives. We hope that knowing the FAA's preference helps you provide more informed comments.

Your involvement is critical to the EIS process. It ensures that we have the best information to guide our final decision regarding the proposed Angoon Airport.

I will be visiting Angoon on **June 25**, and I look forward to talking about this with you. The team and I will be at the ACA building from **10:00 am to 7:00 pm**, with lunch at the senior center. Please feel free to contact me with any questions, concerns, or comments. My contact information can be found below.

Best wishes,
Leslie Grey
Angoon Airport EIS Project Manager

Leslie Grey, [Federal Aviation Administration](#)
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851
Email. Leslie.Grey@faa.gov

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Best wishes,
Leslie Grey
Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division

Angoon Airport EIS
Document 0609



222 West 7th Avenue, Box #14

Anchorage, Alaska 99513-7587

Phone. 907-271-5453 **Fax.** 907-271-2851

Email. Leslie.Grey@faa.gov

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[Contact Us](#)

Lara Bjork

From: Vigil, Randal P POA <Randal.P.Vigil@usace.army.mil>
Sent: Thursday, May 30, 2013 1:58 PM
To: Jamie C. M. Young
Cc: Greg Swenson; Amanda Childs; George Weekley; Lara Bjork
Subject: RE: Angoon Airport EIS: Aquatic Habitats and Associated Species section for your review
Attachments: AngoonEIS_Ch4.5.2_AquaticHabSpec_forUSACereview_03-15-13.pdf

Hi Jamie,

Finally was able to review Chapter 4. Here it is with a few comments. Sorry it took so long. Thanks.

Randy

-----Original Message-----

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Friday, March 15, 2013 12:44 PM
To: Vigil, Randal P POA
Cc: Greg Swenson; Amanda Childs; George Weekley; Lara Bjork
Subject: Angoon Airport EIS: Aquatic Habitats and Associated Species section for your review

Hello Randy,

As we discussed, the Angoon EIS Aquatic Habitats and Associated Species section is attached for your review. This section contains analysis of potential effects to non-wetland waters of the U.S. Similar to your review of the Wetlands section, please document your comments in the PDF. I will check in with you weekly to see if providing your comments back to us by Friday April 5th is do-able.

Please call me with any questions that arise. We look forward to receiving your input and feedback. Thanks for your time, sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive

Ketchikan, Alaska 99901

P 907.220.9016 | C 907.821.0404 | F 907.279.7922

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P Please consider the environment before printing this email



1 **4.5.2. Aquatic Habitats and Associated Species**

2 This section addresses the existing conditions of aquatic habitats and the associated wildlife and plant
3 species in the area of the airport and access road alternatives. It also addresses the potential changes to
4 the conditions of those resources from construction and operation of the proposed land-based airport.

5 The information contained in this section is summarized from the *Freshwater, Estuarine, and Marine*
6 *Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement*
7 *Angoon, Alaska* (SWCA 2011), which is included in this environmental impact statement (EIS) as
8 [Appendix AEM](#).

9 **4.5.2.1. Background information**

10 **4.5.2.1.1. What does the term “aquatic habitats and species” mean?**

11 Aquatic habitats are water-based places lived in or used by plants and animals. They consist of
12 *freshwater, estuarine, and marine habitats*. In this section estuarine habitats are included with marine
13 habitats, although any special status species occupying estuarine habitats are discussed in [section 4.5.3](#)
14 [Special Status Species](#). Aquatic species are the animals and plants that live in those habitats most of the
15 time. These include fish, marine mammals, invertebrates (such as sea urchins, sea stars, and insects),
16 and plants that grow in water (such as eelgrass, seaweed, kelp, and pond lily).

17

18

19

20

21

22

What is discussed in this section?

4.17.1. Background information

4.5.2.1.1. What does the term “aquatic habitats and species” mean?

[4.5.2.1.2. What guidelines and regulations guided how aquatic habitats and species were assessed?](#)

4.17.2. Existing conditions

4.17.3. Project effects

Terms to know

Estuarine habitats: Partly enclosed, nutrient-rich bodies of water where saltwater from the ocean mixes with freshwater from rivers and streams.

Freshwater habitats: Habitats in surface waters such as lakes, ponds, rivers, and streams that have low salinity.

Marine habitats: Habitats influenced by saltwater. These occur in estuarine, coastal, and open ocean saltwater environments.



23 **4.5.2.1.2. What guidelines and regulations guided how aquatic habitats and species were assessed?**

24 Many guidelines and regulations protect aquatic habitats and species. For the Angoon Airport EIS, one
25 guidance document (the *Tongass National Forest Land and Resource Management Plan*) and two
26 regulations (the Clean Water Act and the Magnuson-Stevens Fishery Conservation and Management
27 Act) direct the way in which aquatic resources are addressed. The Clean Water Act and the Magnuson
28 Stevens Fisheries Act assign regulatory designations to aquatic habitats and species and trigger
29 permitting processes related to aquatic habitats and species. These regulatory designations are included
30 as appropriate in the effects discussions that follow.

31 ***Tongass National Forest Land and Resource Management Plan***

32 Because the U.S. Forest Service is the principal land management agency for four of the five action
33 alternatives (see [section 3.3.2](#) in Chapter 3: Alternatives), the FAA was required by the *Tongass*
34 *National Forest Land and Resource Management Plan* (USFS 2008) to conduct **stream inventories**.
35 Although Airport 12a with Access 12a would not be located on lands managed by the U.S. Forest
36 Service, the FAA applied the U.S. Forest Service guidelines to it as well as the other alternatives for the
37 sake of consistent analysis and disclosure of possible effects.

38 Through these inventories, the FAA validated existing data, documented
39 any previously undocumented freshwater habitats, and identified **stream**
40 **classes**.

41 The U.S. Forest Service's stream classes (which also apply to lakes,
42 though they are called "stream class") are as follows:

- 43 • Class 1: Supports **anadromous** fish populations.
- 44 • Class 2: Supports only resident fish populations.
- 45 • Class 3: Does not support fish populations but directly influences
46 fish-bearing fresh waters by moving **sediment** and food sources
47 downstream.

Terms to know

Anadromous: Fish that spawn in freshwater, but live most of their adult lives in saltwater.

Sediment: Material such as sand or silt that can be transported by water to a water body, where it can remain suspended in the water (see the [Turbidity](#) definition below) or settle to the bottom.

Stream class: A designation applied to all fresh waters (streams and lakes) that describes how fish use those water bodies, and how the water bodies influence downstream areas.

Stream inventories: Data collected to establish aquatic conditions and to assess management needs (USFS 2001a).

Beach and estuarine fringe habitat sensitivity

Beach and estuarine fringe habitat is the vital link between terrestrial and marine aquatic habitats. Because the beach and estuarine fringe occurs where two habitat types overlap, it is a biologically rich area. It provides important habitat, migration corridors, and habitat connectivity for wildlife such as eagles, bears, otters, deer, shorebirds, and waterbirds.

Many terrestrial species feed in estuarine habitats or the intertidal zone, and use the beach and estuarine fringe as a corridor to access these habitats. The quality of the beach and estuarine fringe contributes to the ecological integrity of estuarine habitats and their associated riparian management areas. Beach and estuarine fringe is of high value to many wildlife and fish species, and therefore is managed by the U.S. Forest Service as a highly sensitive habitat.



Angoon Airport EIS

Chapter 4: Existing Conditions and Project Effects

4.5.2. Aquatic Habitats and Associated Species

- 48
- 49
- 50
- Class 4: Does not support fish populations and does not directly influence fish-bearing fresh waters. These are generally small headwater streams or isolated ponds.
- 51
- Class 5: Small headwater or wetland seeps, considered by the U.S. Forest Service to be “non-streams.”
- 52

53 It is important to identify stream class because the U.S. Forest Service assesses effects to
54 aquatic habitats and species according to these designations. With their land management
55 practices, the U.S. Forest Service makes every effort to minimize the degradation or loss of
56 Class 1 and 2 freshwater habitats.

57 As part of protecting streams, the U.S. Forest Service designates “*riparian* management
58 areas” near streams because riparian areas are important for the health of aquatic habitats.
59 Riparian areas consist of terrestrial habitats of any type that contribute essential elements to
60 the health and normal function of a river or stream. They contribute food for fish in the form
61 of land-dwelling invertebrates such as insects, centipedes, and spiders. They contribute
62 organic matter, which provides nutrients for aquatic invertebrates such as stoneflies, which
63 are a fish prey source. Large wood (woody vegetation such as branches and fallen trees) is
64 another important riparian contribution. As it falls into streams, large wood creates pools and
65 adds habitat complexity, and it provides aquatic species with cover, refuge from high flows
66 and predators, and variety in food sources. Effects to terrestrial habitats in a riparian area
67 cause related effects to aquatic habitats.

68 **Clean Water Act and waters of the U.S.**

69 The Clean Water Act designates the U.S. Army Corps of Engineers as the regulatory
70 agency over “waters of the U.S.,” which are defined as follows:

71 All waters that are currently used, or were used in the past, or may be susceptible to use
72 in interstate or foreign commerce, including all waters that are subject to the ebb and flow
73 of the tide. These include...lakes, rivers, streams, mudflats, [and] sandflats, wetlands...

Terms to know

Riparian: The zone between land and a river or stream.

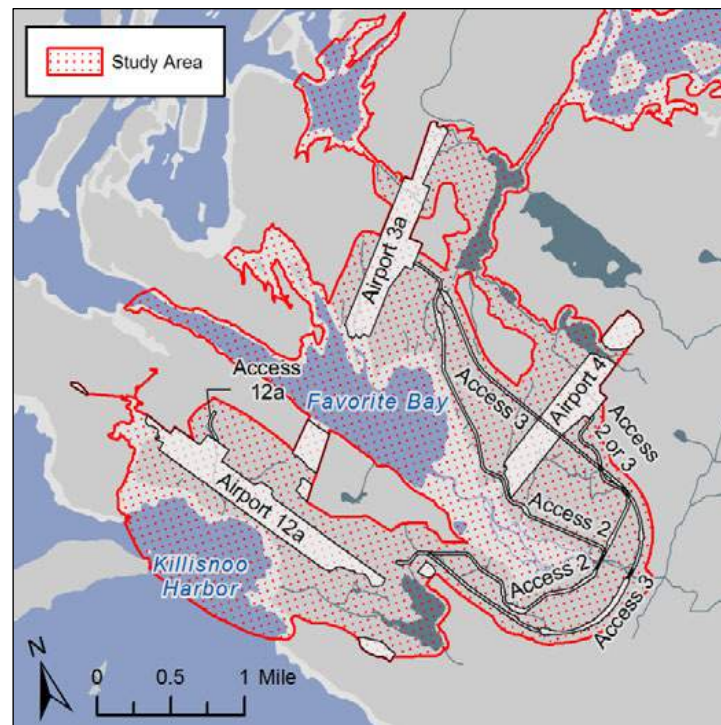


Figure AHAS1. The study area examined for aquatic habitats and species.



Angoon Airport EIS

Chapter 4: Existing Conditions and Project Effects


4.5.2. Aquatic Habitats and Associated Species

74 the use, degradation, or destruction of which could affect interstate or foreign
75 commerce.... (33 Code of Federal Regulations [CFR] 328.3)

76 In the Angoon area, the presence of commercial and recreational fishing—which are considered part of
77 interstate commerce by regulation—means that all aquatic habitats in the area, including the oceans, lakes,
78 streams, and wetlands, are considered waters of the U.S. Because they are waters of the U.S., a permit under
79 Section 404(b)(1) of the Clean Water Act would be required. (*Note:* This section focuses on non-wetland waters of the U.S.;
80 wetland waters of the U.S. are discussed in [section 4.15 Wetlands](#).)

81 Section 404(b)(1) of the Clean Water Act provides guidelines that the U.S. Army Corps of Engineers uses to determine
82 whether a project can obtain a permit. Projects that are not permissible are those that have unacceptable adverse effects
83 according to the U.S. Army Corps of Engineers using the criteria in the Section 404(b)(1) guidelines. Unacceptable
84 adverse effects are those that 1) violate state water quality standards, 2) violate toxic effluent standards or prohibitions, 3)
85 jeopardize the continued existence of species listed as endangered or threatened, or 4) violate any requirement to protect a
86 marine sanctuary. The U.S. Army Corps of Engineers is responsible for determining whether an action does not have
87 unacceptable adverse effects and therefore complies with Section 404(b)(1) guidelines. A Section 404 permit may not be
88 issued without such compliance.



89 Because all aquatic habitats in the Angoon area are considered waters of the U.S., the effects disclosed in this EIS
90 are used to determine if there are unacceptable adverse effects under the Section 404(b)(1) guidelines 

91 ***Magnuson-Stevens Fishery Conservation and Management Act and essential fish habitat***

92 The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S. Code [USC] 1801–1803) requires
93 federal agencies to consult with the National Marine Fisheries Service on all actions that may adversely affect
94 designated “essential fish habitat.” Essential fish habitat under this act is defined as “waters and substrate necessary
95 to fish for spawning, breeding, feeding, or growth to maturity.” More details regarding these selected fish stocks and
96 essential fish habitat are discussed in [Appendix AEM](#). The Angoon area contains essential fish habitat in freshwater
97 and marine habitat types. All aquatic habitats in the Angoon area that are accessible to anadromous fish (Class 1
98 streams and all marine areas) have been designated as essential fish habitat for salmon.

99

Terms to know

Substrate: The surface material on which a species lives, grows, or feeds.



100 **4.5.2.2. Existing conditions**

101 Aquatic habitats and species in the study area are discussed here according to their association with
102 fresh and marine waters. Freshwater habitats include streams, lakes, and ponds (see [Figure AHAS3](#)
103 below). Marine habitats consist of water bodies influenced by saltwater (see [Figure AHAS4](#)
104 below). The distribution of these habitats is illustrated in [Figure AHAS2](#) below.

105 **4.5.2.2.1. How did the FAA determine which aquatic habitats and associated species**
106 **could be affected and their existing condition?**

107 Existing data and new field studies conducted for this EIS were used to identify aquatic habitats
108 and species that could be affected by any of the airport and access alternatives. Because existing
109 studies of aquatic habitats around Angoon (for example, USFS 2002 and USFS 2009) contained
110 incomplete data on the areas that could be affected by the alternatives, the FAA consulted U.S.
111 Forest Service, National Marine Fisheries Service, and Alaska Department of Fish and Game
112 biologists about the occurrence and distribution of aquatic habitats and species in the area
113 encompassing the alternatives. The FAA identified this area of study—the aquatic study area—by
114 estimating the likely locations and extents of project-related construction, operation, and
115 maintenance activities that would have the potential to affect aquatic habitats and species. The
116 FAA conducted field surveys to verify the accuracy and completeness of existing data and to
117 examine areas where data regarding aquatic resources were lacking. During the field survey, if aquatic species were
118 not directly observed but suitable habitat for those species was present, the FAA assumed for the purpose of this EIS
119 that the species were present also.

120 For the purposes of analysis in this EIS, the aquatic study area has been refined from the area used for the field surveys
121 ([Appendix AEM](#)). Because water flows downstream, effects to aquatic habitats and species are anticipated in the
122 immediate vicinity and downstream of project-related activities, but not upstream. The downstream extent of the study
123 area is based on a conservative estimate of *dilution* and geographic boundaries of small bays to larger marine water
124 bodies. It is reasonable that potential effects to water quality, and subsequent effects to aquatic habitats and species, would
125 lessen as more water is encountered (dilution) and the distance from the effects increases downstream. The upstream
126 extent of the study area follows freshwater bodies upstream from marine water bodies until arriving upstream of the

What is discussed in this section?

4.5.2.2.1. How did the FAA determine which aquatic habitats and associated species could be affected and their existing condition?

4.5.2.2.2. [What are aquatic habitats and associated species in the Angoon area like?](#)

4.5.2.2.3. [How are aquatic habitats and associated species managed according to the different landownership categories?](#)

Terms to know

Dilution: The process by which the concentration of a particular substance is lessened because the other surrounding substances are increased.



127 potential project-related activities. In some cases this coincides with the watershed boundary (for example, in watersheds
128 10 and 10A), but in other watersheds, such as Favorite Creek and watershed 2, it was not necessary to include areas of
129 those watersheds that were upstream of the potential project-related activities. See [Figure AHAS1](#) for the boundaries of
130 this refined aquatic study area.

131 **4.5.2.2.2. What are aquatic habitats and associated species in the Angoon area like?**

132 The condition of all aquatic habitats in the study area is relatively undisturbed and high quality because the Angoon area
133 has a small human population that is concentrated near the town center. Outside of the Angoon town center, there are few
134 existing roads or other human-built infrastructure or human activities that could decrease the quality of the existing
135 aquatic habitats. The only existing roads are from the community of Angoon to the ferry terminal (at the mouth of the Salt
136 Lagoon, adjacent to Killisnoo Harbor) and to Auk'Tah Lake, the city's water supply. Aquatic habitats are mostly
137 continuous, with little or no disturbance.

138 Invasive aquatic species are typically found where there is frequent human activity and associated disturbance. No
139 invasive aquatic species were observed during fieldwork for the EIS. The absence of invasive species is a further
140 indication of the lack of human disturbance and presence of high-quality aquatic habitats in the study area.

141 Because the study area contains high-quality aquatic habitats and very little human disturbance, it is assumed that aquatic
142 species in the area have stable populations. There are no apparent indications of instability.

143 The riparian management areas used in this analysis consist of areas within 150 feet of Class 1 and Class 2 lakes and
144 streams and within 50 feet of Class 3 fresh waters. In addition, the U.S. Forest Service (USFS 2008) describes specific
145 management objectives for marine beach and estuary fringe habitat because these areas are sensitive (for more
146 information on this sensitivity, see the sidebar titled "[Beach and estuarine fringe habitat sensitivity](#)" above). The U.S.
147 Forest Service identifies the fringe as approximately 1,000 feet inland from mean high tide line around all marine
148 coastline or estuaries. For this analysis, this 1,000-foot fringe is considered marine beach or estuary riparian area, and
149 effects to the fringe are described as effects to riparian management areas.

150 Riparian management areas in the Angoon area are relatively undisturbed by humans, except those closest to Angoon. The
151 riparian areas near the proposed Airport 12a location are used more frequently by humans, as reflected by trails, land



152 clearing, and pipes directing stream water to homes. However, these riparian areas are not on U.S. Forest Service
153 managed lands, so the U. S. Forest Service riparian management area guidelines do not apply to these areas.

154 Essential fish habitat was determined based on the presence of certain fish species in these habitats. In freshwater habitats,
155 this was determined by identifying stream class (see [Figure AHAS2](#)) and referring to the Alaska Department of Fish and
156 Game *Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes* (Johnson and Blanche
157 2012). In marine habitats, areas were assumed to be essential fish habitat if the habitat was suitable for certain species as
158 detailed in the North Pacific Fishery Management Council's *Fishery Management Plan for Groundfish of the Gulf of*
159 *Alaska* (2008).

160 The Angoon area contains essential fish habitat in freshwater and marine habitat types. Favorite Creek, a Class 1
161 stream, contains spawning and rearing habitat for chum, coho, and pink salmon (Johnson and Klein 2009). Other
162 freshwater streams in the area contain rearing habitat for juvenile coho. Marine essential fish habitat has also been
163 identified for five salmon species (Chinook, coho, chum, pink, and sockeye) and for at least one life stage for other
164 marine fish species, for example walleye pollock (North Pacific Fishery Management Council 2008). A draft
165 essential fish habitat assessment that has been submitted to the National Marine Fisheries Service is included in this
166 EIS as [Appendix EFHA](#).

167 Finally, there is existing human access by boat within the study area's marine habitats, and fishing and harvest of
168 aquatic resources occurs throughout Favorite and Mitchell Bays. These activities are further discussed in [section](#)
169 [4.13](#) Subsistence Resources and Uses. For this EIS it was assumed that the current harvest levels are sustainable
170 because of Angoon's small human population and the prevalence of marine habitats throughout the study area.
171 Marine habitats cover almost half of the study area (44.9%), the remainder of which is mostly terrestrial habitats (see
172 [Figure AHAS2](#)).



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

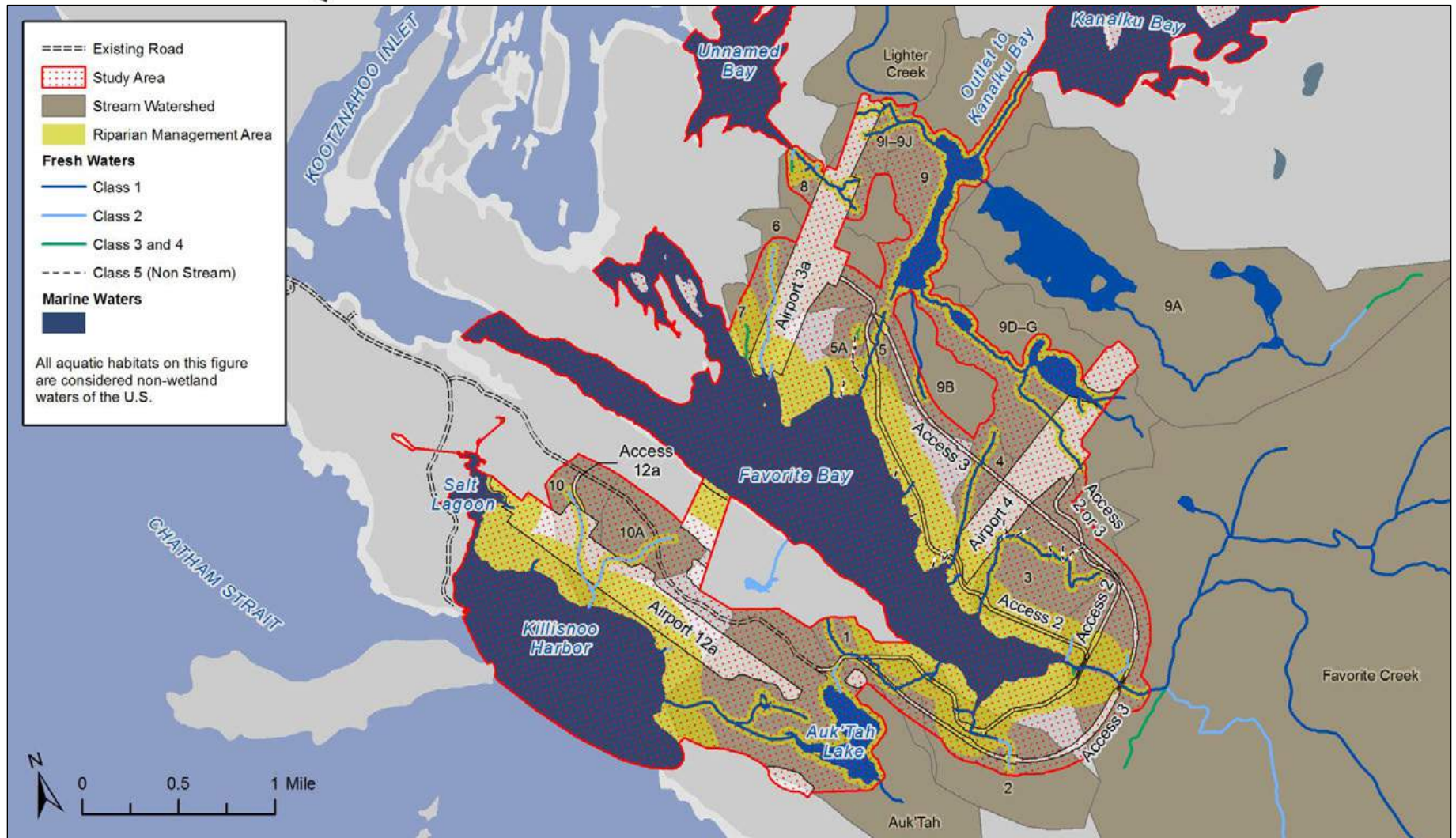


Figure AHAS2. Aquatic habitats in the study area.



Freshwater Habitats (159 acres; 2.8% of the study area)

Common and characteristic aquatic species

- Typical stream banks composed of sedges (*Carex* spp.) and grasses, with overhanging vegetation, undercut banks, and large wood
- Freshwater lakes and ponds support common freshwater plant species such as yellow pond lily (*Nuphar polysepalum*) and pondweed (*Potamogeton* sp.).
- Favorite Creek supports sculpins and at least six species of salmon or trout (pink, chum, coho, sockeye, cutthroat trout, and Dolly Varden).
- Favorite Creek is the largest anadromous stream in the study area and provides spawning and rearing habitat for chum, coho, and pink salmon (Johnson and Klein 2009).
- Other unnamed streams contain rearing habitat for juvenile coho salmon, and for pink and chum salmon in the extreme lower reaches.
- The lake complex that drains to Kanalku Bay supports three anadromous species (coho, Dolly Varden, cutthroat trout), threespine stickleback, and two sculpin species.
- Lakes and ponds are used by a variety of anadromous and resident aquatic species.
- Resident fish are also present in the unnamed streams and lakes.

Note: Although fens could be classified as a freshwater habitat, they are analyzed in this EIS as wetlands (see [section 4.15 Wetlands](#)). Also, because fens support more terrestrial wildlife species in the study area than aquatic species, the animal species living in fen habitats are discussed in [section 4.5.1 Terrestrial Habitat and Associated Species](#) and [section 4.5.3 Special Status Species](#).

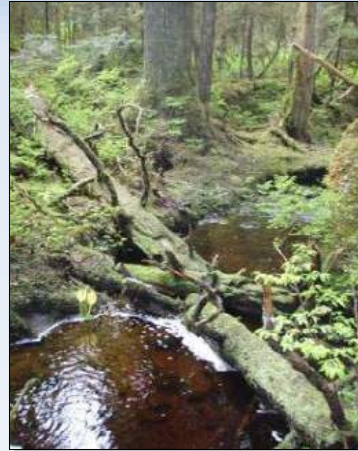


Figure AHAS3. Freshwater habitats and species.





Marine Habitats (2,559 acres; 44.9% of the study area)

Common and characteristic aquatic species

- Plants that grow in these habitats include eelgrass, green algae, seaweed, and kelp.
- Marine invertebrates such as clams, cockles, limpets, isopods, crabs, and barnacles are commonly found in these habitats.
- These habitats are used for rearing by anadromous fish species, including pink salmon, chum salmon, coho salmon, cutthroat trout, Dolly Varden, sculpin, and threespine stickleback.
- Other marine fish species such as groundfish and Pacific herring are found here.
- Marine mammals, including humpback whales, Dall's and harbor porpoises, Stellar sea lions, and harbor seals were observed in Favorite Bay and are likely to use Killisnoo Harbor and Chatham Strait (see [Figure AHAS1](#)).



Figure AHAS4. Marine habitats and species.



176 **4.5.2.2.3. How are aquatic habitats and associated species managed according to different landownership categories?**

177 As discussed in [section 1.2](#) of Chapter 1 and the introduction to Chapter 4 ([section 4.1.2.3](#)), lands in the
178 Angoon area generally fall into two categories based on their management:

- 179 1) The Admiralty Island National Monument and Kootznoowoo Wilderness Area (referred to in
180 this EIS as the Monument–Wilderness Area).
- 181 2) Lands conveyed to Alaska Native groups under the Alaska Native Claims Settlement Act
182 (ANCSA). These lands are referred to in this EIS as “ANCSA conveyed lands.”

183 Each action alternative is assessed below ([section 4.5.2.3.3](#)) for its consistency with the purposes for which the lands were
184 established as national monument and wilderness (hereafter referred to as “Monument–Wilderness Area purposes”) or for
185 its consistency with the purposes of ANCSA and the goals of the primary ANCSA land managers in the Angoon area
186 (hereafter referred to as “ANCSA purposes”).

187 **Monument–Wilderness Area**

188 The U.S. Forest Service’s *Tongass Land and Resource Management Plan* (U.S. Forest Service 2008) has an overarching
189 goal to manage the Monument–Wilderness Area to maintain natural ecological conditions and processes. The plan
190 interprets the Wilderness Act as it applies to the Monument–Wilderness Area and specifies management prescriptions for
191 aquatic habitats and their associated species. The prescriptions that are directly relevant to the airport and access
192 alternatives in the Monument–Wilderness Area are summarized as follows:

- 193 • To restore and maintain fish production to optimum sustained yield consistent with the Alaska National Interest
194 Lands Conservation Act (ANILCA), Section 1315(b) and the Wilderness Act
- 195 • To stress the protection of fish habitat to prevent the need for mitigation
- 196 • To maintain an approximate 1,000-foot-wide beach fringe of mostly unmodified forest to provide important
197 habitats, corridors, and connectivity of habitat for wildlife species associated with *maritime*-influenced habitats
- 198 • To maintain an approximate 1,000-foot-wide estuary fringe of mostly undisturbed forest that contributes to the
199 maintenance of the ecological integrity of the biologically rich tidal and *intertidal* estuary zone. Habitats for shorebirds,
200 waterfowl, and other marine-associated species are emphasized. Old-growth conifer stands, grasslands, wetlands, and

Terms to know

Intertidal: The area that is out of water at low tide and submerged by saltwater at high tide.

Maritime: Bordering the sea.



- 201 other natural habitats associated with estuary areas above the mean high tide line are managed for
202 near-natural habitat conditions with little evidence of human-induced disturbance
- 203 • To maintain and restore the natural range and frequency of aquatic habitat conditions in the
204 Tongass National Forest to sustain the diversity and production of fish and other freshwater
205 organisms
 - 206 • To maintain and restore stream banks and stream channel processes, including maintaining,
207 restoring, or improving cover/pool ratios, pool-riffle sequences, large wood, and bank, channel, and floodplain
208 integrity. (See [section 4.6](#) Floodplains, Stream Geomorphology, and Hydrology for definitions of these terms)
 - 209 • To maintain water quality and optimum water temperature for *salmonids* to provide for fish production
 - 210 • To maintain fish passage with bridges, open-bottom culverts, and stream-simulated culverts or baffled culverts
211 designed to match hydraulic conditions of culverts at certain flows to swimming performance of the specific fish
212 using the culvert
 - 213 • To maintain riparian areas in mostly natural conditions for fish, other aquatic life, and riparian-associated plant
214 and wildlife species, and to provide for ecosystem processes, including important aquatic and land interactions by
 - 215 ○ managing riparian areas for short- and long-term biodiversity and productivity,
 - 216 ○ maintaining natural stream bank and channel processes,
 - 217 ○ maintaining the natural and beneficial qualities of large wood over the short and long term, and
 - 218 ○ protecting water quality by providing for the beneficial uses of riparian areas.
 - 219 • To allow no timber salvage or harvest within 100 feet in width of each side of Class I streams or lakes, or on those
220 Class II streams or lakes that flow directly into Class I streams
 - 221 • To seek to avoid adverse effects to soil and water resources (such as siltation of fish habitat)
 - 222 • To provide for the protection and maintenance of harbor seal, Steller seal lion, and sea otter habitats
 - 223 • To provide for the protection and maintenance of humpback whale habitats
 - 224

Terms to know

Salmonids: Members of the scientific family of fish, Salmonidae, which contains species such as trout, salmon, and Dolly Varden.



225 ***ANCSA conveyed lands***

226 Airport 12a with Access 12a would be located on ANCSA conveyed lands. ANCSA, itself, contains no provisions
227 about the management of aquatic habitats and species to meet its purposes, which focus on providing Alaska Natives
228 with control of traditional lands and sustainable economic and cultural benefit. ANCSA conveyed lands are subject
229 to the management actions of the landowners, within the parameters of local policies, such as zoning ordinances, and
230 state or federal laws applicable to all lands regardless of ownership. The primary ANCSA landowners in Angoon
231 area are Kootznoowoo, Inc. and the City of Angoon. Sealaska Corporation owns subsurface rights on large expanses
232 of ANCSA lands in the area, but these subsurface rights are not relevant to discussions of aquatic habitats and
233 species and are not discussed further here.

234 Kootznoowoo, Inc. does not have a management plan or management provisions for aquatic habitats and species on lands
235 under their jurisdiction. The corporation does, however, have strategic goals of protecting their lands and resources and
236 promoting and protecting the culture of its shareholders, which comprise Alaska Natives with traditional ties to Angoon
237 (Kootznoowoo, Inc. 2012). By extension, these strategic goals reflect a general desire to avoid adverse effects on natural
238 resources, including aquatic habitats and species.

239 The City of Angoon has ordinances to protect drinking water quality, which indirectly benefit aquatic resources in
240 the freshwater system associated with Auk'Tah Lake, the community drinking water source. The City also has a
241 general land use plan that was prepared in 1982 and a comprehensive plan set out in 1976, but these plans do not
242 specifically address aquatic habitats and resources. These plans do, however, indicate that subsistence harvest and
243 gathering areas are important to the community and exist in most lands and waters in the area. The plans call for a
244 50-foot development setback along the marine shoreline as measured from the mean high water line (DOT&PF
245 2006). These stipulations clearly indicate a desire on the part of the City of Angoon to avoid adverse effects on
246 aquatic habitats and species.



247 **4.5.2.3. Project effects**

248 For all action alternatives, construction, operation, and maintenance of an airport and access road
249 would affect aquatic habitats and species. Although the nature of the effects would be the same for
250 all action alternatives, the magnitude and extent of effects would differ per alternative.

251 [Table AHAS1](#) and the sections that follow it describe the actions causing the effects, the nature of the
252 effects, the methods for analyzing effects, assumptions used in the analysis, and the magnitude and
253 extent of effects for each alternative.

254 Figures [AHAS3](#) and [AHAS4](#) list common and characteristic aquatic species that can be found in the
255 freshwater and marine habitats near each action alternative. Assessing effects to individual aquatic
256 species is not possible; in other words, determining the specific number of individuals affected by any
257 given alternative is neither feasible nor likely to be accurate. For that reason, in this EIS, the FAA uses
258 acres of aquatic habitat removed or altered as a relative measure of the effect from each alternative on
259 the aquatic species using those habitats.

260 The U.S. Forest Service makes every effort to minimize effects to fish-bearing fresh waters, and
261 potential effects to fish-bearing freshwater habitats must be permitted through the Alaska Department of
262 Fish and Game. Therefore, throughout this analysis, the FAA discusses effects to fish-bearing fresh
263 waters (Class 1 and 2).

264 Because all aquatic habitats in the study area are waters of the U.S., the analyses of effects to habitats
265 and species discussed in the sections that follow also apply to waters of the U.S.

266

267

268

What is discussed in this section?

4.5.2.3.1. How did the FAA determine the effects of the alternatives on aquatic habitats and species?

4.5.2.3.2. How did the FAA determine the significance of the anticipated effects from the alternatives?

4.5.2.3.3. How would each alternative affect aquatic habitats and associated species?

4.5.2.3.4. Would the effects from the alternatives be consistent with the purposes of the Monument–Wilderness Area and ANCSA conveyed lands?

4.5.2.3.5. How do the effects to aquatic habitats and species, and therefore also waters of the U.S., compare?

4.5.2.3.6. Would any effects be irreversible or irretrievable?

4.5.2.3.7. Would any of the action alternatives have a significant effect on aquatic habitats or species, and therefore also waters of the U.S.?

4.5.2.3.8. How could the effects described above be avoided, minimized, or mitigated?



269 **4.5.2.3.1. How did the FAA determine the effects of the alternatives on aquatic habitats and species?**

270 As described in [section 4.1](#), the introduction to Chapter 4, construction actions would involve grading
271 and recontouring the ground surface through cut and fill to create flat surfaces for runways and road
272 beds, paving runways and roads, constructing facilities related to the airport, and removing
273 vegetation (as part of grading the ground surface or to enhance visibility near roads and runways and
274 for aviation easements). Any road stream crossing would require culverting, rerouting, or filling of
275 streams. Four of the five alternatives would involve bridge construction over Favorite Creek. As described in [section](#)
276 [3.4.1](#) in Chapter 3, the location of either Airport 3a or Airport 4 would require a permanent bridge over Favorite Creek
277 as part of the access road. The Access 2 bridge would have an estimated two *piers* surrounded by *riprap* in the stream
278 channel. The Access 3 bridge would not have piers in the stream channel. Construction of the permanent bridge at
279 either access location would require a temporary use area that would likely involve vegetation removal, terrain
280 disturbance, construction of a temporary access road, installation of a temporary bridge, and bridge piers in the stream
281 channel for up to 3 years.

282 Actions related to operation and maintenance that could affect aquatic habitats and species include continual vegetation
283 maintenance in the rights-of-way and aviation easements, noxious weed treatments, re-fueling of the airport generator,
284 and increased human activity from improved access.

285 For the purposes of effects analysis in this section, these actions are grouped according to the kind of effect they would cause.
286 [Table AHAS1](#) lists the effects, the actions causing them, and the methods for determining their extent.

287

288

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Terms to know

Pier: Upright support for a structure.

Riprap: A foundation or supporting wall of stones.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

Table AHAS1. Effects and analysis methods

Effect	Action causing effect	Direct (D) or indirect (I)	Short term (S) or long term (L)	Method for analyzing and assumptions
Stream* habitat removal	Culverting, rerouting, or filling streams; pier installation at Favorite Creek bridge	D	S, L	Acres where runways, roads, and other types of disturbance intersect streams, requiring culverting, rerouting, or filling of the stream; or in the case of Favorite Creek, pier installation in the stream channel.
Stream* habitat alteration	Airport and access road replacing existing forested areas	I	L	Modeled channel changes from increased surface runoff (using the same watersheds and analysis from section 4.6 Floodplains, Stream Geomorphology, and Hydrology).
Riparian management area removal	Tree removal (for airport, roads, and aviation easements)	D, I	S, L	Acres of riparian management area potentially affected. See section 4.5.2.1.1 for a description of riparian management areas used for analysis. Effects to marine beach and estuary fringe are included.
Behavioral change, injury, or mortality	Sound from pile-driving associated with Favorite Creek bridge pier installation	D	S	A qualitative comparison between alternatives using the number of estimated piers that would be installed in the Favorite Creek stream channel.
Increased fishing and harvest of aquatic resources	Improved human access	I	L	A qualitative assessment of whether increased fishing and harvest is anticipated in lakes, Favorite Creek, and Favorite Bay marine areas.
Sedimentation and turbidity	Construction of airport and access road causing soil disturbance	I	S	As detailed in section 4.14 Water Quality, it is assumed that the installation and maintenance of best management practices would make these effects negligible. Therefore they are not analyzed further in this section.
Contaminant runoff	Presence of new impervious surface	I	L	

Terms to know

Pile: Poles or H-shaped lengths of steel that are driven into the ground to strengthen bridge foundations.

Pile-driving: Use of a crane-mounted hammer that pounds the steel pile deep into the ground.

Impervious: The quality of not allowing something to pass through; not penetrable.


Sedimentation: The process by which sediment is transported by surface water; also referred to as surface erosion.

Turbidity: Lack of clarity in water as a result of suspended sediments.

* Because there are no anticipated direct effects to lakes or ponds, habitat removal and alteration are only analyzed regarding the stream freshwater habitats.



294 **Stream habitat removal**

295 Culverting, rerouting, or filling streams 

296 Stream habitats would be removed anywhere the terrain is disturbed in a stream channel, requiring that
297 stream section to be culverted, rerouted, or filled. These would be direct effects during construction (in
298 the short term) and operation (over the long term).

299 Filling a stream channel removes the stream habitat completely. Rerouted stream sections would function
300 in a similar manner as ditches, and would no longer provide intact habitat—instead, they would be
301 uniform channels simply conveying water.

302 Culverting removes stream habitat in the following ways:

- 303 • The culverted section would not have natural substrate to contribute to nutrient cycling, invertebrate production,
304 or food sources for fish.
- 305 • The culverted section would not have exposure to light and therefore would not contribute to the *primary*
306 *productivity* of the stream.
- 307 • The culverted section would not have natural banks and therefore would not benefit from the contributions of a
308 riparian area (as described in [section 4.5.2.1.1](#)).

309 All culverts and reroutes would be designed to allow fish passage during construction and operation, so there would be no
310 effects to fish passage. The function of the culverted or rerouted stream segment would be limited to fish passage only,
311 and that stream section would no longer be suitable for its other habitat functions for fish, including hatching of eggs and
312 rearing of young.

313 Pier installation for bridge support at Favorite Creek

314 The location of either Airport 3a or Airport 4 would require construction of a permanent bridge across Favorite Creek.
315 The permanent bridge would cause long-term direct effects at Access 2 but not at Access 3. At the Access 2 location
316 there would be an estimated two piers supporting the permanent bridge. Where these piers are located at the edges of
317 the stream channel, permanent stream habitat removal would occur because the existing stream habitat would be
318 replaced with the pier footprint. This acreage of stream habitat is included with the acreages of stream habitat removal

Terms to know

Primary productivity: The process of using or releasing oxygen in a water body through the breakdown of organic matter or photosynthesis by aquatic plants.



319 due to culverting, rerouting, or filling streams. This analysis assumes that the pier footprint includes
320 the concrete base of each pier plus the riprap surrounding the pier. Because the quantity of habitat
321 that the edge of the riprap would replace is very small (315 square feet), this habitat was analyzed as
322 stream habitat removal instead of alteration. However, aquatic species will likely use the edge of the
323 riprap, despite its reduced habitat value.

324 For construction of the permanent bridge, a temporary bridge might be installed. The temporary
325 bridge could be used to move equipment, facilitate construction of the permanent bridge, and as a
326 haul route. To accommodate these uses, the temporary bridge could require numerous in-stream piers.
327 The piers would be installed by crane situated above the *ordinary high water mark* and outside of the
328 stream channel; however, this analysis assumes temporary habitat removal within the entire in-stream
329 temporary use area. The EIS analysis makes this assumption because the exact quantity and locations
330 of piers will not be determined until the design phase of the project. For this analysis, the context of
331 these temporary effects uses only the Favorite Creek stream habitat within the study area—not the
332 total stream habitat in the entire study area. The in-stream temporary use area is greater than what
333 would be implemented during construction because it is likely that the work area
334 would be isolated via *coffer dams*. Through coordination with the Alaska Department
335 of Fish and Game, in-stream construction activities would not be conducted during the
336 typical salmon migratory or spawning periods, approximately May 15 to September 15
337 (USFS 2001b). The temporary stream habitat removal that would occur in Favorite
338 Creek would be a direct effect for up to 3 years, depending on the length of
339 construction.

340 **Stream habitat alteration**

341 In watersheds where terrain disturbance and tree removal cause an increase in surface runoff, stream channels would
342 noticeably change, and in turn change the quality of the stream habitat as follows:

- 343 • Increased flow: Additional water volume in small streams typically straightens them and reduces habitat
344 suitability.

Terms to know

Coffer dams: Vertical enclosures installed in the stream with a pile-driving hammer. Water is then pumped out of the enclosure, and construction can occur within them, isolated from the creek. This prevents construction materials and sediment from entering the stream during the installation of bridge piers.

Ordinary high water mark: The line on a shore or stream bank created by the rise and fall of water levels. It can be indicated by impressions or shelving on the bank, changes in soil, destruction of vegetation, or the presence of debris.

Why does riprap have reduced aquatic habitat value?

Placing riprap in existing aquatic habitats typically decreases habitat value because it reduces the sources and diversity of organic matter and insects. This subsequently reduces the quality of cover and foraging habitat for juvenile fish. Although riprap does not provide the same aquatic habitat quality, the spaces between the riprap may provide some areas for cover and food production (Kahler et al. 2000).



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

- 345
- Reduced riffle and pool frequency: Riffles and pools provide foraging and resting habitat, respectively, and their alteration makes the habitat less usable for aquatic species.
- 346
- 347
- Shallower pool depths: Shallow pools provide less protection for aquatic species than deeper pools.
- 348

Terms to know

Stream geomorphology: The physical form of a stream channel and its change over time.

349 These effects would be indirect and occur over the long term. Details of the surface runoff analysis per watershed and how
350 it indicates changes to stream channels are further discussed in section 4.6 Floodplains, *Stream Geomorphology*, and
351 Hydrology. For this analysis it is anticipated that stream habitat alterations would occur downstream of modeled increases
352 in surface runoff.

353 **Riparian management area removal**

354 Where trees would be removed for construction of the airport and access road or felled in avigation easements, portions of
355 riparian management areas would be removed. Removal of a portion of a riparian management area would be a direct and
356 long-term effect to that area itself because it would not revegetate to its existing quality in the long term.

357 Removal of a portion of riparian management area would cause indirect short-term and long-term effects to stream
358 habitats in the following ways:

- 359
- Decreased shading over the stream and raised water temperature: Increased water temperatures can have adverse, indirect effects on aquatic life such as fish that rely on colder temperatures.
- 360
- Reduced potential for contributions of large wood that provides fish habitat and stabilizes the stream bank to minimize erosion and sediment entering the stream: This added habitat complexity offers aquatic species cover, refuge from high flows and predators, and different food sources than would be available in high-flow areas.
- 361
- 362
- Reduced availability of terrestrial prey sources and contributions of organic matter important for nutrient cycling.
- 363
- 364

365 Removing vegetation from a stream would remove these functions from the stream in the short term and long term.
366 Because existing riparian vegetation in the study area is mostly undisturbed and of high quality, the magnitude of
367 vegetation removal effects from the action alternatives would be proportional to the acres of riparian management area
368 removed for each alternative.



369 ***Behavioral change, injury, or mortality***

370 Pile-driving during the installation of bridge piers in Favorite Creek would generate sound in the water under the Access 2
371 or Access 3 alternatives. Pile-driving may produce harmful sound levels that have the potential to disrupt, displace, injure,
372 or kill fish. The effects of pile-driving noise on fish depend on several factors, including the sound pressure levels
373 transmitted and the size and species of fish. Sound levels produced from pile-driving vary by type and diameter of pile,
374 type of installation device, and use of sound reduction devices such as bubble curtains. For this EIS it is assumed that 1)
375 the pile would be made of steel, 2) the estimated pile size would range from 2–6 feet in diameter, and 3) that a pile-driving
376 hammer would be used for all bridge alternatives. The magnitude of the sound effects from pile-driving to aquatic species
377 is evaluated using the number of piers that would be installed. Access 2 would require two in-stream piers for the
378 permanent bridge, and from three to 10 in-stream piers for the temporary bridge. Access 3 would require no in-stream
379 piers for the permanent bridge, and from two to five in-stream piers for the temporary bridge.

380 ***Increased fishing and harvest of aquatic resources***

381 Construction of the new airport facilities, especially vehicle parking areas and new access roads, would facilitate more
382 convenient access to areas that are currently accessed only by foot trails that residents use for subsistence harvest.
383 Improved human access to these areas may increase human effects to streams, lakes, and intertidal areas. This would be a
384 notable change only at Airport 3a and Airport 4 and their associated access roads. For Airport 12a, the existing road
385 already provides access into the areas adjacent to the airport location, and Access 12a would be so short as to not
386 make a noticeable difference in access.

387 Indirect effects from increased fishing and harvest could include damage to aquatic habitats from humans trampling or
388 accidentally introducing contaminants, and a reduction of aquatic resources (of fish, marine invertebrates, and plants)
389 because of the increased fishing and harvest. Because Favorite Creek is the only large Class 1 stream in the area of the
390 action alternatives, this is the only stream expected to receive increased stream fishing.

391 Overall, effects to aquatic habitats and species from increased human activity are expected to be minimal for two reasons:

- 392
- 393 • Public access would continue to be limited to cross-country foot travel. Considering the area's dense vegetation,
394 fallen trees, and steep-sided drainages, it is reasonable to assume that most travel would be limited to within a
half-mile of the point of access from the airport, vehicle parking areas, or access road.



- 395
- As described in [section 4.13](#) Subsistence Resources and Uses, a slight increase in fishing and marine invertebrate
- 396 harvest could occur with construction of a land-based airport.

397 A qualitative assessment is provided per alternative as to whether increased fishing and harvest is anticipated to occur in

398 lakes, Favorite Creek, and Favorite Bay marine areas. Population-level effects to aquatic species are not anticipated under

399 any action alternative.

400 **4.5.2.3.2. How did the FAA determine the significance of the anticipated effects from the alternatives?**

401 FAA Orders 1050.1E (FAA 2004) and 5050.4B (FAA 2006) identify the thresholds for significant effects on fish,

402 wildlife, and plants (see [section 4.1](#), the introduction to Chapter 4, for more on significance thresholds). According to

403 FAA Order 5050.4B, the significance thresholds would be exceeded if any of the following happened:

- 404
1. The action would adversely affect the population dynamics, sustainability, reproduction, natural or artificial
- 405 mortality, or the minimum population size needed to sustain a species.
- 406
2. The action would reduce the habitat supporting plant or animal species below that needed to maintain self-
- 407 sustaining populations of the species.
- 408
3. The action would adversely affect the maintenance of natural systems that support wildlife and fish habitat, and/or
- 409 economically important timber, food, or fiber resources in the affected terrestrial habitats or surrounding systems.
- 410
4. The action would be inconsistent with applicable state natural resources management strategies.

411 The significance of effects on aquatic habitats and associated species is assessed according to this guidance in [section 4.5.2.3.7](#).

412 In addition to guidance from FAA orders, the U.S. Army Corps of Engineers Section 404(b)(1) guidelines for

413 unacceptable adverse effects to waters of the U.S. (see [section 4.5.2.1.2](#)) were used to determine whether any of the

414 anticipated effects from the alternatives were significant to aquatic habitats.

415 Guidance from the National Marine Fisheries Service was also used to evaluate significance of effects for essential fish

416 habitat. All aquatic habitats in the study area that are accessible to anadromous fish (Class 1 streams and all marine areas)

417 have been designated as essential fish habitat by the National Marine Fisheries Service. Essential fish habitat is essential

418 to the long-term survival and health of our nation's fisheries and is defined under the Magnuson-Stevens Fishery

419 Conservation and Management Act as "those waters and substrate necessary to fish for spawning, breeding, feeding, or



420 growth to maturity.” Direct or indirect changes that would have a considerable effect on any of the components of
421 essential fish habitat would be significant. Effects to essential fish habitat could also affect the fish dependent on it.

422 **4.5.2.3.3. How would each alternative affect aquatic habitats and associated species?**

423 ***No action alternative***

424 There would be no new airport or access road construction under the no action alternative. Effects to aquatic habitats and
425 species would be of the type and extent currently occurring. Because there are currently limited miles of road and possible
426 access points to the undeveloped landscape, aquatic habitats in the study area are mostly continuous, with little or no
427 disturbance except where streams, ponds, or estuaries are crossed by roadways associated with the community of Angoon.
428 Currently, there is one stream crossing along the existing road to the city water supply at Auk’Tah Lake. Riparian
429 management areas in the Angoon area are relatively undisturbed by humans, except those closest to Angoon. The riparian
430 areas near where Airport 12a would be constructed are used more frequently by humans, as reflected by trails, land
431 clearing, and drinking water collection. However, these riparian areas are not on lands managed by the U.S. Forest
432 Service, so the U.S. Forest Service riparian management area guidelines do not apply to them. No new access roads or
433 bridges would be constructed under the no action alternative, so no effects to aquatic species from pile-driving or
434 increased fishing or harvest of aquatic resources are anticipated under this alternative.



435 **Airport 3a with Access 2 (proposed action)**

436 Table AHAS2, [Figure AHAS5](#), and [Figure AHAS6](#) show the effects to habitats and species for Airport 3a with Access 2.

437 Discussion of the effects follows the table. The effects to essential fish habitat are summarized in [section 4.5.2.3.7](#).

Table AHAS2. Effects from Airport 3a with Access 2

Potential effect	Measure of effect	
Stream habitat removal	Class 1 or 2*	Total (Class 1–5)*
	Permanent** 0.34 acre; 2.5%	Permanent** 0.36 acre; 2.5%
	Temporary (Favorite Creek only): 0.51 acre; 11.8%	
Stream habitat alteration	Stream watersheds 6 and 8	
Riparian management area removal**	125 acres; 9.5%	
Behavioral change, injury, or mortality	Pier installation in Favorite Creek stream channel: Permanent bridge: two piers Temporary bridge: three to 10 piers	
Increased fishing and harvest of aquatic resources:		
Lakes	Yes	
Favorite Creek	Yes	
Favorite Bay	Yes	

*The acreages of Class 1 or 2 streams are separately called out in this table because those acreages represent fish-bearing stream habitats, whereas Class 3–5 streams are not fish-bearing stream habitats.

**The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

438

439



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

440 Stream habitat removal

441 This alternative would result in the removal of 0.36
442 acre of stream habitats due to the culverting, rerouting,
443 or filling of stream segments. The existing stream
444 function at those segments would be lost, although
445 fish passage would be maintained on fish-bearing
446 streams. In cases of Class 1 and Class 2 streams, the
447 area culverted, rerouted, or filled would no longer
448 provide rearing habitat for fish, and it would no longer
449 contribute nutrients or food to downstream reaches.

450 There would be one bridge crossing, located in the
451 tidally influenced portion of Favorite Creek. This bridge
452 would have two permanent piers in the stream channel,
453 resulting in 315 square feet of long-term stream habitat
454 removal. It is likely that aquatic species would eventually
455 use the edge of the riprap surrounding these piers as
456 habitat. During construction (estimated to last 3 years), it
457 is possible that three to 10 piers would be placed inside
458 the stream channel, causing up to 0.51 acre of temporary
459 stream habitat removal at Favorite Creek. This is almost
460 12% of the Favorite Creek stream habitat located in the
461 aquatics study area. However, this acreage overestimates
462 the temporary stream habitat removal, because the piers
463 would be a subset of that entire area. Because the exact
464 location of the piers is unknown at this time, this analysis
465 uses the entire area for comparative purposes.

466 Of the total 0.36 acre of permanent stream habitat
467 removed, 0.34 acre comprises fish-bearing stream

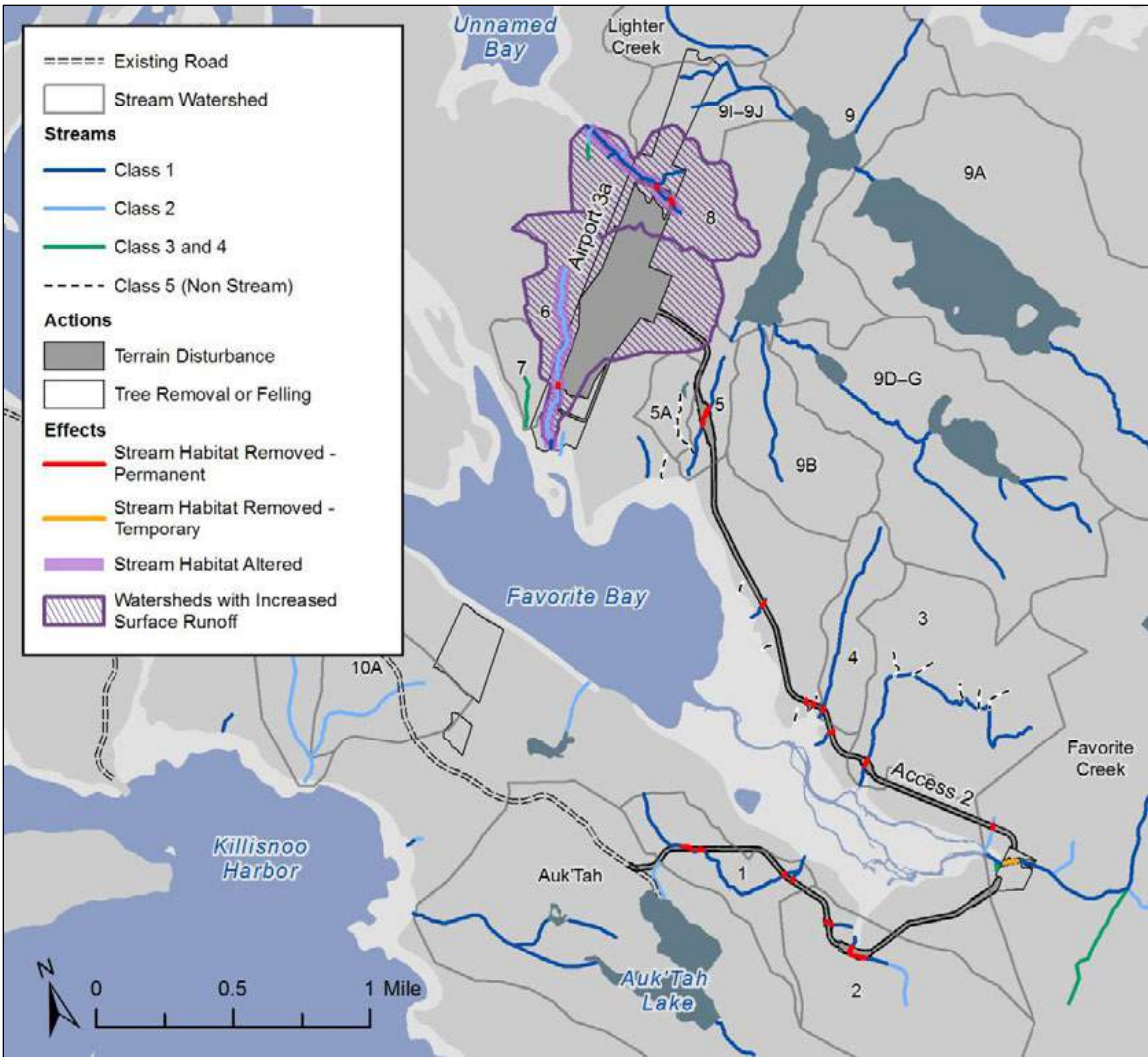


Figure AHAS5. Stream habitat removal and stream habitat alteration for Airport 3a with Access 2.



468 segments. This stream habitat removal constitutes 2.5% of the fish-bearing streams in the study area. Because fish passage
469 would be maintained, aquatic species would likely move to similar habitat within or outside the study area.

470 Stream habitat alteration

471 Under this alternative, stream channel changes that would alter the stream habitat quality would occur in watersheds 6 and 8
472 (see [Figure AHAS5](#)). The Class 1 and 2 stream habitats in these watersheds might then support fewer fish due to reduced
473 foraging and resting areas, less cover to avoid predation, and decreased habitat suitability. These effects would be indirect and
474 long-term.

475 Effects to the floodplains and stream geomorphology from the two piers that would support the Access 2 Favorite Creek
476 permanent bridge are further analyzed in [section 4.6](#).

477 Riparian management area removal

478 Airport 3a with Access 2 would remove 125 acres of riparian management area in watersheds 6 and 8 (9.5% of the
479 riparian management areas in the study area). Access 2 would be located mainly in the estuarine or marine beach fringe,
480 which is important and sensitive habitat, as discussed in [section 4.5.2.1.1](#).

481 Seven acres of riparian management area could be removed in the temporary use area at the Favorite Creek bridge
482 crossing. Although this area would be allowed to revegetate, it would likely not return to its existing high quality during
483 the operational life of the access road.

484



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

485 Short- and long-term indirect effects would occur to the
486 streams adjacent to the removed riparian management
487 areas, reducing or eliminating their contributions to stream
488 function and health as described in section 4.5.2.1.1.

489 Behavioral change, injury, or mortality

490 Under this alternative, the estimated two piers for the
491 permanent bridge and three to 10 piers for the
492 temporary bridge would have the potential to cause
493 behavioral change, injury, or mortality of aquatic
494 species. During pile-driving to install the piers,
495 aquatic species would likely avoid these areas, a
496 disruption of their normal feeding and migratory
497 patterns. These are direct short-term effects that would
498 occur only during the pier installation.

499 Increased fishing and harvest of aquatic resources

500 The existing habitat that would receive improved
501 human access is the most remote of all the alternatives
502 and is relatively undisturbed (see [Figure SU7](#) in
503 [section 4.13](#) Subsistence Resources and Uses). Airport
504 3a with Access 2 could increase fishing in the lakes
505 northeast of Airport 3a and in Favorite Creek near the
506 bridge, and increase harvest of marine invertebrates
507 and seaweed in the Favorite Bay intertidal area. These
508 increases in fishing and harvest would be slight (see
509 [Table SU5](#) in section 4.13), and effects to aquatic
510 habitats and species from this increased pressure
511 would be minimal.

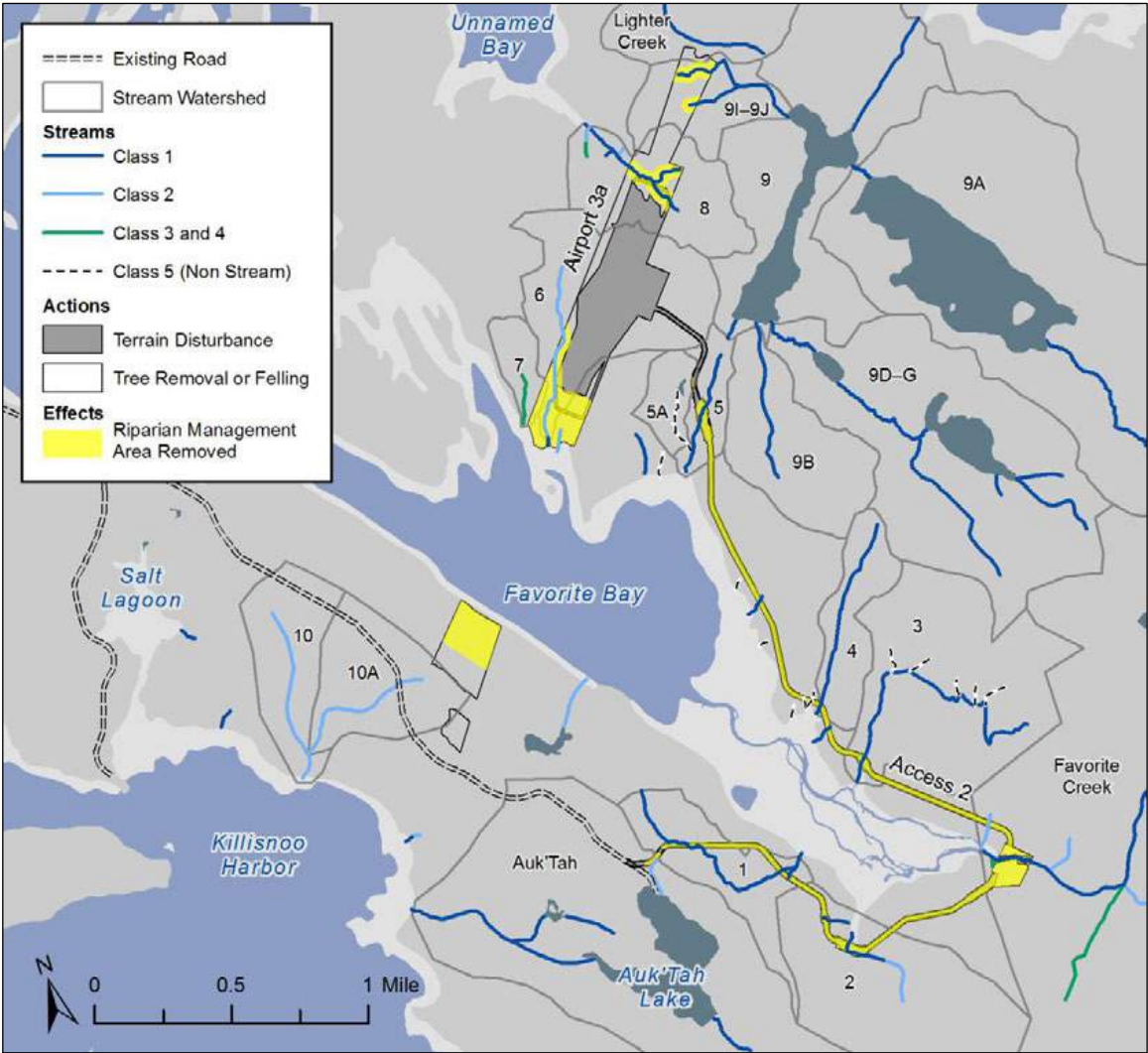


Figure AHAS6. Riparian management area removal for Airport 3a with Access 2.



512 **Airport 3a with Access 3**

513 Table AHAS3, Figure AHAS7, and Figure AHAS8 show the effects to habitats and species from Airport 3a with Access
 514 3. Discussion of the effects follows the table. The effects to essential fish habitat are summarized in section 4.5.2.3.7.

515

Table AHAS3. Effects from Airport 3a with Access 3

Potential effect	Measure of effect
Stream habitat removal	Class 1 or 2 and total (Class 1–5)*
	Permanent**: 0.17 acre; 1.2%
	Temporary (in Favorite Creek only): 0.29 acre; 6.8%
Stream habitat alteration	Stream watersheds 6 and 8
Riparian management area removal*	86 acres; 6.5%
Behavioral change, injury, or mortality	Pier installation in Favorite Creek stream channel: Permanent bridge: none Temporary bridge: two to five piers
Increased fishing and harvest of aquatic resources:	
Lakes	Yes
Favorite Creek	Yes
Favorite Bay	No

*The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

**The acreages of Class 1 or 2 streams are separately called out in this table because those acreages represent fish-bearing stream habitats, whereas Class 3–5 streams are not fish-bearing stream habitats.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

516 Stream habitat removal
517 Because Access 3 would be located farther inland,
518 almost at the upper end of many of the stream
519 watersheds, it would intersect fewer streams than
520 Access 2, and would therefore remove only half as
521 much stream habitat. Among all action alternatives,
522 Airport 3a with Access 3 would result in the smallest
523 amount of stream habitat removal (1.2% of the study
524 area).

525 Unlike Airport 3a with Access 2, no permanent stream
526 habitat removal would occur at the Favorite Creek
527 bridge crossing for the permanent bridge piers.
528 However, the two to five in-stream piers would cause
529 0.29 acre of temporary stream habitat removal at
530 Favorite Creek for up to 3 years. This is almost 7%
531 of the Favorite Creek stream habitat in the aquatics
532 study area.

533 Stream habitat alteration
534 Because they are associated with the airport location,
535 stream channel changes from increased surface runoff
536 in watersheds 6 and 8 would be identical to those for
537 Airport 3a with Access 2.

538 Riparian management area removal
539 Because fewer streams would be crossed by Access 3
540 than by Access 2, fewer riparian management areas
541 would be affected. The location of Access 3 farther

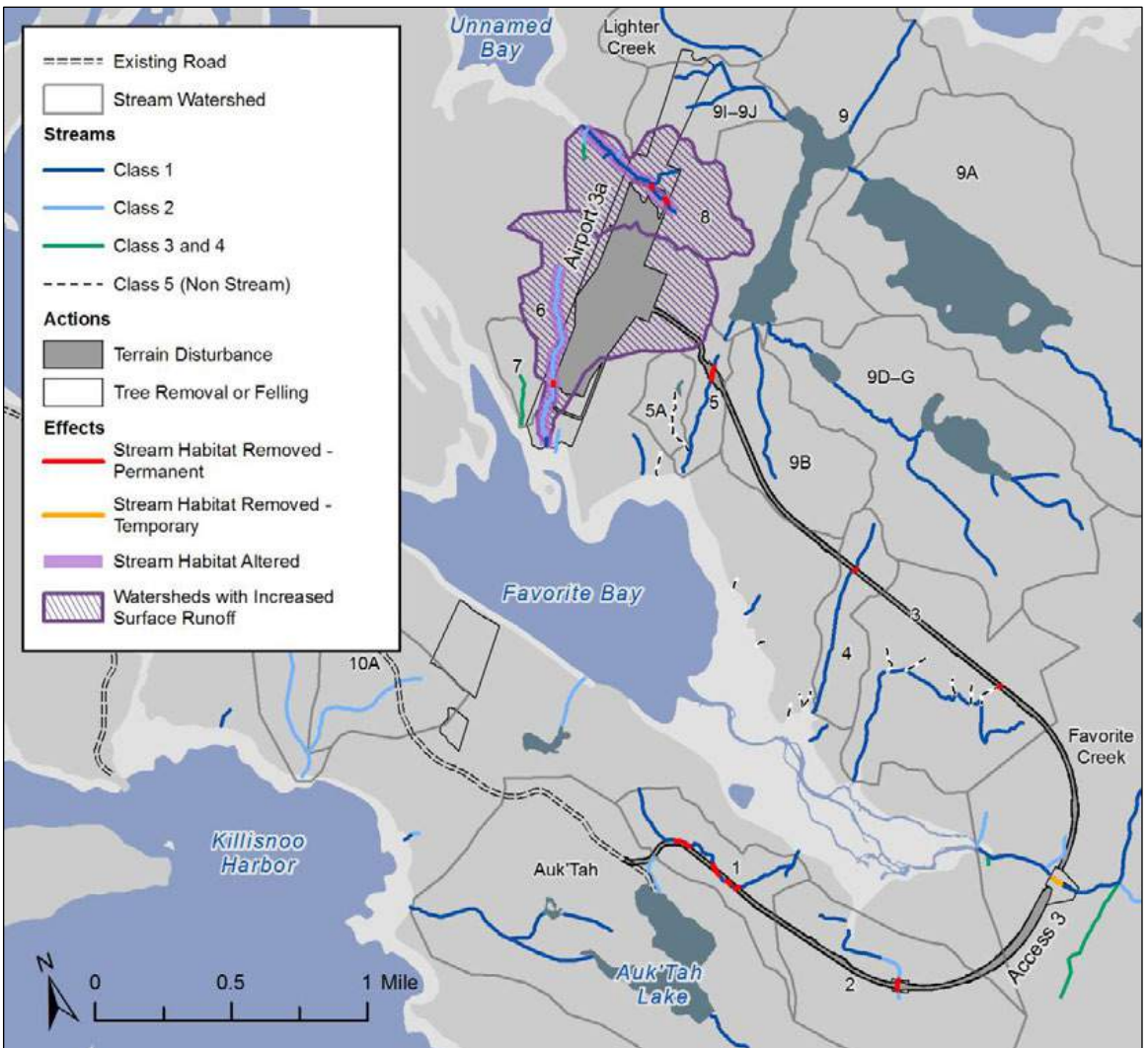


Figure AHAS7. Stream habitat removal and stream habitat alteration for Airport 3a with Access 3.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

542 inland requires almost 40 fewer acres of riparian
543 management area to be removed (6.5% of the riparian
544 management areas in the study area) than Access 2
545 (9.5%).

546 Only 3 acres of riparian management area removal
547 could occur in the temporary use area at the Favorite
548 Creek bridge crossing under Airport 3a with Access 3,
549 as opposed to 7 acres with Access 2.

550 Behavioral change, injury, or mortality

551 Airport 3a with Access 3 would cause less behavioral
552 change, injury, or mortality from pile-driving than
553 Airport 3a with Access 2. The Access 3 permanent
554 bridge would not require any piers in the stream
555 channel, and there would only be from two to five
556 piers for the temporary bridge. Aquatic species would
557 still likely avoid this area during construction, but not
558 to the extent that they would under Access 2.

559 Increased fishing and harvest of aquatic resources

560 Under Airport 3a with Access 3, increased fishing
561 could occur in the lakes northeast of Airport 3a and at
562 the Favorite Creek bridge crossing. However, unlike
563 under Access 2, increased harvest of marine
564 invertebrates and seaweed is not expected because
565 Access 3 would be located inland, farther from the
566 Favorite Bay estuary.

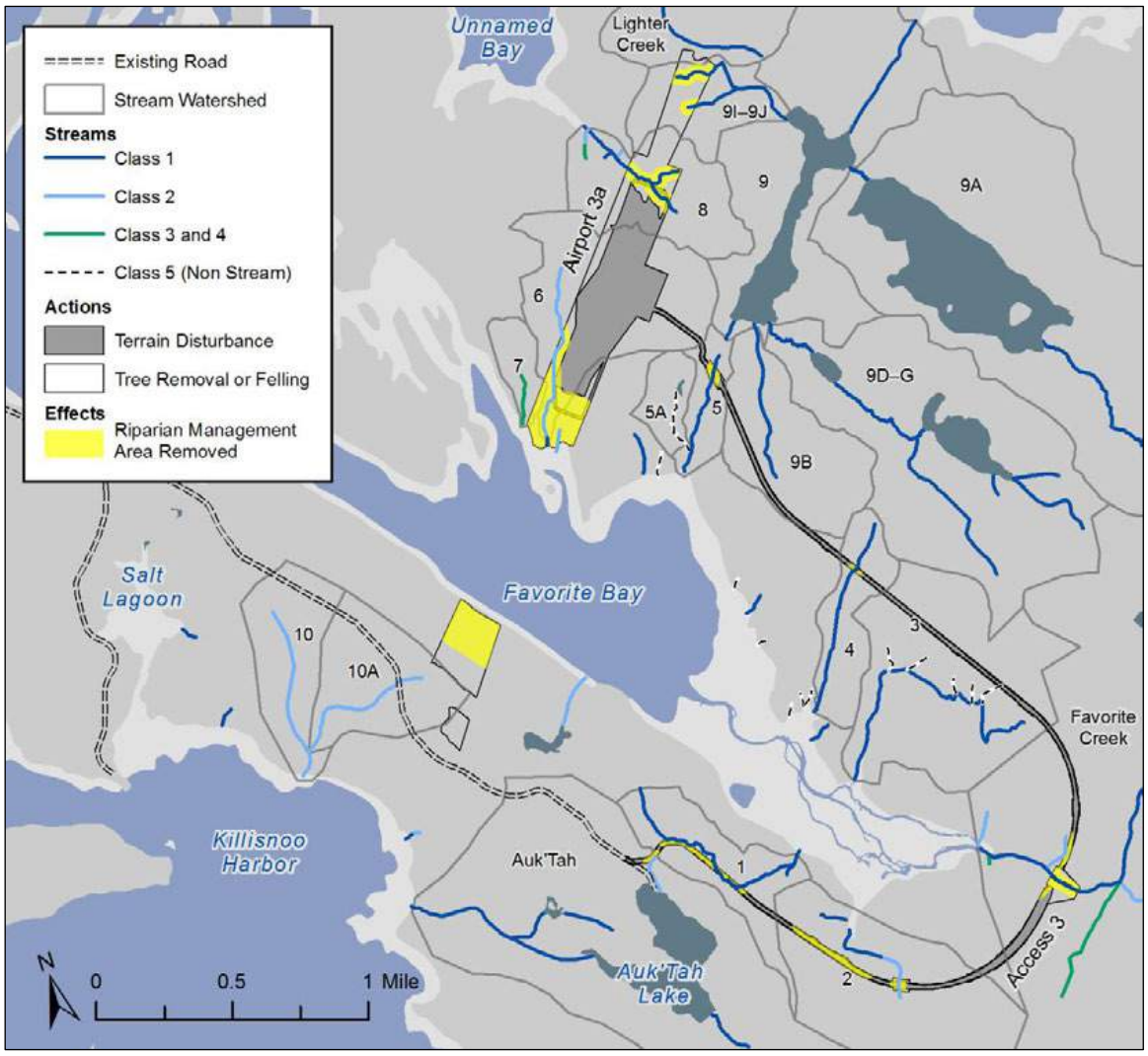


Figure AHAS8. Riparian management area removal for Airport 3a with Access 3.



567 **Airport 4 with Access 2**

568 Table AHAS4, [Figure AHAS9](#), and [Figure AHAS10](#) show the effects to habitats and species from Airport 4 with Access
 569 2. Discussion of the effects follows the table. The effects to essential fish habitat are summarized in [section 4.5.2.3.7](#).

Table AHAS4. Effects from Airport 4 with Access 2

Potential effect	Measure of effect	
	Stream habitat removal*	Class 1 or 2*
	Permanent** 0.41 acre; 3.0%	Permanent** 0.44 acre; 3.2%
	Temporary (in Favorite Creek only): 0.51 acre; 11.8%	
Stream habitat alteration	Stream watersheds 3, 4, and 9D–G	
Riparian management area removal*	68 acres; 5.2%	
Behavioral change, injury, or mortality	Pier installation in Favorite Creek stream channel: Permanent bridge: two piers Temporary bridge: three to 10 piers	
Increased fishing and harvest of aquatic resources:		
Lakes	Yes	
Favorite Creek	Yes	
Favorite Bay	Yes	

*The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

**The acreages of Class 1 or 2 streams are separately called out in this table because those acreages represent fish-bearing stream habitats, whereas Class 3–5 streams are not fish-bearing stream habitats.

570

571



Angoon Airport EIS

Chapter 4: Existing Conditions and Project Effects

4.5.2. Aquatic Habitats and Associated Species

572 Stream habitat removal

573 Under Airport 4 with Access 2, slightly more stream
574 habitat would be removed due to the culverting,
575 rerouting, or filling of stream segments than under either
576 of the Airport 3a alternatives (3.0% of the streams in the
577 study area instead of 2.5% or 1.2%, respectively). As
578 with Airport 3a with Access 2, most of the stream habitat
579 that would be removed is Class 1 (0.41 acre). This
580 alternative would result in the most stream habitat
581 removal of all the alternatives.

582 As with Airport 3a with Access 2, an estimated 315
583 square feet of stream habitat removal would occur at
584 Favorite Creek for the permanent bridge piers, and a
585 maximum of 0.51 acre of habitat would be temporarily
586 unavailable to aquatic species for up to 3 years.

587 Stream habitat alteration

588 Under Airport 4 with Access 2, channel changes from
589 increased surface water runoff are expected in watersheds
590 3, 4, and 9D-G. All contain Class 1 stream habitat. The
591 Class 1 stream habitats in these watersheds might then
592 support fewer fish due to reduced foraging and resting
593 areas, less cover to avoid predation, and decreased habitat
594 suitability. These effects would be indirect and long term.

595 Effects to the floodplains and stream geomorphology
596 from the two piers supporting the Access 2 permanent
597 bridge are further analyzed in [section 4.6](#).

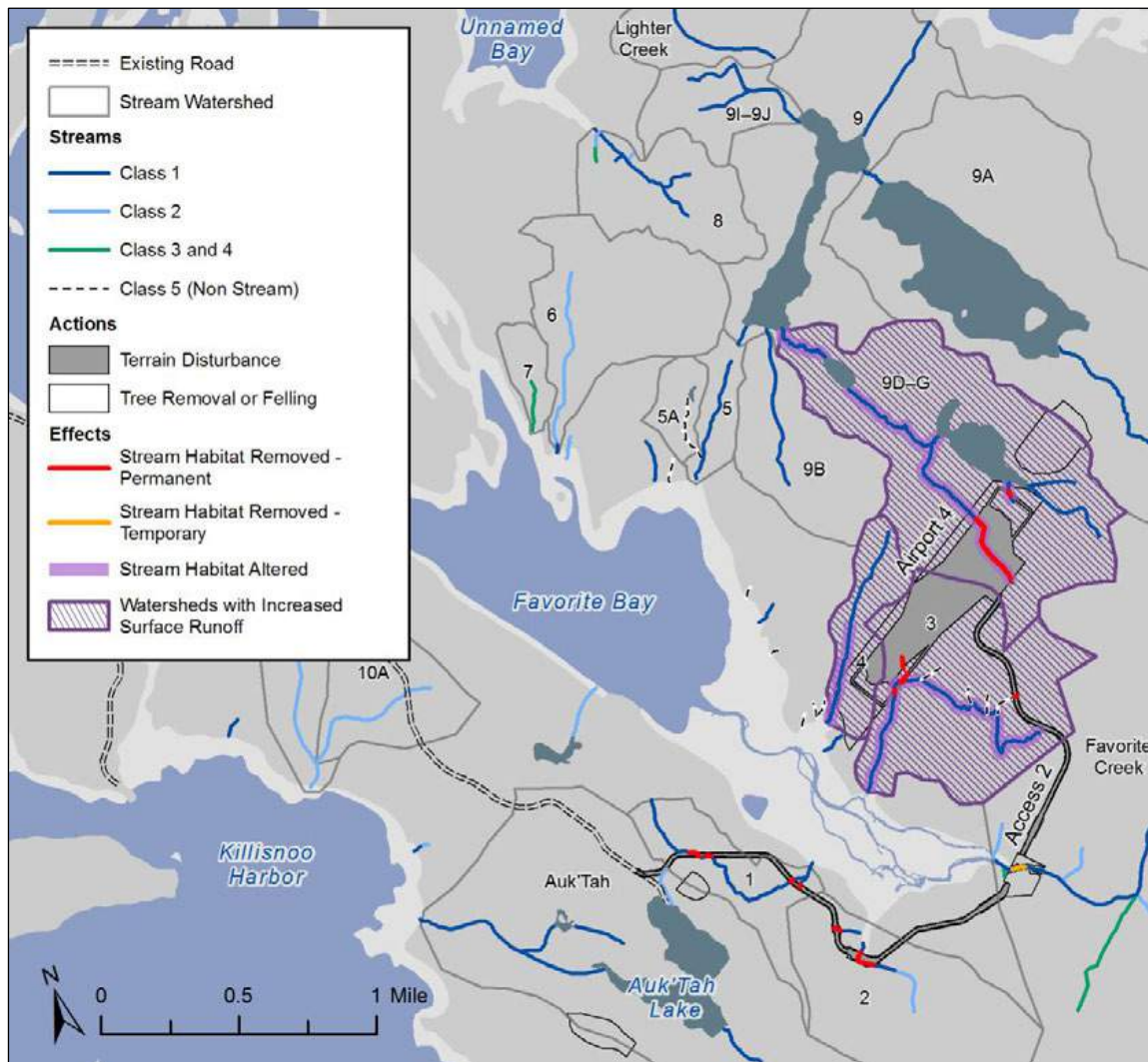


Figure AHAS9. Stream habitat removal and stream habitat alteration for Airport 4 with Access 2.



Angoon Airport EIS Chapter 4: Existing Conditions and Project Effects 4.5.2. Aquatic Habitats and Associated Species

598 Riparian management area removal

599 Because the length of Access 2 would be shorter for
600 Airport 4 than for Airport 3a, half as much riparian
601 management area would be removed under this
602 alternative (5.2%) than under Airport 3a with Access
603 2 (9.5%).

604 The same riparian management area removal (7 acres)
605 for the temporary use area at Favorite Creek's bridge
606 crossing would occur from Airport 4 with Access 2 as
607 from Airport 3a with Access 2.

608 Behavioral change, injury, or mortality

609 The behavioral change, injury, or mortality of aquatic
610 species from pile-driving under this alternative would
611 be the same as under Airport 3a with Access 2
612 because the installation of bridge piers in the Favorite
613 Creek stream channel would be the same.

614 Increased fishing and harvest of aquatic resources

615 There would be improved human access to the aquatic
616 habitats near Airport 4 with Access 2 (see [Figure SU7](#)
617 in section 4.13 Subsistence Resources and Uses). As
618 with the Airport 3a alternatives, increased fishing at
619 the lakes northwest of Airport 4 could occur under this
620 alternative and at the Favorite Creek bridge crossing
621 because of improved access. The increase in harvest of
622 marine invertebrates and seaweed from the Favorite
623 Bay estuary under Airport 4 with Access 2 would be

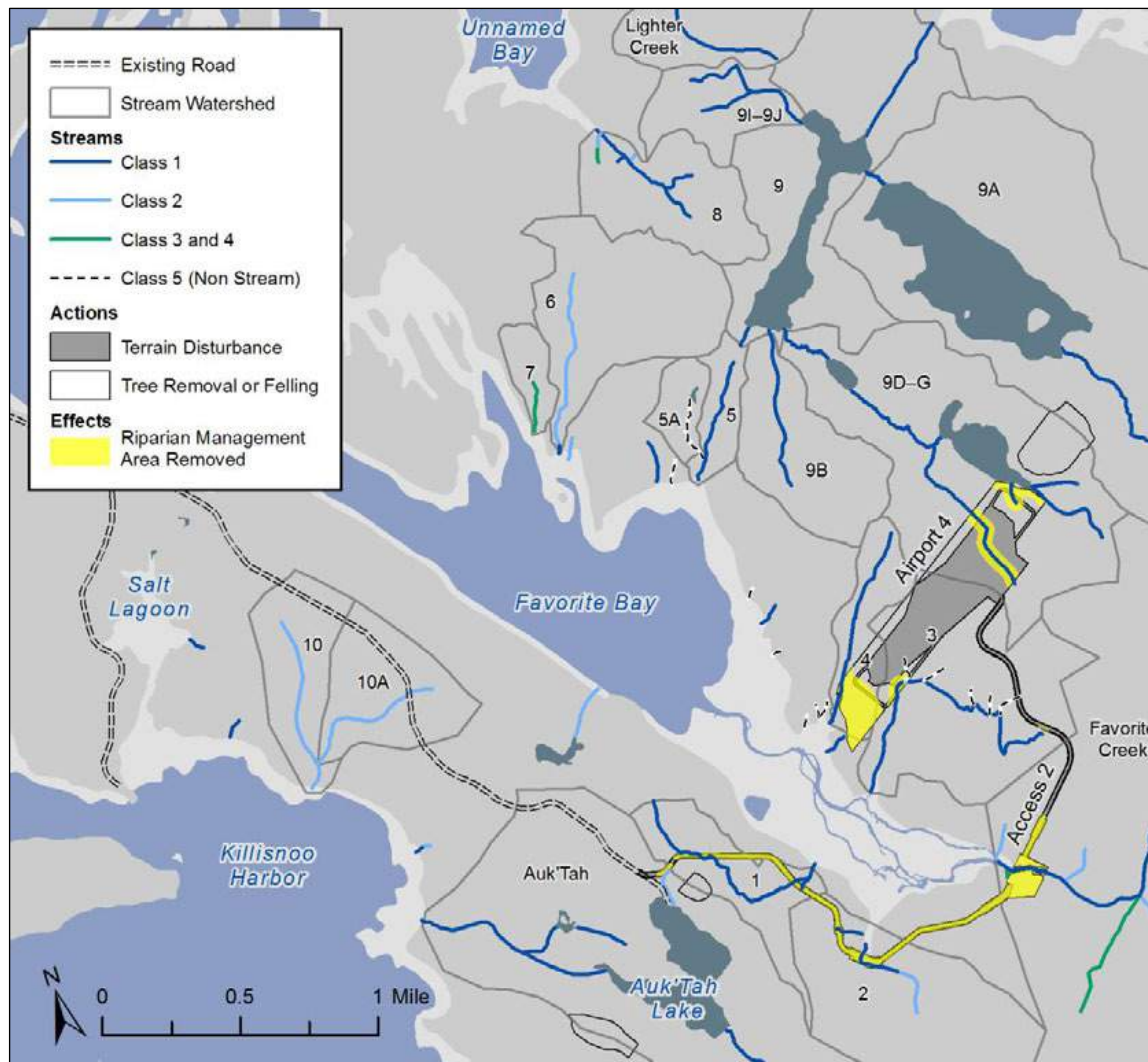


Figure AHAS10. Riparian management area removal for Airport 4 with Access 2.



624 less than under Airport 3a with Access 2, and more than Airport 3a with Access 3. These increases in fishing and harvest
 625 would be slight (see [Table SU5](#) in section 4.13), and effects to aquatic habitats and species from this increased pressure
 626 would be minimal.

627 **Airport 4 with Access 3**

628 Table AHAS5, [Figure AHAS11](#), and [Figure AHAS12](#) show the effects to habitats and species from Airport 4 with Access
 629 3. Discussion of the effects follows the table. The effects to essential fish habitat are summarized in [section 4.5.2.3.7](#).

Table AHAS5. Effects from Airport 4 with Access 3

Potential effect	Measure of effect	
Stream habitat removal*	Class 1 or 2**	Total (Class 1–5)**
	Permanent** 0.38 acre; 2.8%	Permanent** 0.42 acre; 3.0%
	Temporary (in Favorite Creek only): 0.29 acre; 6.8%	
Stream habitat alteration	Stream watersheds 3, 4, and 9D–G	
Riparian management area removal*	53 acres; 4.0%	
Behavioral change, injury, or mortality	Pier installation in Favorite Creek stream channel: Permanent bridge: none Temporary bridge: two to five piers	
Increased fishing and harvest of aquatic resources:		
Lakes	Yes	
Favorite Creek	Yes	
Favorite Bay	No	

*The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

**The acreages of Class 1 or 2 streams are separately called out in this table because those acreages represent fish-bearing stream habitats, whereas Class 3–5 streams are not fish-bearing stream habitats.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

630 Stream habitat removal

631 The amount of stream habitat removed due to the
632 culverting, rerouting, or filling of stream segments
633 under Airport 4 with Access 3 is almost the same as
634 with Access 2 because most of the effects would be
635 caused by the construction associated with the airport
636 location. There would be almost no difference in the
637 magnitude of this effect between the access locations.
638 Airport 4 with Access 2 would remove 3.0% of stream
639 habitat in the study area, whereas Airport 4 with
640 Access 3 would remove 2.8%. However, Airport 4
641 with Access 3 would remove more than twice the
642 acreage of stream habitat as Airport 3a with Access 3.

643 As with Airport 3a with Access 3, no long-term
644 stream habitat removal would occur at Favorite Creek
645 from the permanent bridge piers. If a temporary bridge
646 were used during construction, a maximum of 0.29
647 acres of stream habitat would be temporarily
648 unavailable to aquatic species for up to 3 years.

649 Stream habitat alteration

650 Because the stream channel changes that would alter
651 stream habitat quality in watersheds 3, 4, and 9D-G
652 are associated with the airport location, the anticipated
653 effects from this alternative would be the same as for
654 Airport 4 with Access 2.

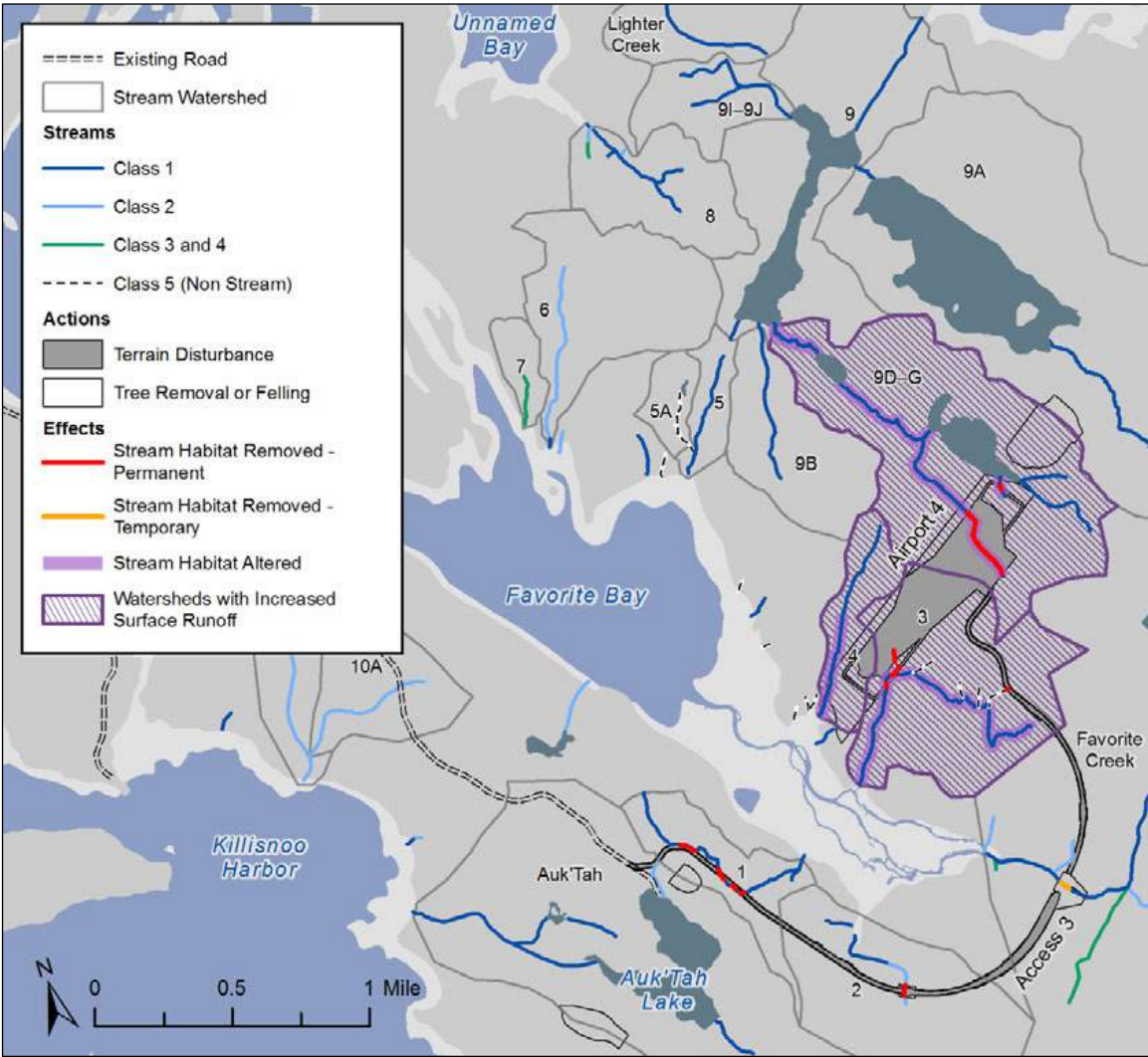


Figure AHAS11. Stream habitat removal and stream habitat alteration for Airport 4 with Access 3.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

655 Riparian management area removal

656 Because the proposed access road would be located
657 inland, away from the Favorite Bay estuarine riparian
658 management area, this alternative would result in the
659 least amount of riparian management area removed of
660 all action alternatives (4.0% of the riparian
661 management area in the study area).

662 The same riparian management area removal (3 acres)
663 for the temporary use area at Favorite Creek's bridge
664 crossing would occur from Airport 4 with Access 3
665 as from Airport 3a with Access 3.

666 Behavioral change, injury, or mortality

667 The behavioral change, injury, or mortality from pile-
668 driving under this alternative would be the same as
669 under Airport 3a with Access 3 because the
670 installation of bridge piers in the Favorite Creek
671 stream channel would be the same.

672 Increased fishing and harvest of aquatic resources

673 As with Airport 4 with Access 2, increased fishing at
674 the lakes northwest of Airport 4 and at the Favorite
675 Creek bridge crossing could occur under this
676 alternative. However, because Access 3 is located
677 farther from the Favorite Bay estuary, increased
678 harvest of marine invertebrates and seaweed would not
679 be likely to occur under Airport 4 with Access 3.

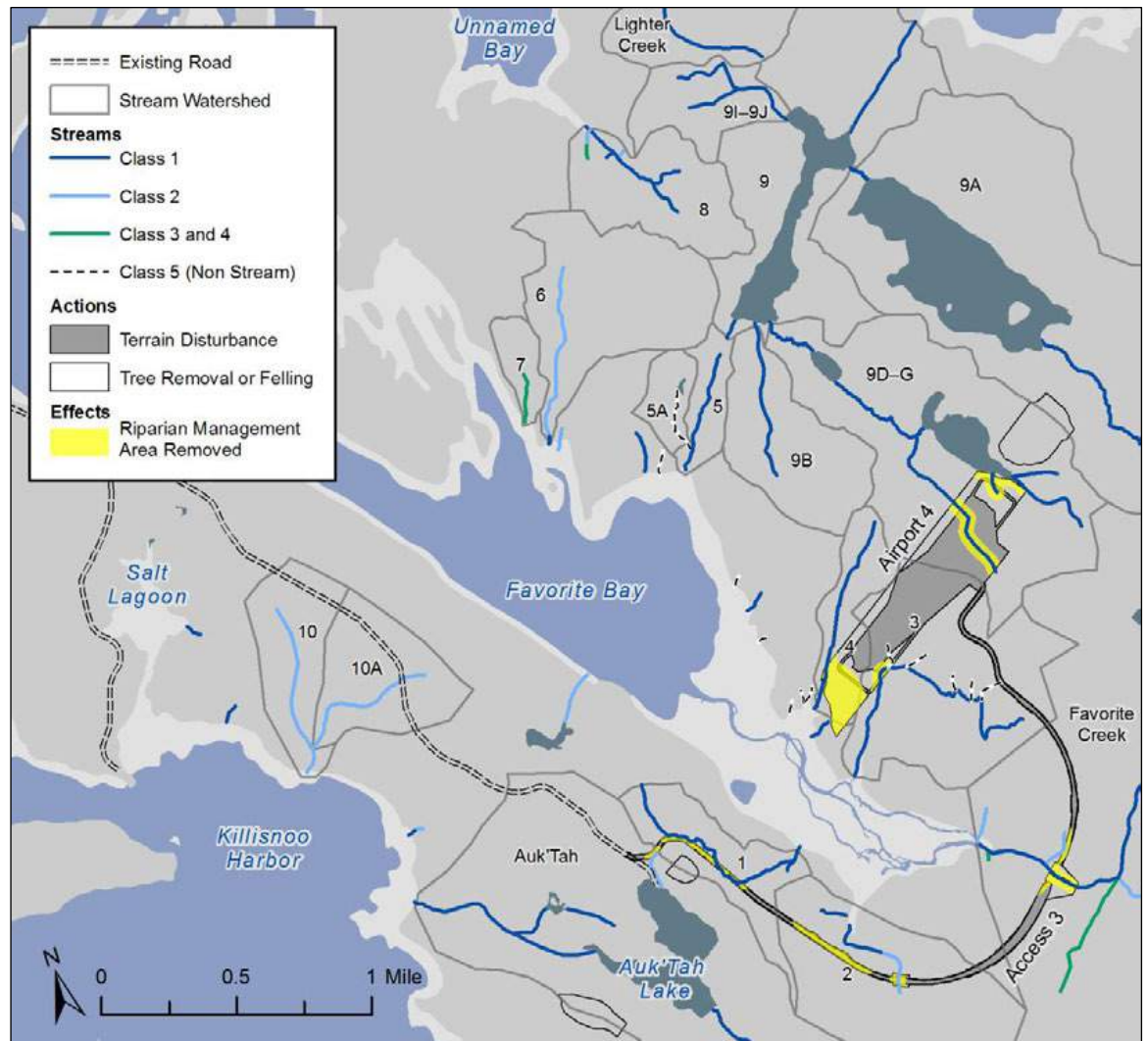


Figure AHAS12. Riparian management area removal for Airport 4 with Access 3.



680 **Airport 12a with Access 12a**

681 Table AHAS6, [Figure AHAS13](#), and [Figure AHAS14](#) show the effects to habitats and species for Airport 12a with Access
 682 12a. Discussion of the effects follows the table. The effects to essential fish habitat are summarized in [section 4.5.2.3.7](#).

Table AHAS6. Effects from Airport 12a with Access12a

Potential effect	Measure of effect
Stream habitat removal* (permanent only)	Class 2 and total (Class 1–5)** 0.22 acre; 1.5%
Stream habitat alteration	Stream watershed 10
Riparian management area removal*. [†]	114 acres; 8.6%
Behavioral change, injury, or mortality	No effects to aquatic species from pile-driving
Increased fishing and harvest of aquatic resources:	
Lakes	No
Favorite Creek	No
Favorite Bay	No

* The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

** This alternative would only affect Class 2 streams, not Class 1 streams. Class 2 streams are separately called out in this table because those acreages represent fish-bearing stream habitats, whereas Class 3–5 streams are not fish-bearing stream habitats.

[†]Riparian management area prescriptions only apply to those streams on lands managed by the U.S. Forest Service, but for comparison between alternatives this analysis was also applied to Airport 12a with Access 12a.

683

684



Angoon Airport EIS Chapter 4: Existing Conditions and Project Effects 4.5.2. Aquatic Habitats and Associated Species

685 Stream habitat removal

686 This alternative would result in 0.22 acre of Class 2
687 stream habitat removal due to the culverting,
688 rerouting, or filling of stream segments. No Class 1
689 stream habitat would be affected. Airport 3a with
690 Access 3 is the only action alternative that would
691 remove less stream habitat than Airport 12a with
692 Access 12a.

693 Because this alternative would not require a Favorite
694 Creek bridge crossing, there would be no effects to
695 Favorite Creek under this alternative.

696 Stream habitat alteration

697 The increased surface runoff in watershed 10 could
698 cause channel changes under this alternative. Of all
699 the alternatives, Airport 12a with Access 12a would
700 affect the fewest watersheds.

701 Riparian management area removal

702 Riparian areas in the Angoon area are relatively
703 undisturbed by humans except for those near Airport
704 12a, which would not be located on lands managed by
705 the U.S. Forest Service and therefore have different
706 management objectives (see [section 4.5.2.1.1](#) for more
707 on this). However, to compare between the
708 alternatives, removal of riparian areas is analyzed for
709 Airport 12a with Access 12a using the same methods
710 as those for riparian management areas. The riparian

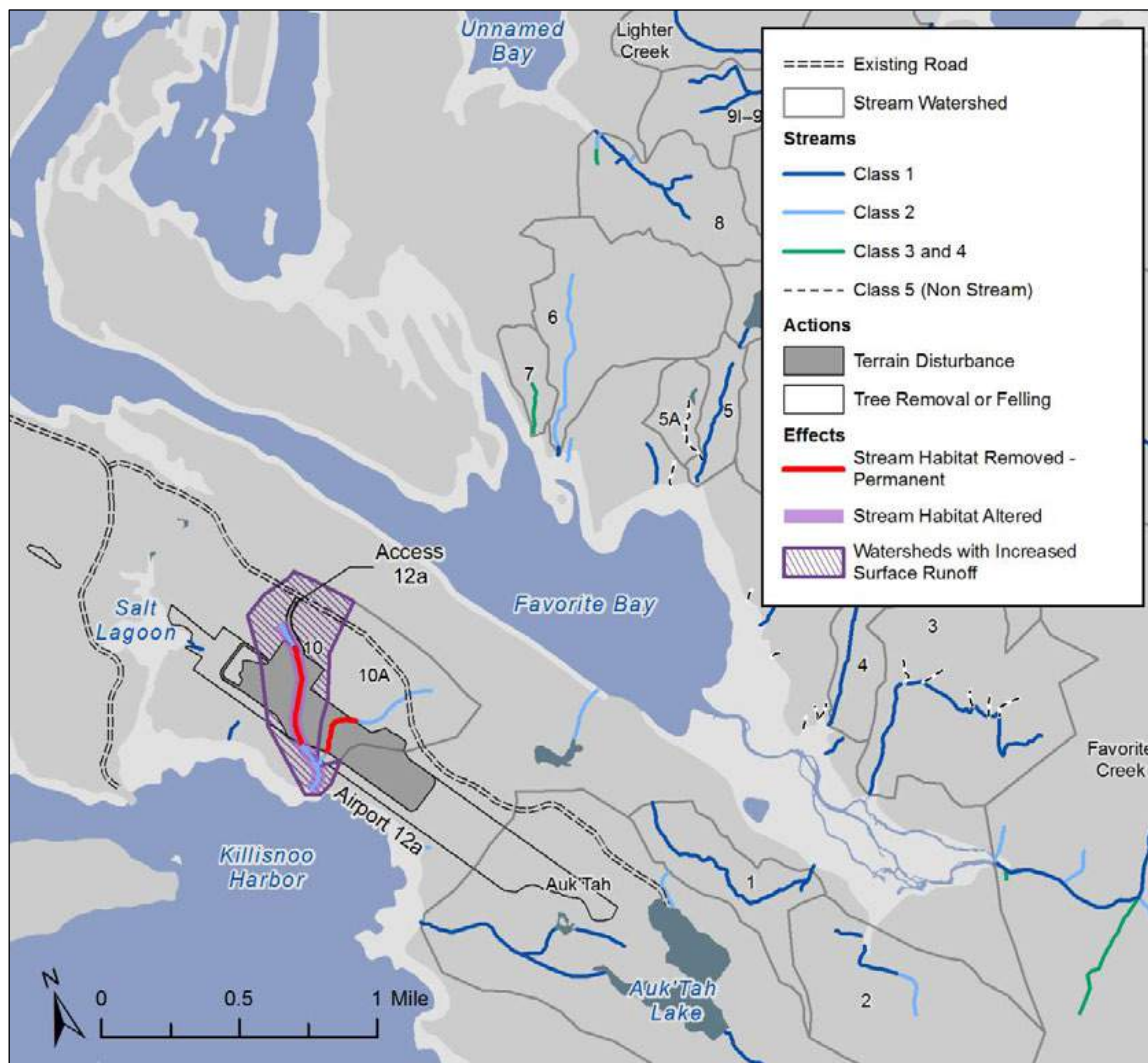


Figure AHAS13. Stream habitat removal and stream habitat alteration for Airport 12 with Access 12a.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

711 areas around Airport 12a with Access 12a are used
 712 more frequently by humans, as is reflected by trails,
 713 land clearing, and pipes directing stream water to
 714 homes. Because two streams flow through the
 715 proposed Airport 12a location and because it would be
 716 located within the Killisnoo Harbor marine beach
 717 riparian management area, this alternative would
 718 remove 114 acres of riparian area (8.6% of the total
 719 riparian management area in the study area). Only
 720 Airport 3a with Access 2 would remove more riparian
 721 management area.

722 There would be no riparian management area removal
 723 at Favorite Creek because Airport 12a with Access
 724 12a would not require a bridge at Favorite Creek.

725 Behavioral change, injury, or mortality

726 Because this alternative would not require a Favorite
 727 Creek bridge crossing, there would be no behavioral
 728 change, injury, or mortality associated with the
 729 construction of Airport 12a with Access 12a.

730 Increased fishing and harvest of aquatic resources

731 Under this alternative, there would be no increased
 732 fishing or harvest of aquatic resources at the lakes
 733 northeast of Favorite Bay (that drain to Kanalku Bay),
 734 at Favorite Creek, or in the Favorite Bay estuary,
 735 because no additional access to these areas would be
 736 constructed.

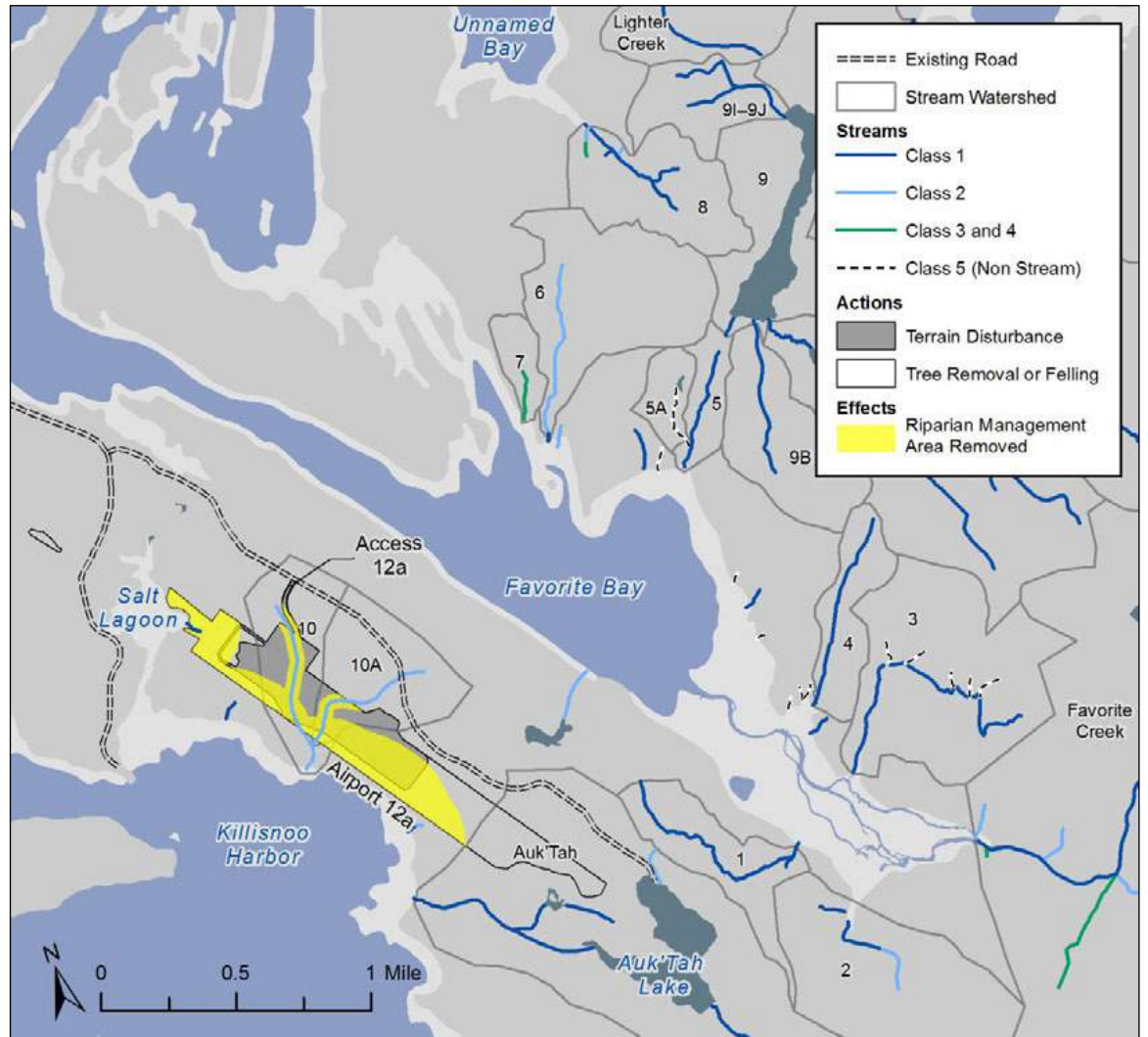


Figure AHAS14. Riparian management area removal for Airport 12a with Access 12a.



737 **4.5.2.3.4. Would the effects from the alternatives be consistent with the purposes of the**
738 **Monument–Wilderness Area and ANCSA conveyed lands?**

739 The Airport 3a and Airport 4 alternatives would affect aquatic habitats and species on both Monument–Wilderness Area
740 and ANCSA conveyed lands. Airport 12a with Access 12a would affect aquatic habitats and species only on ANCSA
741 conveyed lands. The nature of the effects to both categories of land would be similar, but this section clarifies how the
742 magnitude and extent of those effects would differ across the action alternatives.

743 Airport 3a with Access 2 would result in the most effects to aquatic habitats and species in both Monument–Wilderness
744 Area and ANCSA conveyed lands.

745 ***Consistency with Monument–Wilderness Area purposes***

746 The anticipated short-term and long-term effects from the Airport 3a and 4 alternatives on stream and riparian habitats and
747 functions would be inconsistent with the specific management prescriptions, as described in [section 4.5.2.2.2](#), for the
748 Monument–Wilderness Area because they could result in

- 749
- 750 • long-term unnatural changes to currently naturally functioning systems;
 - 751 • long-term adverse effects to freshwater aquatic habitat, including large wood supporting fish and other freshwater species;
 - 752 • short-term loss of riparian functions during construction of the bridge along Access 2 or 3; and
 - 753 • long-term but minor, localized loss of riparian and stream bank function in the footprint of the bridge.

754 As detailed in [section 4.14](#) Water Quality, it is assumed that the installation and maintenance of best management
755 practices would make water quality effects negligible. As such, the Airport 3a and Airport 4 action alternatives would be
756 consistent with the Monument–Wilderness Area management prescriptions to maintain freshwater and marine water
757 quality suitable for use by salmonids, harbor seals, Steller sea lions, and sea otters.

758 Airport 3a with Access 2 would place large sections of the access road within the 1,000-foot-wide limited-development
759 zone for marine beach and estuary fringe set forth in the *Tongass Land and Resource Management Plan* (USFS 2008)
760 and would, therefore, be inconsistent with the management prescriptions in the plan. However, the alternative would
761 not result in complete clearing of vegetation within the 1,000-foot-wide zones around Favorite Bay and would leave a



762 buffer of forest vegetation between the access road and the Favorite Bay shoreline. This would be expected to maintain
 763 the water-land habitat interactions and values still allow the U.S. Forest Service to achieve the management plan goal
 764 of maintaining aquatic habitats. Because the access road for Airport 3a with Access 3 would not be located in the
 765 marine beach or estuary fringe, this alternative would minimize development in the 1,000-foot-wide marine beach and
 766 estuary fringe and would be consistent with the management prescription.

Table AHAS7. Number of streams directly or indirectly affected on Monument–Wilderness Area and ANCSA conveyed lands

		Airport 3a with Access 2	Airport 3a with Access 3	Airport 4 with Access 2	Airport 4 with Access 3	Airport 12a with Access 12a
Monument–Wilderness Area	Class 1	13	8	8	5	0
	Class 2	3	3	0	1	0
ANCSA	Class 1	1	1	1	1	1
	Class 2	0	0	0	0	2

767

768 Table AHAS7 indicates the number of streams directly or indirectly affected on Monument–Wilderness Area lands by
 769 each action alternative. Airport 3a with Access 2 would affect the most streams on Monument–Wilderness Area lands, but
 770 all action alternatives on Monument–Wilderness Area lands would affect several such streams. Most of these streams
 771 would be affected by the placement of culverts under the new access road. Most of the access road right-of-way would be
 772 cleared of tall or dense vegetation, including trees. Near Class 1 and 2 stream crossings, this clearing of trees would
 773 include riparian management areas adjacent to the streams and would therefore be inconsistent with the *Tongass Land and*
 774 *Resource Management Plan* management prescription to minimize timber salvage and harvest within 100 feet of these
 775 stream classes. Although stream channels would be affected by the placement of culverts or the realignment of sections of
 776 stream channels under the Airport 3a and 4 action alternatives, the culverts and realigned stream channels would be
 777 designed to support continued fish passage. As such, the effects of these alternatives would be consistent with
 778 management prescriptions to maintain fish passage in the affected streams.



779 The inconsistencies of the Airport 3a and 4 alternatives with specific management prescriptions for the Monument–
780 Wilderness Area would apply only to small, localized sections of aquatic habitat that are neither rare nor unique in the
781 Angoon area or the Monument–Wilderness Area as a whole. The resulting effects would not prevent or substantially
782 diminish the ability of the U.S. Forest Service to manage the Monument–Wilderness Area to meet the overarching
783 purposes for which the national monument and wilderness area were established, nor would they prevent or substantially
784 diminish the ability of the U.S. Forest Service to manage aquatic habitats and species to support the purposes of the
785 Monument–Wilderness Area.

786 Airport 12a with Access 12a would not affect any aquatic habitats or species on Monument–Wilderness Area lands and
787 would, therefore, be consistent with the management prescriptions and ultimate purposes of the national monument and
788 wilderness area.

789 ***Consistency with ANCSA purposes***

790 As noted in [section 4.5.2.2.2](#), ANCSA, itself, does not specify management prescriptions for aquatic habitats and species,
791 and the managers of the ANCSA conveyed lands in the Angoon area do not have specific management guidelines for
792 these resources beyond the City of Angoon’s ordinance requiring a minimum 50-foot setback from the marine shoreline
793 for any development. However, the broad goal of the ANCSA land managers is to maintain ecosystem health to provide
794 for such things as the subsistence uses of ANCSA conveyed lands, including the use of aquatic resources.

795 [Table AHAS7](#) above indicates the number of streams directly or indirectly affected on ANCSA conveyed lands. Under
796 Airport 3a or 4 with Access 2 one Class 1 stream would be affected on ANCSA conveyed lands. Under Airport 3a or 4
797 with Access 3 the same Class 1 stream would be affected, although the location of the affected segment differs and would
798 be longer, due to the difference in the Access 3 alignment from Access 2.

799 On ANCSA conveyed lands, effects on aquatic habitats and species would be very limited under all of the Airport 3a and
800 Airport 4 alternatives. No development would occur within 50 feet of the mean high water of any shoreline. Fish passage
801 would be maintained on the one affected Class 1 stream on ANCSA conveyed lands, and no substantial adverse effects on
802 aquatic habitats or species on ANCSA conveyed lands would occur. For these reasons, the Airport 3a and Airport 4
803 alternatives are consistent with ANCSA purposes and management objectives.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

804 Airport 12a with Access 12a would result in direct effects to aquatic habitats and species on ANCSA conveyed lands.
805 Airport 12a with Access 12a would substantially affect stream function in portions of two freshwater streams (both Class
806 2 streams under the classification system of the U.S. Forest Service). Loss of habitat function in these streams would
807 affect aquatic species dependent on those streams, particularly non-mobile aquatic species along the affected stream
808 reaches. For these reasons, this alternative is inconsistent with the management goals of the ANCSA land managers as
809 stream channel health and function relate to the preservation of water-based subsistence resources. No permanent
810 structures would be placed within 50 feet of the marine shoreline under this alternative, though some tree felling would
811 occur in such areas. As such, this alternative is substantially consistent with the 50-foot development setback ordinance
812 established by the City of Angoon to protect near-shore marine aquatic habitats and species. Although this alternative
813 would be inconsistent with specific aquatic resource preservation goals of ANCSA land managers due to adverse effects
814 on segments of two individual streams, it would not prevent ANCSA land managers from achieving the overarching goal
815 of maintaining general ecosystem health given limited nature of the effects in the overall context of aquatic resources on
816 ANCSA conveyed lands in the area.



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

817 **4.5.2.3.5. How do the effects to aquatic habitats and species, and therefore also waters of the U.S., compare?**

818 The nature of the effects from the different alternatives is similar, though the extent of the effects differs. These
 819 similarities and differences are demonstrated in [Table AHAS8](#) and discussed in detail in [section 4.5.2.3.3](#) above.

Table AHAS8. Summary of effects to habitats and species

Potential effect	No action	Airport 3a with Access 2		Airport 3a with Access 3		Airport 4 with Access 2		Airport 4 with Access 3		Airport 12a with Access 12a
		Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	
Stream habitat removal:		Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	Permanent*	Temporary (in Favorite Creek only)	Permanent*
Class 1 or 2**	0 acres	0.34 acre (2.5%)	0.51 acre (11.8%)	0.17 acre (1.2%)	0.29 acre (6.8%)	0.41 acre (3.0%)	0.51 acre (11.8%)	0.38 acre (2.8%)	0.29 acre (6.8%)	0.22 acre (1.6%)
Total (Class 1–5)	0 acres	0.36 acre (2.5%)				0.44 acre (3.2%)				
Stream habitat alteration	0 stream watersheds	Two stream watersheds		Two stream watersheds		Three stream watersheds		Three stream watersheds		One stream watershed
Riparian management area removal*	0 acres	125 acres (9.5%)		86 acres (6.5%)		68 acres (5.2%)		53 acres (4.0%)		114 acres (8.6%) [†]
Behavioral change, injury, or mortality from pier installation in Favorite Creek stream channel: Permanent bridge: Temporary bridge:	None	Two piers Three to 10 piers		No piers Two to five piers		Two piers Three to 10 piers		No piers Two to five piers		None
Increased fishing and harvest of aquatic resources:										
Lakes	No	Yes		Yes		Yes		Yes		No
Favorite Creek	No	Yes		Yes		Yes		Yes		No
Favorite Bay	No	Yes		No		Yes		No		No

* The percentages shown are calculated from all stream and riparian management areas, respectively, in the study area.

** The acreages of Class 1 or 2 streams are separately called out in this table because those acreages represent fish habitat, whereas Class 3–5 are not fish-bearing streams.

[†] Riparian management area prescriptions apply to streams on lands managed by the U.S. Forest Service; for comparison between alternatives this analysis was also applied to Airport 12a with Access 12a.




820 **4.5.2.3.6. Would any effects be irreversible or irretrievable?**

821 There would be irreversible and irretrievable effects where stream habitats or riparian management areas would be directly
822 removed; otherwise, there would be no irreversible or irretrievable effects to aquatic habitats or species during airport
823 construction or ongoing operation.

824 **4.5.2.3.7. Would any of the alternatives have a significant effect on aquatic habitats or species,
825 and therefore also waters of the U.S.?**

826 Because affected areas would be small compared to the aquatics study area and similar areas in Southeast Alaska,
827 effects to aquatic habitats and species, and therefore waters of the U.S. would not be significant. Development of any of
828 the airport and access alternatives would remove or alter some stream habitats. However, the magnitude and extent of
829 activities under the action alternatives would not reach the significance thresholds identified for aquatic habitats and
830 associated species (see [section 4.5.2.3.2](#)) because project activities would not remove or alter existing habitat to the
831 extent that the population dynamics, sustainability, reproduction, or mortality of associated species would be adversely
832 affected.

833 The project would not cause any of the unacceptable adverse effects to waters of the U.S. using the Section 404(b)(1)
834 guidelines identified in [section 4.5.2.1.2](#). 

835 Similarly, the action alternatives (see [Table AHAS9](#)) could adversely affect small quantities of essential fish habitat (Class
836 1 streams and all marine areas). None of the action alternatives would have a significant effect on essential fish habitat for
837 the reasons outlined above. As indicated in [Table AHAS8](#), Airport 4 with Access 2 would affect the most freshwater
838 essential fish habitat. The alternative with the most riparian management areas removed that could indirectly affect
839 essential fish habitat is Airport 3a with Access 2. Effects determinations for essential fish habitat are further summarized
840 in the essential fish habitat assessment ([Appendix EFHA](#)).



Angoon Airport EIS
Chapter 4: Existing Conditions and Project Effects
4.5.2. Aquatic Habitats and Associated Species

Table AHAS9. Summary of effects to essential fish habitat as it relates to significance determination

Potential effect	No action	Airport 3a with Access 2	Airport 3a with Access 3	Airport 4 with Access 2	Airport 4 with Access 3	Airport 12a with Access 12a
Stream habitat removal Permanent* Temporary (in Favorite Creek only)	0 acre	0.33 acre (2.7%) 0.51 acre (11.8%)	0.14 acre (1.1%) 0.29 acre (6.8%)	0.41 acre (3.3%) 0.51 acre (11.8%)	0.36 acre (2.9%) 0.29 acre (6.8%)	0 acre (0.0%)
Stream habitat alteration	0 stream watersheds	One stream watershed	One stream watershed	Three stream watersheds	Three stream watersheds	0 stream watersheds
Riparian management area removal*	0 acres	119 acre (9.5%)	77 acres (6.2%)	678 acres (5.4%)	49 acres (3.9%)	98 acres (7.9%)**
Behavioral change, injury, or mortality from pier installation in Favorite Creek stream channel: Permanent bridge Temporary bridge	None	Two piers Three to 10 piers	No piers Two to five piers	Two piers Three to 10 piers	No piers Two to five piers	None
Increased fishing and harvest of aquatic resources:						
Lakes	No	Yes	Yes	Yes	Yes	No
Favorite Creek	No	Yes	Yes	Yes	Yes	No
Favorite Bay	No	Yes	No	Yes	No	No

* The percentages shown are calculated from all Class 1 stream and Class 1 riparian management areas, respectively, in the study area.

** Riparian management area prescriptions apply to those streams on lands managed by the U.S. Forest Service; for comparison between alternatives this analysis was applied to Airport 12a with Access 12a.

841 **4.5.2.3.8. How could the effects described above be avoided, minimized, or mitigated?**

842 Because there would be no significant effects, no additional mitigation measures beyond design features and those
 843 required by law would be needed.

844



FAA-KOOTZNOOWOO, INC. MEETING NOTES
JUNE 24 & 26, 2013

Participants: FAA □ Leslie Grey,
SWCA - Amanda Childs, Jamie Young, Sue Wilmot, Sheri Ellis
DOT&PF □ Verne Skagerberg
Kootznoowoo, Inc. □ Peter Naoroz, Floyd Kookesh (Chairman)

Time: Monday, June 24, 2013, 3 PM
Wednesday, June 26, 2013

Leslie Grey (LG) introduced the team.

Peter Naoroz (PN): Where will you be meeting?

Jamie Young (JY): At the ACA building. We have meetings with the ACA and the City.

LG explained that we would be at preliminary draft EIS this fall. Kootznoowoo Inc. gets the entire draft EIS, and can review the sections that they choose. LG explained the overarching EIS process, and how we will get to the Final EIS and Record of Decision.

PN: *asked questions about alternative 5 (the Hood Bay alternative).*

Questions about “consultation” versus “decision”. We need to clarify that we aren’t asking □the community□ to make a decision.

We don’t want to decide, we want to understand how the decision will be made.

What about Airport 9? People bought □property□ out there assuming there would be an airport there.

LG: *discussed supplemental aviation studies.* The FAA looked at all alternatives to determine what alternatives were viable from an aviation standpoint, including 12a. The FAA did more detailed modeling than DOT&PF originally conducted.

PN: to be blunt, here’s what I’m hearing from community members. 1) “Who is going to get rich?” And 2) “That’s my subsistence area.” Very highly qualitative for subsistence. What we want is a good decision.

I presented the preferred alternative to the Kootznoowoo Inc. Board the first week of June

LG: as of today, we have identified the alternative based on U.S. DOT Section 4(f) regulations.

U.S. DOT Section 4(f) discussion

PN: The FAA chose Wilderness alternatives because Don Young was pushing DOT and FAA to go into Wilderness.

Verne Skagerberg (VS): There were no political overlays on the State's decision for the proposed action (3a). Many people looked at our proposed action decision to try to exercise ANICLA.

PN: We believe that under ANILCA one of our rights is to use these lands. We intend to go through the full range of opportunities.

LG: We have analyzed all alternatives equally.

PN: Tell me more about funding for the road.

VS: FAA has made it clear from the beginning that they are not paying for road.

LG: But we are still analyzing all access roads' effects in the EIS.

PN: Kootznoowoo, Inc. would help the State fund the access road. I want the Chairman (Floyd Kookesh) to know that we are supportive of it.

VS: I want to see is Angoon get an airport. When the State did the analysis, 12a was not viable. But FAA has done enough analysis to convince me that it is a viable alternative.

PN: Please talk more about this.

FAA shows him the tables showing the aviation availability comparisons.

LG: We have 2 years of wind data and the weather availability modeling shows that 12a is 89% available, while 3a is 95%.

PN: What about cross winds, do you need a cross runway installed also?

VS: No, we don't need a cross runway for cross winds at these sites. The only time you build one like that is if the winds shift. In this case, there's no justification for the additional runway. 3a and 12a are almost identical for wind coverage. We have lots of wind data. The only differences in those is about other weather factors like visual flight rules, IFR minimums. 3a is only slightly better because the trapezoid is so minimal.

Floyd Kookesh (FK): Mike Stedman (of Alaska Seaplanes) says it's a bad site.

LG: We've coordinated with all of the operators. We've included this in the modeling.

FK: She doesn't have to live with it.

LG: I have a very important responsibility, NEPA disclosure. It isn't my airport, it will be the State's airport, and the community will benefit from it.

FK: I want the FAA to make the best decision, not the Tribe. I thought Airport 4 was the best, not 12a.

LG: FAA evaluates the aviation component. We are bound to comply with other regulations, as well. Analyzing the effects creates a path toward the Record of Decision. The EIS will disclose the impacts.

PN: There were several recent sales of allotment. The Rocky Mountain Elk Foundation or the Audubon Society purchased 123 acres from the U.S. Forest Service (USFS) for \$1M at Chaik Bay. The German who has property in Hood Bay has his up for sale at \$4M. We'll see comparables coming in.

LG: Cost comparisons won't be in the EIS. The Uniform Relocation Act is what drives the cost of lots.

PN: Is that a condemnation process?

VS: We would operate on a long term lease with the USFS. (*quick discussion of ANILCA*)

PN: What are the archeological values on the shoreline?

Sheri Ellis (SE): There are midden sites and some historic sites. The surveys that were done (in 2009) didn't find anything in the heart of 12a but there are additional surveys being planned now that there is a more defined footprint. And we will look at these areas. The intention is to take a hard look at the sites associated with the old village, do probes and make sure the old village doesn't extend.

JY: Previously we had your verbal permission to access these lands.

PN: Let's talk about that more, it's pretty sensitive. All Kootznoowoo Inc. can do is coordinate.

SE: If a landowner said no, we wouldn't go on the property. The goal is to get as much information as possible so we can protect resources. But we would respect private property owners' wishes.

FK: I'm just curious what the Tribe will say. We're (Kootznoowoo, Inc.) easy.

Amanda Childs (AC) showed a brief presentation of the preliminary draft EIS on her laptop and Sue Wilmot (SW) discussed how they can provide useful/meaningful comments.

JY: Regarding mitigation, what is the status of Kootznoowoo's wetland banking project with HDR?

PN: The project is still in progress. We've had issues with the U.S. EPA and the Corps not being in agreement. When you mitigate in Alaska or in a Monument, then where do you go?

VS: EPA has recently been exerting their Clean Water Act jurisdiction.

LG: We'll put the public draft EIS out there and then work on the mitigation plan.

PN: If you choose 12a, we'd probably want some additional ANSCA land in the Wilderness, especially since it's free. If you settle on 12a, our community is suddenly smaller. I'm curious to know what you think the plusses and minuses are.

VS: Part of the field work that still has to be done is the wetland delineation.

LG: The goal is to get the field work done this year. That gets us further along. If we can't do the field work this year, it will be next year.

FK: There is a City planning and zoning department. They are supposed to be autonomous. What happens to the existing zoning? Are you all engaged at that level?

PN: Will the airport make other development happen around the airport?

SE: FAA can only analyze what is considered reasonably foreseeable.

PN: The cultural resources discovered in 2009, how do we figure out what they are, ie. what was their origin?

SE: The FAA and consultant team can't do more. But Kootznoowoo, Inc. can go to the USFS and coordinate with them. They may want to work through the Alaska State Historic Preservation Office (SHPO). The USFS may like to see more studies on it.

PN: At the end of the day, we would like there to be some of the discoveries. Like the rock collection at Juneau.

SE: You should speak to the University or the Museum. They might be able to help. Find someone to donate those services. It's a really interesting find.

PN: There's a guy named Grovnor, the grandson of signer of the Declaration of Independence. He had a mining claim on Favorite Bay about the same time as the bombardment. People are speculating that the mining claims are why that happened.

JY and SW requested 14c3 mapping and clarifications on lot lines near the existing materials source.

SW: Does Kootznoowoo, Inc. own any lots where the existing materials source is? If you have any information on who owns those lot lines, we would like to obtain the information from you.

PN: Kootznoowoo's plan was to expand the quarry back, instead of to either side. We have a .pdf of this plan and will provide it to you.

CONTINUED MEETING ON 6/26/13:

FAA and the consultant team provided Kootznoowoo, Inc. an update on the 6/25/13 community visit and discussions with the Tribe and City.

PN: Kootznoowoo, Inc. can provide help with private lot owner contact information. What can we do now to assist DOT with the ROW process?

SW: Thank you for offering to encourage private lot owners to provide our field work staff access to their landowners in your upcoming newsletter.

PN: You should also contact Stan Dunahue in Anchorage to learn more about the GCI easements for tidelands in front of town.



FAA-ANGOON COMMUNITY ASSOCIATION MEETING NOTES
JUNE 25, 2013

Participants: Angoon Community Association □ Wally Frank, Sr., Travis See, George Nelson, Edward Gamble (Transportation Planning and Management), Walter Jack (Indian Environmental General Assistance Program - IGAP - Coordinator), Raynelle Jack (Tribal Administrator), Juanita Silva (Secretary)
FAA □ Leslie Grey
SWCA □ Amanda Childs, Sheri Ellis, Jamie Young, Sue Wilmot
DOT&PF □ Verne Skagerberg, Jane Gendron

Time: Tuesday, June 25, 2013, 11 AM

Wally Frank, Sr. (WF): introduce himself, George Nelson, Travis See, Edward Gamble (Transportation Planning and Management), Walter Jack, Raynelle Jack, Juanita Silva.

Leslie Grey (LG): introduce FAA group, including SWCA.

Verne Skagerberg (VS): aviation planning for state DOT. We got a master plan, determined we are moving forward. Handed off to FAA to do the EIS. I'm allowing LG to do what she needs to do. Glad to see things getting closer all the time.

Jane Gendron (JG): work w/ Verne at DOT. SE region environmental manager. Will be reviewing the FAA's document.

Sheri Ellis (SE): consultant team member out of SLC Utah.

Jamie and Sue: going to the Senior Center at lunch. We are the technical team if you need us.

SWCA will provide a copy of the notes to the ACA. SWCA will email them to Raynelle and Juanita.

WF: the main thing the Tribe is worried about is when we talk about all of the Areas Meriting Special Attention (AMSAs). The Tribe stayed away from the subsistence use area. Will the state fix the BIA Road? George and Edward don't like to ride those roads in the winter. They are like ice, like glass on the dirt road. On the concrete to the ferry terminal stays pretty good for driving. We stay away from the BIA Road during winter. It would be easier to keep the BIA Road clear of ice in winter, if it were paved. People want more road access but I don't think the City will be able to keep up on the maintenance. Right now they are working on our roads and all they are going to do is fill in the potholes.

I know you wrote us a letter.

The FAA should rule out Airport 3a because of Subsistence. How long were the wind gages up?

LG: At least 2 years. The wind data shows that 12a is acceptable from an aviation perspective.

WF: Are they going to pave the BIA Road? The dirt road is like ice in the winter.

LG: Paving the BIA Road is not included in this project.

TS: I have four wheel drive and studded tires and still spin out on that road.

LG: This is a continuation of government to government consultation. We appreciate the discussion and your concerns.

WF: So many meetings have now been held at the ACA building. People are saying that the Tribe is holding back the project. It's not true. We are not slowing down the project. We voice our opinion as a Tribe and the power that has been given to us by congress on subsistence and issues like that.

LG: The project isn't slow because someone is slowing it down. In 2009 the team came and did field work, now it's 2013. That's just the time it takes to get the data put together and do the analysis. We've often said we're writing and doing analysis. At this point, after doing initial analyses, the FAA has identified 12a as the preferred alternative. As of now, we are focusing on 12a.

WF: We want our airport. We need an airport that is safe for our people to travel in the winter.

George Nelson (GN): What site is 12a?

(The consultant group clarified which alternative is the preferred alternative on the maps).

GN: When will you make the final decision?

LG: We will be preparing the preliminary draft for you to review. This will be a "sneak preview" of the document. We estimate that in January the full public draft document would go to the public.

WF: We've given all of our comments. At the tribe's side, we are looking at areas that won't affect the welfare of the people in Angoon.

Travis See (TS): There are private lots there. Have you begun finding out who is there?

LG: There will be a couple more documents for your review. Part of that process will be identifying who owns the lands. The State will implement the acquisition of those lands.

GN: Couldn't Kootznoowoo do a land exchange?

TS: Are there cabins there?

GN: Who is going to be responsible for maintaining the access road?

Verne: That would be worked out during the project design. That would involve the State of Alaska DOT regional office and maintenance. We would work that out later (after the EIS Record of Decision).

GN: What was done in Hoonah and Kake?

Verne: It varies. In Kake, we contract with the City, in Hoonah we have someone that maintains the road.

(WF asks Edward about the BIA Road.)

Edward Gamble (EG): After the BIA Road was built, it was turned over to the City. The BIA has it on their inventory of roads that exist.

LG: If 12a stays the preferred alternative, we should reach a Record of Decision by Fall 2014. Then the State will handle the land acquisition, permitting, and final design.

WF: The council doesn't want to waste their time asking the same questions.

EG: Why did they do a big EIS on such a little airport for so few people? We (Tribal Transportation Program, TTP, Roads) are concerned about 3a. We have the road on our TTP inventory. It will cost more to build than the airport. Maintenance will be very difficult. The Tribal government has an opportunity now. The problem we used to have is State roads, we never had the opportunity for funds to maintain the road. The tribal government has recognized that funds should come from Federal Highways. We (the Tribe) have a chance to have input on the roads that are going to be built. We can do the design work and plan it. The important thing is 25% of that money goes to the Tribe to maintain the road. The Tribe has an invested concern on the things we do in the community. The people's concern with building an airport is that it takes the land away from the people forever. What's going to happen in the future, if the community needs a bigger airport? What are the plans? Would the airport be moved? The newspapers said that we fought against an airport. It wasn't the airport that we fought against, it was the location. Why did you do such a big EIS on this little airport? Is the EIS really necessary? The wilderness was what caused the EIS, and it's never going to be built there. The EIS should make a statement that no one is listening to the community. The community should have the first say on where the airport is. We would not put it toward Kanalku (3a). Our preference is changing to sockeye. Kanalku can only produce so much sockeye.

Richard George (RG, Angoon Mayor): I attended the first meeting when DOT came out here proposing an airport. I've been in-the-loop all along. I was in the meeting Edward alluded to. The airport was turned away because of the location. When we refused the airport, DOT was charged with going back and doing a study for another location. When DOT came back they proposed 3a because of the wind. And that's where I'm standing. We need to put the airport there (3a). I'm tired of us putting every project behind the house. We get a project, we put it here. We need to expand our area. DOT have said that we should put it at 3a. I don't want it next to the community. I've complained multiple times. You think you have a proposed route, I am going to follow that. Approach and landing, they don't abide by it now. And we are the ones that have homes under where the planes are going to fly. That's why I stand behind 3a. There are other opportunities to expand our community. The State and Feds need to "put the money where the mouth is" and get this service to our community. I know for a fact there was a road to nowhere because people in that community mentioned it to me during a native gathering. Things are being done in Alaska that will help us establish something we need in this community. We need it because of the cost of travel, that is the main objective. To help us. We don't want outsiders without our being able to adjust ourselves.

WF: Is that the opinion of the City Council?

RG: No, just my opinion.

LG: *shows the flight tracks for 12a.* Yellow is existing today.

WF: Have you talked to the wilderness people, the Monument?

LG: Yes, we have been talking with them.

WF: We've been talking with the Forest Service for two years now.

RG: Edward touched on the length of time it took for other communities to get constructed. We turned the airport away. The next year it was under construction in Kake. We shouldn't have to go through these hoops.

GN: What about the private lots?

LG: The State will acquire the lots after the FAA Decision is made. There is a federal process, the "Uniform Relocation Act" that would be followed.

GN: Kootznoowoo should do an exchange. If you don't, we'll be sitting on it for more years. Get the affected lot owners different lots in different areas.

WF: There is a village that got \$60 million for 60 people for an airport. Angoon area is clear. We want an opportunity for expansion.

LG: As part of the plan for this airport, there is room for expansion to 4000 feet long. For now it will be built at 3300 feet long.

WF: The safety of our people is what I look at. I'd like to see our roads paved before the airport comes in. I don't like to repeat myself, but those roads are terrible in the winter. If the road isn't paved it will be dangerous.

LG: We'll be doing field work this summer. It would be very valuable to us if you would comment on the Preliminary draft EIS (your "sneak peak"), although you can also comment on the public draft EIS. In between the Preliminary and public draft EIS docs there will be small changes. If there are big changes, we'll be notifying you.

WF: Please hurry.

Walter Jack (WJ): With the proposed project being closer to the community, flights would be right over our water source. I am concerned for the community drinking water in the future. I appreciate Edward and his hard work. There is a proposed road going to Hood Mountain. The two tributaries combined would give the community a long-term water supply. Where the water source is now, is not good. Matching funds for a road system with the Tribe and State working with the roads would allow for a safer drinking water source.

LG: *Discusses Airport 5 (along the proposed Hood Bay Road), and how it was not a safe approach.*

WJ: *Discussion of ANILCA and how it should provide for the water source.*

WF: The ANILCA process and permitting takes such a long time. I think that the Forest Service (FS) will really get down on you, if you choose a different area [Airport 3a or 4].

LG: We were prepared to pursue any of the alternatives. We would continue to work with the FS. We would have moved forward with any of the analysis, if it had shown otherwise. We have to comply with Section 4(f).

Discussion of plane size and what types of planes could come in.

Verne: If you look at forecasted demand, there is not anticipated traffic for much bigger aircraft.

TS: Shoot for 12a, the other roads are too long.

LG: Regulations tell us that we have to do the EIS. I understand you being frustrated.

WF: What you are going to do with the lots should be the first step.

LG: That will be the first step after the Record of Decision, which we anticipate in the fall of 2014, at the earliest.

GN: It would seem that we would consider this an emergency location for Alaska Airlines or any other. We could get the support of Homeland Security. We hear on the news all the time of the U.S. situation regarding other countries. We have less rainfall than Juneau or Ketchikan. The likelihood of this place being used for emergency landings is high. I would appreciate that this consideration be given for our airport. That it be a place where aircraft can land. I was on a plane where we couldn't land. We went back and forth from Anchorage to Seattle 5 times.

WF: Thank you for meeting with us. Please meet with the community members that have come in to speak with you.

The FAA met later in the afternoon with Kevin Frank and Albert Howard who came after they were done with their regular work hours. Principle discussion topics were:

- The Airports 3a or 4 locations offering more options for future community expansion via the longer access road than the Airport 12a location
- Potential water quality effects to Auk'Tah Lake from the proposed airport and access roads



U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

July 1, 2013

Chad Van Ormer, Monument Ranger
Juneau Ranger District – Admiralty National Monument
U.S. Forest Service
8510 Mendenhall Loop Road
Juneau, AK 99801

RE: Angoon Airport Environmental Impact Statement
Section 4(f)

Dear Mr. Van Ormer:

In conjunction with the environmental impact statement (EIS) for the proposed Angoon Airport, the Federal Aviation Administration (FAA) is preparing an evaluation pursuant to Section 4(f) of the Department of Transportation Act of 1966 (Public Law 89-670) and its implementing regulations at 23 CFR 774. Section 4(f) requires that the proposed Angoon Airport avoid the use of land from publicly owned wildlife and waterfowl refuges and recreational properties, as well as certain types of historic sites, if feasible and prudent alternatives exist. The process of identifying such resources and evaluating the potential use of land from them requires consultation with the officials with jurisdiction over said resources. The FAA has identified the Kootznoowoo Wilderness Area as a publicly owned recreational property, over which the U.S. Forest Service has jurisdiction.

Section 4(f) requires that the FAA obtain your concurrence with four specific findings:

- The Kootznoowoo Wilderness Area is a publicly owned property whose primary purpose is recreation—in this case, primitive recreation.
- The Kootznoowoo Wilderness Area is a significant public recreational resource in the U.S. Forest Service system.
- The permanent incorporation of land from the Kootznoowoo Wilderness Area into an airport and access road—through easement, special use permit, long-term lease, or other instrument not involving a land exchange—would not constitute a *de minimis* use of the wilderness area.
- Section 4(f) does not apply to the archaeological site known as the Favorite Bay Garden Site (SIT-00302).

The FAA has determined that the Kootznoowoo Wilderness Area consists of federal public lands administered by the U.S. Forest Service and that primitive recreation by members of the general public is a primary purpose and goal of management of the wilderness area. Additionally, the FAA believes that the formal establishment of the wilderness area by Congress and a comparison of the recreational functions and values of the area versus the functions and values of other lands administered by the U.S. Forest Service support a finding that the wilderness area is a significant

recreational property in the U.S. Forest Service system. That is, the Kootznoowoo Wilderness Area plays an important role in meeting the U.S. Forest Service's objective of providing public recreational opportunities. The FAA also finds that, in accordance with the criteria set forth in 23 CFR 774.11(d), Section 4(f) consideration applies to all lands within the boundary of the wilderness area.

Section 4(f), at 23 CFR 774.17, establishes that *use* of a Section 4(f) property occurs when:

1. land is permanently incorporated into a transportation facility;
2. there is a temporary occupancy of land that is adverse in terms of the Section 4(f) statute's preservationist purposes; or
3. there is a constructive use of a Section 4(f) property.

Based on the evaluation conducted in conjunction with the EIS, the FAA finds that alternatives Airport 3a and 4 and their access road options would use land from the Kootznoowoo Wilderness Area through permanent incorporation of wilderness area lands into the airport and access road (see Figure 1, attached). This permanent incorporation would occur through measures that would provide the Alaska Department of Transportation & Public Facilities with sufficient property interests to implement, operate, and maintain the transportation facilities over the long term. The FAA also finds that there would be no temporary occupancy or constructive use of wilderness area lands under either of these alternatives and that the permanent incorporation of wilderness area lands into the airport and access road under either Airport 3a or 4 would adversely affect the activities, features, or attributes of the wilderness area that qualify it for Section 4(f) protection.

The FAA further finds that alternative Airport 12a and its associated access road, which are located outside of the wilderness, would not use lands of the Kootznoowoo Wilderness Area. Airport 12a would not permanently incorporate lands of the wilderness area into either the airport or access road, nor would it require temporary occupancy of wilderness area lands or result in constructive use of said lands.

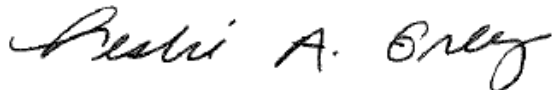
With regards to the archaeological site known as the Favorite Bay Garden Site, Section 4(f) states that historic sites that are chiefly important for what can be learned through data recovery (i.e., have minimal value for preservation in place) are excepted from Section 4(f) protection (23 CFR 774.13(b)(1)). The Favorite Bay Garden Site has been determined eligible for listing on the National Register of Historic Places under Criterion D (information potential). The FAA made this determination in consultation with the U.S. Forest Service and the Alaska State Historic Preservation Officer; there was no evidence to conclude that the site warrants preservation in place. Based on this determination of eligibility, the FAA finds that the site meets the exception criteria found in the statute, and Section 4(f) does not apply to the Favorite Bay Garden Site.

In accordance with Section 4(f), we respectfully request your written concurrence with our findings as outlined above. Alternatively, if you do not agree with our findings, please provide the details of your objection in writing.

Should you require additional information, I would be happy to arrange a conference call to discuss the matter. You can reach me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above. You may also contact Sheri Ellis, who has been

assisting the FAA in preparing the Section 4(f) evaluation for the Angoon Airport project. She may be reached via phone at (801) 230-7260 or via e-mail at Sheri@certussolutionsllc.com. I look forward to hearing from you soon.

Sincerely,

A handwritten signature in black ink that reads "Leslie A. Grey". The signature is written in a cursive, flowing style.

Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Attachment

cc: A. Childs (SWCA)

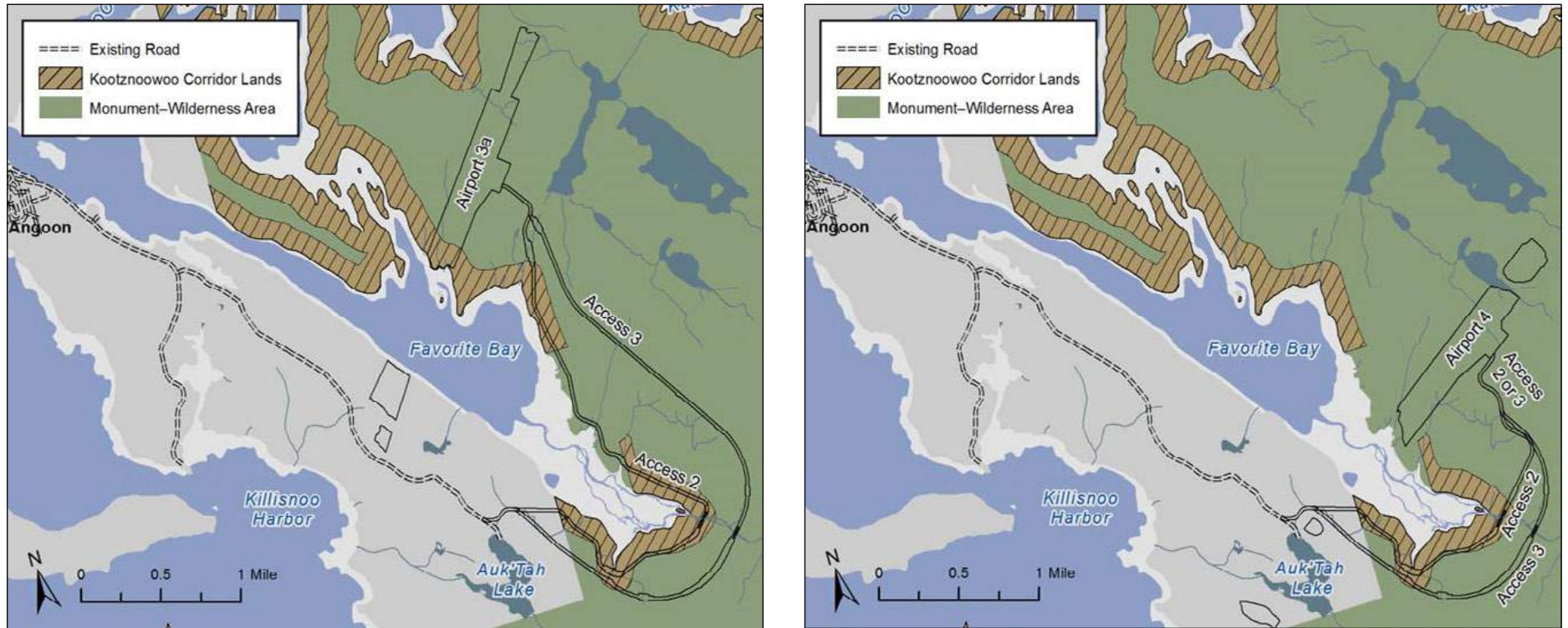


Figure 1. Locations of Airport 3a and Airport 4 with Access 2 or Access 3 showing proposed use of Section 4(f) properties. Airport 12a with Access 12a is not shown on this figure, but is located on the Angoon peninsula outside of the wilderness area.



U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

July 15, 2013

Judith Bittner
State Historic Preservation Officer
Office of History and Archaeology
550 West 7th Ave., Ste. 1310
Anchorage, AK 99501-3565

RE: File No. 3131-1R FAA
Angoon Airport Environmental Impact Statement

Dear Ms. Bittner:

In April 2012, the Federal Aviation Administration (FAA) submitted our determinations of eligibility (DOE) for the above-referenced undertaking in Angoon, Alaska. We received your concurrence with our determinations on late April 2012. In our DOE letter, we notified you that the FAA is implementing a phased approach to historic properties identification. We noted that at such time as the FAA had identified a preferred alternative as part of the environmental impact statement (EIS) process and had sufficient information to identify the full area of potential effects (APE), we intended to conduct additional field investigations for that alternative. The FAA recently identified our preferred alternative—Airport 12a with Access 12a—and are prepared to proceed with the additional archaeological investigations.

As you may recall from our initial consultation with your office, the FAA is considering three action alternatives and one no action alternative for a land based airport in Angoon. Two of the action alternatives (Airport 3a and Airport 4) are located primarily on lands administered by the U.S. Forest Service. The third action alternative, Airport 12a, is located on lands owned by private individuals, the City of Angoon, and the village corporation (Kootznoowoo, Inc.). In addition to consultation with you, we are engaged in consultation with these parties, as well as the Angoon Community Association—the federally recognized tribal government—regarding the preferred alternative, its potential effects on historic properties and traditional cultural properties, and the additional field studies to be conducted.

The FAA has identified the APE for the preferred alternative to include all lands that would be subject to ground disturbance, vegetation clearing, or vegetation alteration (such as thinning or topping) for construction and operation of the airport and its access road. This APE, which is depicted on the attached figure, also includes anticipated disturbance areas for materials sites. Indirect effects from visual intrusion will not extend beyond the footprint of the areas cleared for airport and access road use due to the dense nature of the spruce-hemlock forest surrounding in the area and the nature of the terrain; the airport would be only minimally visible for a short distance beyond the edge of any cleared areas. Anticipated noise effects will extend beyond the airport footprint. The FAA will assess the effects of said noise on any noise-sensitive historic properties identified to date in the area surrounding the Airport 12a site; any currently undocumented noise-sensitive historic properties identified through consultation with tribal parties and community members will be evaluated similarly.

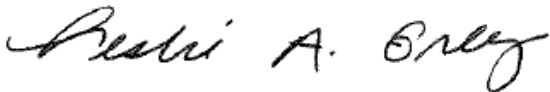
The FAA has contracted with SWCA Environmental Consultants (SWCA) to conduct the additional archaeological survey for the preferred alternative. SWCA also completed the previous survey associated

with the EIS. SWCA will conduct an intensive-level pedestrian inventory of the APE as depicted on the attached figure. Using the U.S. Forest Service Admiralty Island model for identifying areas of high probability for archaeological resources and professional judgment, SWCA will also excavate shovel probes to help identify subsurface cultural resources and confirm the boundaries of known resources in the vicinity of the APE. To the extent allowable by terrain and vegetation cover, SWCA will place shovel probes in a systematic fashion on regular intervals. Upon completion of fieldwork, SWCA will prepare a technical report summarizing the results, and the FAA will consult with you and other consulting parties regarding any new determinations of eligibility and our findings of effect.

Pursuant to our DOE letter and the criteria in 36 CFR 800.3(c)(3) and 800.4(a), we request that you review the information contained in this letter, including the attached figure, and provide us with any comments you may have regarding 1) the APE as described herein, and 2) the methods proposed to identify historic properties. Please, also notify us of any concerns you may have about the undertaking in general or any specific historic properties of which you believe the FAA should be aware.

Should you require additional information, I would be happy to arrange a conference call to discuss the matter. You can reach me via phone at (907) 271-5453, via e-mail at Leslie.Grey@faa.gov, or at the address above. I look forward to hearing from you soon.

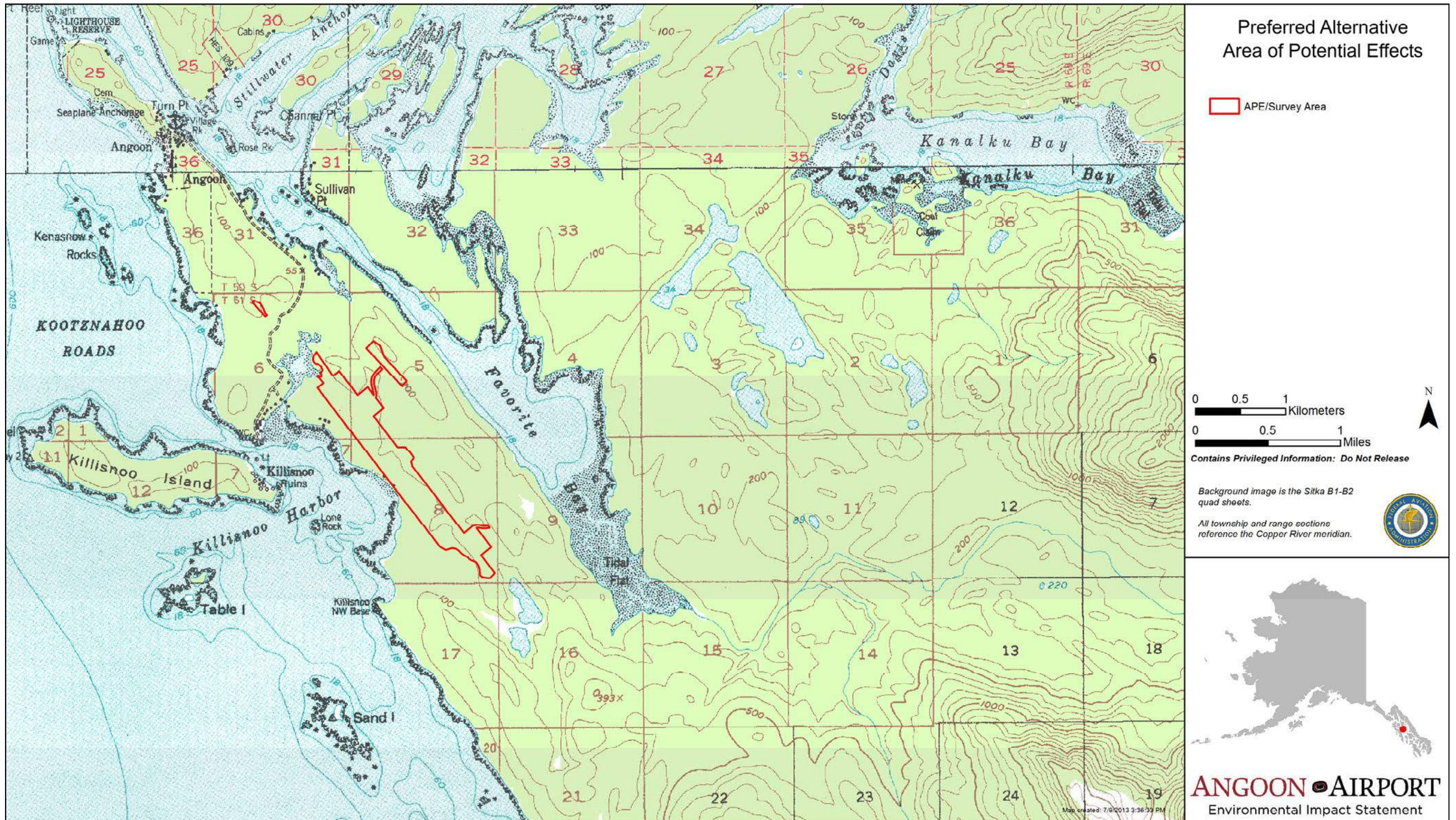
Sincerely,



Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Attachment

cc: A. Childs (SWCA)
V. Skageberg (ADOT&PF)
J. Gendron (ADOT&PF)



Area of potential effects / survey area for FAA's preferred alternative—Airport 12 with Access 12a—and associated materials sites and disturbance areas.



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Natural Resources

DIVISION OF PARKS AND OUTDOOR RECREATION
Office of History and Archaeology

550 West 7th Avenue, Suite 1310
Anchorage, Alaska 99501-3565
Web: <http://dnr.alaska.gov/parks/oha>
Phone: 907.269.8721
Fax: 907.269.8908

RECEIVED

AUG 29 2013

August 26, 2013

File No.: 3130-1R FAA

Leslie A. Grey
FAA Project Manager
Angeon Airport EIS
AAL-614
Alaskan Region Airports Division
222 West 7th Avenue, #14
Anchorage, AK 99513

Subject: Angeon Airport Environmental Impact Statement

Dear Ms. Grey:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated July 15, 2013) on July 22, 2013.

Following our review of the documentation provided, we have no objections to the proposed area of potential effects (APE) as it is presently defined, with the understanding that as the project develops or changes, the APE may be amended accordingly. Additionally, we agree that the proposed methodology for further identification of historic properties is appropriate. We look forward to receiving the results of the inventory as they are available and to further consultation on the subject undertaking.

Thank you for the opportunity to comment. Please contact Shina duVall at 269-8720 or shina.duvall@alaska.gov if you have any questions or if we can be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Judith E. Bittner".

Judith E. Bittner
State Historic Preservation Officer

JEB:sad

RECORD OF CONVERSATION	Time:	Date: 8/5/13
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TYPE	<input type="checkbox"/> In-person Conversation	<input type="checkbox"/> Meeting/Conference	<input type="checkbox"/> Telephone <input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	<input checked="" type="checkbox"/> E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)
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Location of In-person Conversation, Meeting, or Conference:

Name of Persons Contacted or in Contact with You Jennifer Berger, Special Use Permit Administrator	Organization U.S. Forest Service	Telephone No. 907.789.6278
---	--	--------------------------------------

Subject: Confirmation of Land Use Technical Report citations

Summary of Conversation

Jenn Berger confirmed the accuracy of these statements included in the Angoon Airport EIS Land Use Technical Report:

Kootznoowoo, Inc. also owns an approximately 133-acre parcel along the shore at the end of Kanalku Bay, which is not considered part of the Kootznoowoo Corridor Lands (personal communication, Berger 2013).

Four businesses are currently authorized under special use permit by the USFS to provide commercial outfitting and guiding services into the Monument–Wilderness Area near Angoon (personal communication, Berger 2013).

Action Required: None

Name of Person Documenting Conversation: Jamie Young, SWCA Environmental Consultants

Lara Bjork

From: Berger, Jennifer -FS <jberger@fs.fed.us>
Sent: Monday, August 05, 2013 3:23 PM
To: Jamie C. M. Young
Cc: Lara Bjork; Sue Wilmot; Amanda Childs
Subject: RE: Angoon Airport EIS: Land Use technical report citations

Yes, I can confirm the accuracy of these two statements.
Thanks for checking!

Jennifer Berger

Wilderness . Heritage . Lands . Special Uses

Admiralty Island National Monument
Juneau Ranger District
Tongass National Forest
907.789.6278

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Friday, August 02, 2013 11:50 AM
To: Berger, Jennifer -FS
Cc: Lara Bjork; Sue Wilmot; achilds@swca.com
Subject: Angoon Airport EIS: Land Use technical report citations

Hello Jenn,

We do not have a record of conversation (ROC) in the Angoon Airport EIS Admin Record for the two citations below that reflect communication between you and Linda Snow. Can you please confirm the accuracy of these two statements and then we'll put the attached current ROC in the Admin Record. Thanks for your help! Jamie

oot noowoo, Inc. also owns an approximately acre parcel along the shore at the end of analku Bay, which is not considered part of the oot noowoo Corridor Lands. Snow personal communication via telephone with J. Berger January .

Four businesses are currently authorized under special use permit by the SFS to provide commercial outfitting and guiding services into the Monument Wilderness Area near Angoon. Snow personal communication via email with J. Berger .

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 C 907.821.0404 F 907.279.7922



Visit Our Website: <http://www.swca.com>  

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Lara Bjork

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Wednesday, August 14, 2013 3:36 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News, Announcements, & Updates (8/15/13)

We are excited to announce that the latest version of the Angoon Airport Environmental Impact Statement Newsletter, published by the Federal Aviation Administration - Alaskan Region Airports Division, is now available on our website. Please visit www.angoonairporteis.com or click the link below to check it out!

Click [HERE](#) for the August 2013 Newsletter

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager

Leslie Grey, [Federal Aviation Administration](#)
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851
Email. Leslie.Grey@faa.gov

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ANGOON AIRPORT

Environmental Impact Statement



A Message from the FAA

Hello everyone! It was great to see so many familiar faces during our visit to Angoon in June. As usual, we received many excellent questions and comments on the project as a whole, as well as on the FAA’s recent identification of a preferred alternative. You can find answers to these questions later on in this newsletter.

This is an extremely exciting time for the Angoon Airport EIS Project. We’ve completed our internal draft of the EIS and are now in the final stages of preparation for local, state and agency review. We’re also conducting some additional cultural and natural resources fieldwork. We hope you had a chance to stop by to say “hi” to our field crews as they have been working in the area during August.

I can’t thank everyone enough for coming out to talk with us and sharing your feedback and thoughts on the preferred alternative. Your involvement is critical to the EIS process—it ensures that we have the best information to guide our decision. As always, my contact information is provided on the last page of this newsletter. Please feel free to contact me with any questions, concerns, or comments.

Best wishes,

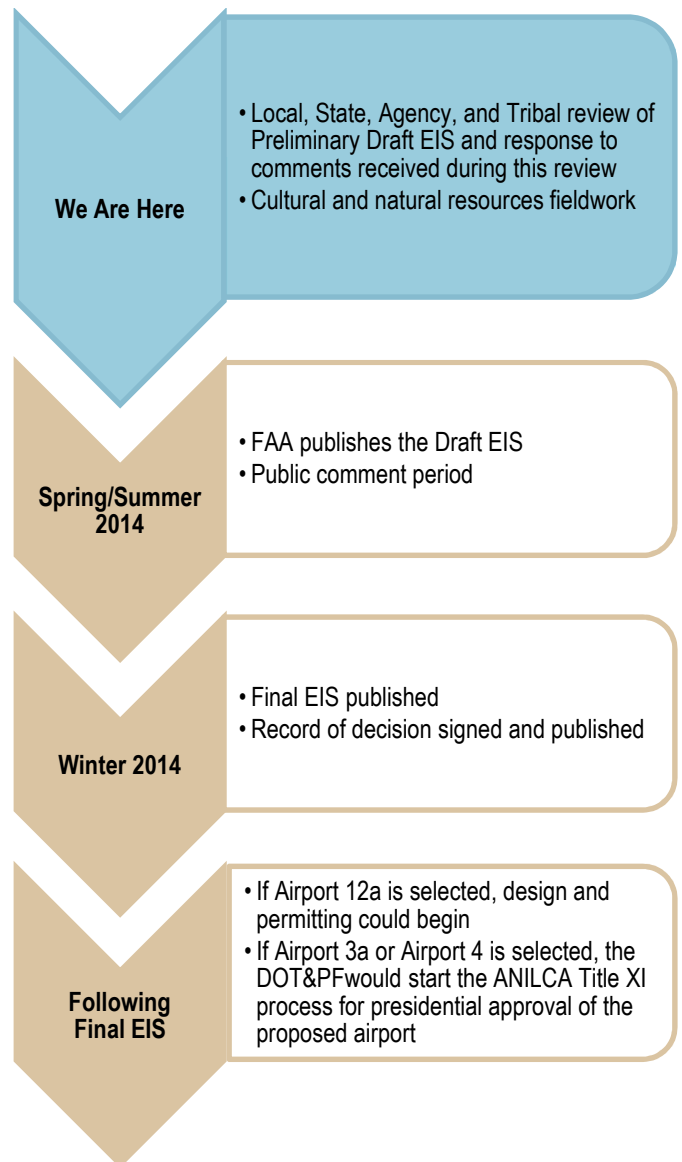
*Leslie Grey
FAA Alaskan Region Airports Division
Angoon Airport EIS Project Manager*



Leslie and Charlotte Washington during our recent visit to Angoon

Project Update

This year brings several exciting new steps towards completion of the EIS. The steps that are coming up are provided below.



Identification of the Preferred Alternative

As we discussed during our Angoon visit, the FAA has identified Airport 12a as our preferred alternative for the Angoon Airport EIS. It's rare for an EIS to have one obvious choice among the alternatives. Typically, each alternative evaluated in an EIS will have a variety of effects ranging from minimal to substantial, both across and within different resources. As such, it is the FAA's job to balance these competing effects to find the alternative that minimizes effects while best fulfilling the project's purpose and need.

The FAA's intent throughout the early stages of the EIS process was to evaluate all alternatives, provide the Draft EIS to the public, evaluate all comments on the EIS, and then identify a preferred alternative. However, the analysis to date indicates that Airport 12a is likely to be FAA's preference. Since FAA's own guidance and Section 1502.14(e) of the Council on Environmental Quality's (CEQ's) guidance encourages agencies to identify the preferred alternative as soon as there is justification to do so, we felt that it was appropriate to disclose our preference in the Draft EIS.

Although the preferred alternative is the alternative the FAA is *most likely* to adopt for the record of decision (ROD), the agency could ultimately choose a different alternative based on additional agency consultation, fieldwork, and/or public comment. As such, we still want your comments on all of the alternatives considered in the EIS—a decision will not be made until the ROD is published.

Your Questions, Our Answers

We received many excellent questions from those of you who were able to attend our open house meetings in Angoon in June, as well as from the Angoon Community Association Council and the Mayor's Office. We want to share some of those questions, and our answers with those who may not have been able to participate.

Q: When will the airport be built?

A: If Airport 12a is selected in the ROD, the airport would be open and available for use after airport design, permitting, land acquisition, and construction occurs. The timing for these tasks would likely be three or more years after release of the ROD.

If Airport 3a or Airport 4 is selected, the DOT&PF would need to go through the ANILCA Title XI process to obtain presidential approval to construct an airport in a wilderness area before conducting airport design and permitting. As

such, it is likely that the time to airport construction would be longer under this scenario.

Q: Does identification of a preferred alternative change how alternatives are analyzed in the EIS?

A: No. Identification of a preferred alternative does not change how alternatives are analyzed in the EIS. CEQ regulations require that all alternatives are analyzed equally during the National Environmental Policy Act (NEPA) process. The FAA will continue to consider all alternatives until a final alternative is selected in the ROD.

Q: What private lots would be affected by Airport 12a?

A: The EIS will disclose information on potentially affected private lots as part of the socioeconomic analysis. These lots are subject to change, however, based on final airport layout planning and design.

Q: How would the DOT&PF acquire lands for Airport 12a?

A: The DOT&PF would follow the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 for all land acquisitions and would work with affected property owners to negotiate just compensation for their properties.

Q: Is the Airport 12a site a safe and viable runway alternative?

A: Yes. Airport 12a meets all FAA standards for airport design and would allow flights to occur 89% of the total hours in a year (more than doubling current availability). FAA would not evaluate an alternative in the EIS if it did not meet FAA standards.

Q: How did the FAA rule out other alternatives for consideration, such as Hood Bay?

A: The FAA considered a wide range of airport sites for the EIS, including local community suggestions for an airport by Hood Bay. Ultimately, the FAA eliminated any alternative that did not meet FAA standards or allow for improved availability and reliability of aviation services to Angoon. The proposed locations for Airport 3a, Airport 4, and Airport 12a were the only alternatives that met these standards and were subsequently carried forward for analysis.

Fieldwork Announcement

For the past few weeks, crews have been out in Angoon conducting cultural and natural resource surveys at the Airport 12a site (see Figure 1). These surveys will provide the FAA and DOT with additional information that may be used, as applicable, for permitting and mitigation planning for the preferred alternative. Results from these surveys will be provided in the Final EIS.



Figure 1. Cultural resource survey team.

Newsletter Correction

The November 2012 newsletter incorrectly stated that a fish ladder would be constructed to Kanalku Lake. The newsletter was updated to fix that error and was reposted on the Angoon Airport EIS website. To see the revised newsletter, go to:

http://www.angoonairporteis.com/Documents/Angoon_November_Newsletter_November_2012.pdf

Stay Involved with the Project!

As always, you can submit comments via email to comments@angoonairporteis.com, or you can contact Leslie Grey, the FAA project manager, via her contact information below. We will be in touch with the community at important milestones in the project as well as other times just to check in. We are also on Facebook and are posting small updates as often as possible. Join the conversation! www.facebook.com/AngoonAirportEIS



Do you have any community information, events, stories, or news that you'd like to share? If so, send it our way and we'll publish it in the next newsletter.

How to Contact Us

If you have any questions about the proposed project or the EIS, please contact Leslie Grey.



FAA Project Manager

Leslie Grey – AAL 614
Angoon Airport EIS
222 West 7th Avenue
Box #14
Anchorage, AK 99513-7587
Telephone: 907-271-5453
Fax: 907-271-2851
E-mail: Leslie.Grey@faa.gov

Angoon Community Association

P.O. Box 328 * Angoon, Alaska 99820 * (907) 788-3411 * FAX (907) 788-3412

RESOLUTION OF THE ANGOON COMMUNITY ASSOCIATION No. 13-04

WHEREAS: The Angoon Community Association (ACA) is the tribal governing body of the Community of Angoon as authorized by the acts of Congress of June 18, 1934, (48 Stat. 948), and May 1, 1936 (49 Stat. 1250) approved by the Secretary of the Interior on May 10, 1939 and ratified by the membership of Angoon Community Association by an election on November 15, 1939, and

WHEREAS: Article V-Powers, Section 1 (a) states "To negotiate with the Federal and Territorial (state) Governments on behalf of the Community...", and

WHEREAS: the Tribal Government of Angoon Alaska, Angoon Community Association (ACA), has been keeping track of the progress of the EIs for the proposed airport, and

WHEREAS: one of the key elements of a successful transportation facility is access, and

WHEREAS: this brings the location into the process which should support Economic Development of the Community, material to construct the facility to accommodate the population of the community, now therefore

BE IT RESOLVED THAT: the ACA tribal council unanimously support, by resolution, the airport access 12a as the site for the land based airport.

SIGNED: Wally R. Frank, Sr.
Wally R. Frank, Sr., President

CERTIFICATION

I, the undersigned, as the Secretary of the Angoon Community Association hereby certify that the Council of the Association is composed of Seven (7) members, of whom 7 constituted a quorum were present at a meeting there of duly and regularly called, noticed, convened and held this 22nd day of August, 2013; and that the foregoing resolution No. 13-04 was adopted at such meeting by affirmative vote of 7 Aye and 0 Nay.

In witness thereof, I have set my hand as Secretary this 22nd day of August, 2013.

ATTEST: Floyd G. Jim
Floyd G. Jim, Secretary



Fri 9/6/2013 12:09 PM

Jamie C. M. Young

Angoon Airport EIS preferred alternative 12a site visit info

To Johnny Zutz (johnny.zutz@alaska.gov)

Cc Leyla Arsan; Amanda Childs

Message

stream_disappears_into_gravel_sink.JPG

stream_end_at_gravel_sink.JPG

water_depth_below_gravel_sink_surface.JPG

downstream_of_gravel_sink_barrier.JPG

Hello Johnny, and thank you again for your time this week discussing my questions.

I've attached photos of the gravel sink barrier that we found at the mouth of the main stream flowing through the proposed Airport 12a airport site. It's NOT your typical barrier situation. It'll be a good site for you to review. The water depth was, at least, 3ft below the surface at the gravel sink.

I spoke with Leyla Arsan who coordinated our AWC amendment submittal and we submitted 6 changes following our fieldwork. Leyla said that ADF&G field-verified and updated, at least, 2 of the streams.

We prefer staying at the Favorite Bay Inn (FBI) B&B. The owners are John & Kathy Quinn and they can be contacted at 907.788.3234 or favoritebayinn@gmail.com.

Unfortunately our local vehicle rental option won't have her vehicle in Angoon again until next summer. When her vehicle's not an option, we ferry a rental truck (Juneau Car Rental Company) to Angoon. We'll have a truck there 9/12-19.

Alvin Johnson is very knowledgeable of bear behavior and the project area. We've hired him as a bear guard for \$200/day and he can be reached at 907.957.2786.

Finally, if you would like boat access while you're in Angoon, we've paid \$100/day for Russell James (907.723.0377) and Kenny Johnson (907.957.0872) to shuttle us to/from project sites with their skiffs.

Please call me anytime with questions. Thanks again, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 | C 907.821.0404 | F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, September 11, 2013 4:58 PM
To: richard_enriquez@fws.gov
Cc: Lara Bjork; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport EIS: informal UFWS consultation for preferred alternative (12a)
Attachments: AngoonAirportEIS_Summary_USFWS_09-11-2013.pdf; Angoon Airport Project EIS BE Map.jpg; TechReport_Fig10.pdf

Hello Richard,

When we met in June, you said that for the preferred alternative's informal consultation you would need a project summary, including Lat/Long and map. Will the attached "*AngoonAirportEIS_Summary_USFWS_09-11-2013.pdf*" and these coordinates suffice?

Latitude: 57.476814 decimal degrees
Longitude: -134.548126 decimal degrees

Please let me know, if you need any other information to initiate this informal consultation.

Also, I wanted to follow-up with you on my 8/1/13 email. During our 2009 fieldwork we identified 5 active nests and 2 inactive (see the attached map from our technical report) that don't appear to have been added to the FWS Nest database. The complete Technical Report is here:

http://www.angoonairporteis.com/Documents/TechReport_VegWetWild.pdf.

Thank you for your time. I look forward to speaking with you more soon. Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
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INTRODUCTION

The Alaska Department of Transportation and Public Facilities (DOT&PF) has proposed the construction of a land-based airport and airport access road for the community of Angoon in Southeast Alaska. The community of Angoon is the only permanent settlement on Admiralty Island, a large island located about 55 miles from Alaska's capital, Juneau, and about 700 miles southeast of Anchorage (see Figure 1). Currently, Angoon has no land-based airport, nor any roads to any other communities. The only methods of transportation to and from the community are via floatplanes, boat, and the Alaska Marine Highway System (ferry). It is the largest southeast Alaska community without a land-based airport.

The 2010 census count for Angoon was 459, and most residents are Alaska Natives. The community is small and has few commercial services. The economy is based on commercial fishing and hunting and local government employment, and many residents live a primarily subsistence lifestyle. The Angoon Community Association is the federally recognized tribal government in Angoon.

The community is located on a peninsula surrounded on the north and west by Chatham Strait and on the east by Favorite Bay. Beyond Favorite Bay, and to the south of the peninsula, Angoon is surrounded by the nearly one-million-acre Admiralty Island National Monument and Kootznooko Wilderness Area. This means that private, state, or municipal lands on which to build an airport are extremely limited.

The DOT&PF has requested both funding and approval for the proposed airport from the Federal Aviation Administration (FAA). The DOT&PF has applied to the FAA for construction funding from the FAA's Airport Improvement Program and for approval of the airport layout plan (ALP) for the proposed airport. Before the FAA can decide whether to provide the requested funding or approval for the airport layout plan, they are required by the National Environmental Policy Act (NEPA), to evaluate and disclose to the public the potential social and environmental effects of building and operating the proposed airport. Additionally, the FAA is responsible for ensuring that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment (49 U.S.C. 47101(a)(6)). The DOT&PF would own, maintain, and operate the airport if one is built.

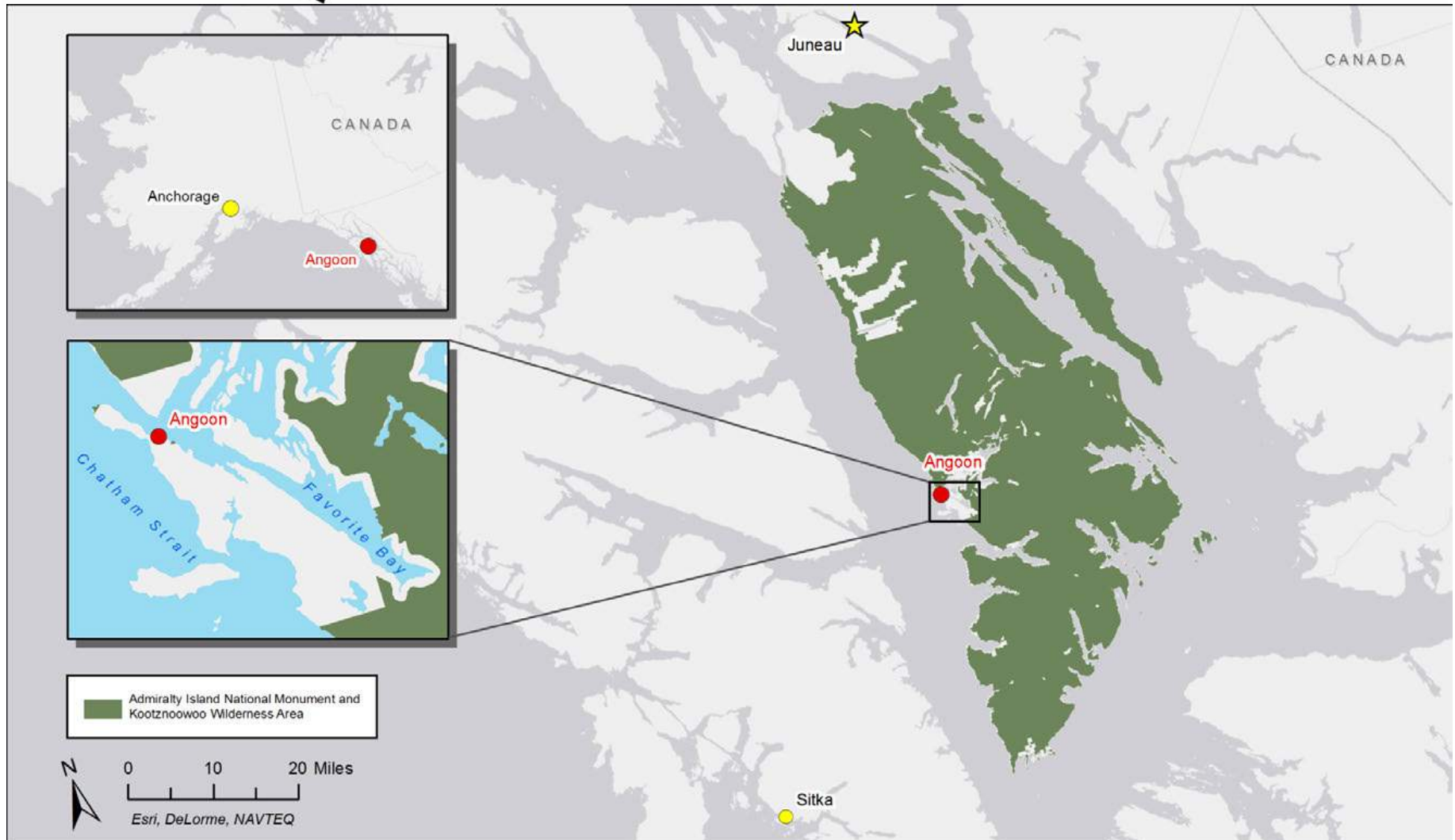


Figure 1 . Location of Angoon and the Admiralty Island National Monument and Kootznoowoo Wilderness Area in Southeast Alaska.



Current Transportation Options in Angoon

The Angoon Seaplane Base

Currently, the only fixed-wing airplane service to Angoon is provided by seaplanes using the Angoon Seaplane Base. The seaplane base is a dedicated dock located in the tidally influenced Favorite Bay. There is no defined seaplane landing area in Favorite Bay; pilots take off and land in the most advantageous area based on water, wind, and weather conditions at the time. Commercial seaplane flights are offered between Juneau and Angoon two or three times daily, depending on the season.

Alaska Marine Highway System ferry

The state-run Alaska Marine Highway System provides public ferry service connecting Angoon with Juneau and, in summer months, other Southeast Alaska communities such as Sitka.

Alternatives Analyzed in the EIS

There are three alternative locations for the proposed airport and three alternatives for the access roads (Figure 2). These sites were identified through technical studies and public, agency, and tribal input as the three most viable airport locations from an aviation standpoint. Two locations (Alternatives 3a and 4) are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area. The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the DOT&PF's proposed location. The FAA's preferred alternative is the Airport Alternative 12a location.

All action alternatives have certain components of the proposed action in common as follows:



Runway: Paved; 3,300 feet long and 75 feet wide, with future expansion to 4,000 feet long

- **Runway safety areas:** 150 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- **Object free area:** 500 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- **Runway protection zone:** Standard visual approach dimensions of 500 × 1,000 × 700 feet
- **Single, perpendicular taxiway:** Paved
- **Aircraft apron:** Paved
- **Navigational aid:** Rotating beacon
- **Visual approach aid:** Precision approach path indicator

- **Runway lights:** Pilot-controlled, medium-intensity lights
- **Terminal space:** Sufficient area for a future terminal or passenger shelter
- **Lease lots:** Five 12,500-square-foot spaces
- **Electrical control building:** Near future terminal site
- **Perimeter fence:** For security and wildlife control
- **Passenger parking lot:** Paved, near future terminal site
- **Support facilities:** Weather station, communication, etc.
- **Access road:** Two, paved, 9-foot-wide lanes and 1-foot shoulders with right-of-way sized for future expansion to two 10-foot-wide lanes and 5-foot shoulders
- **Overhead utility lines:** Power and telephone lines located within the access road corridor

All action alternatives would require the following construction activities:

- Vegetation removal related to the airport and road (clearing for construction or for visibility)
- Terrain disturbance related to the airport and road (includes cutting and filling of soil, and ripping and blasting of shallow bedrock to level the ground)
- Pavement related to the airport and road (creating smooth surfaces for airplanes and vehicles)
- Tree felling (cleared trees are left where they fall) related to aviation easements (creating visually open areas for flight approach and takeoff)
- Rerouting and culverting of streams (to continue water flow that would be impeded by newly filled areas)



The differences between the alternatives are the result of each alternative's location, the terrain of that location, and access requirements specific to each location. For example, the exact area where aircraft would park would vary depending on the location of the runway ends or the access road, both of which are influenced by the terrain. The location, terrain, and access requirements determine the following characteristics and construction requirements of each alternative:

- Configuration of airport components
- Total acreage required for airport property, access road right-of-way, and any easements that would be needed
- Acres of impervious surface, terrain disturbance, vegetation removal, aviation easements, and temporary use-areas required for construction
- Length of the access road
- Need for and length of a bridge over Favorite Creek
- Number of streams requiring culverting or rerouting
- Amount of fill material required for construction
- Number of barge and truck trips needed to haul materials
- Construction duration
- Aviation performance characteristics for the airport and runways

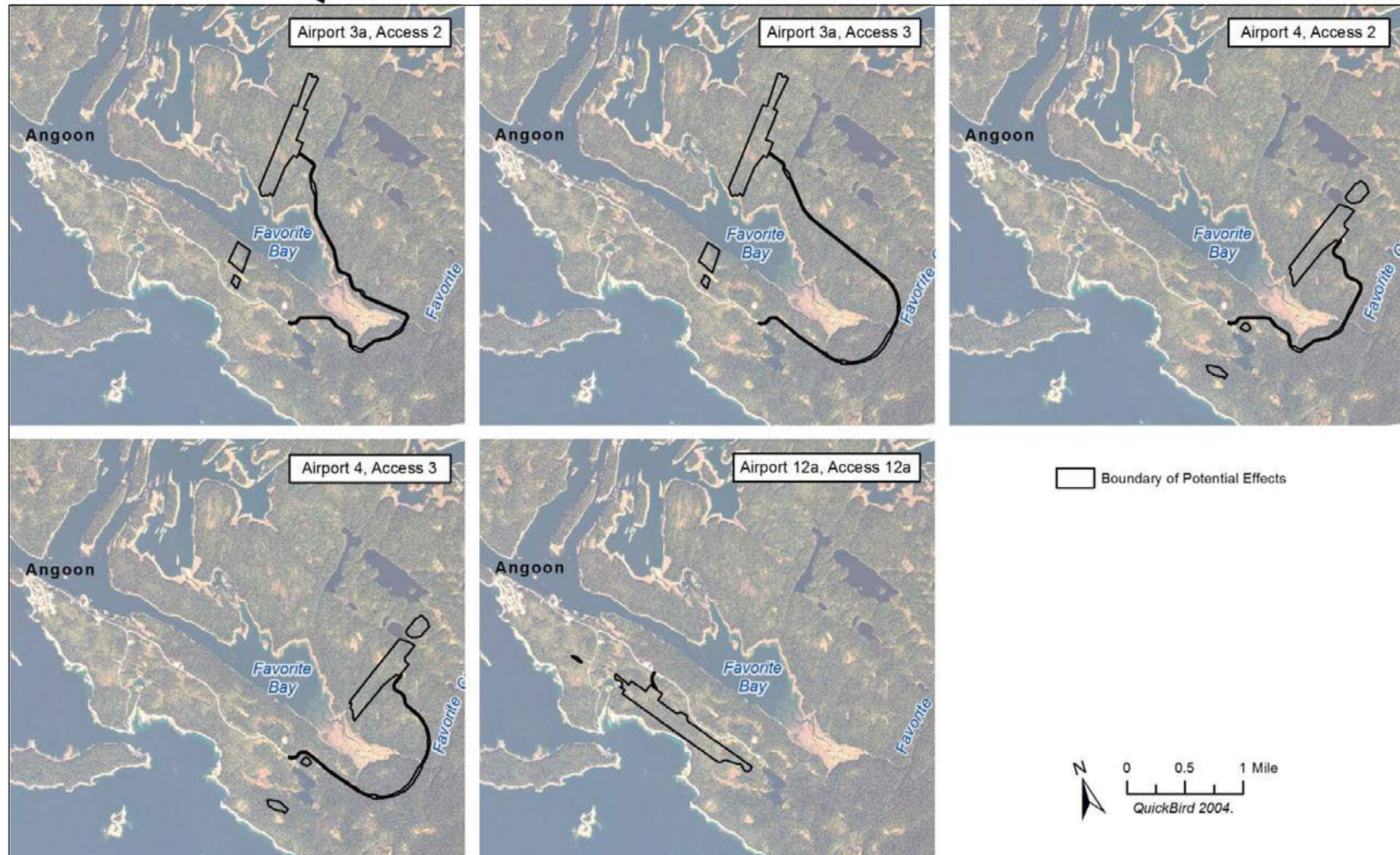


Figure 2. Alternatives analyzed in the EIS.



Alternative 3a with Access 2 (proposed action)

Airport 3a with Access 2 is ADOT&PF's proposed action. This alternative would be located on lands owned or managed by the U.S. Forest Service; Kootznoowoo, Inc; and Sealaska Corporation, (which manages the subsurface estate). The airport would be located on the north side of Favorite Bay within the boundaries of the Admiralty Island National Monument and Kootznoowoo Wilderness Area. Access 2 would begin at the existing BIA Road, and travel around the southeastern end of Favorite Bay within 1,000 feet of the shoreline. It would require the construction of a bridge across Favorite Creek. Because this alternative would be located in Monument–Wilderness Area, it would require a permit under Title XI of ANILCA. Characteristics of this alternative are shown in Figure 3.

Alternative 3a with Access 3

The access road would be the only difference between this alternative and Airport 3a with Access 2 (the proposed action). As with Access 2, Access 3 would begin at the existing BIA Road, but would stay farther inland from the Favorite Bay shoreline. The bridge crossing at Favorite Creek would be located farther upstream than the bridge crossing for Access 2. Because this alternative would be located in the Monument–Wilderness Area, it would require an ANILCA Title XI permit. Characteristics of this alternative are shown in Figure 4.

Airport 4 with Access 2

Airport 4 with Access 2 would be located on the east side of Favorite Bay on lands owned or managed by the U.S. Forest Service, Kootznoowoo Inc., and Sealaska Corporation in the Monument–Wilderness area. Access 2 would begin at the existing BIA road and travel around the eastern end of Favorite Bay within 1,000 feet of the shoreline. A bridge crossing at Favorite Creek—the same bridge location as for Airport 3a with Access 2—would be required. Because this alternative would be located in the monument–wilderness area, it would require an ANILCA Title XI permit. Characteristics of this alternative are shown in Figure 5.

Airport 4 with Access 3

The access road would be the only difference between this alternative and Airport 4 with Access 2. The location and details for the airport location would be the same as under Airport 4 with Access 2. As with Access 2, Access 3 would



also begin at the existing BIA Road, but it would stay farther inland from the Favorite Bay shoreline. The bridge crossing at Favorite Creek would be located farther upstream than the bridge crossing for Access 2, and the road would then go northwest to the proposed Airport 4 location. The bridge crossing at Favorite Creek would be at the same bridge location as for Airport 3a with Access 3. Because this alternative would be located within the Monument–Wilderness Area, it would require an ANILCA Title XI permit. Characteristics of this alternative are shown in Figure 6.

Airport 12a with Access 12a (preferred alternative)

Airport 12a with Access 12a is the FAA’s preferred alternative and would be located on lands owned or managed by private landowners, Kootznoowoo Inc., and the City of Angoon. Both the airport and access road would be on the Angoon peninsula southeast of the community of Angoon; no part of this alternative would be located on Monument–Wilderness Area lands. Access 12a would begin at the existing BIA Road and travel directly to the proposed airport location. Characteristics of this alternative are shown in Figure 7.

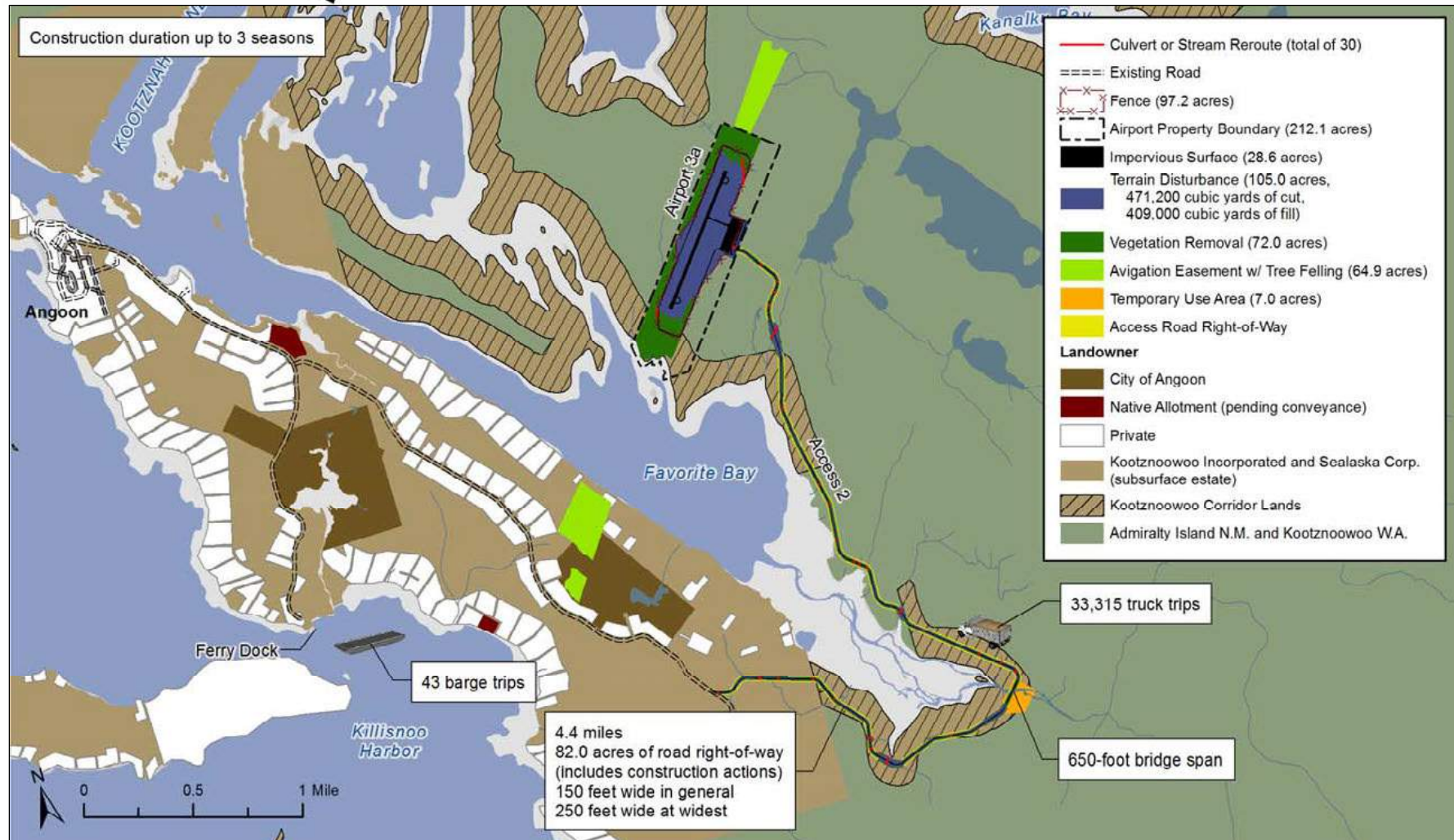


Figure 3. Characteristics of Airport 3a with Access 2, and requirements for its construction.

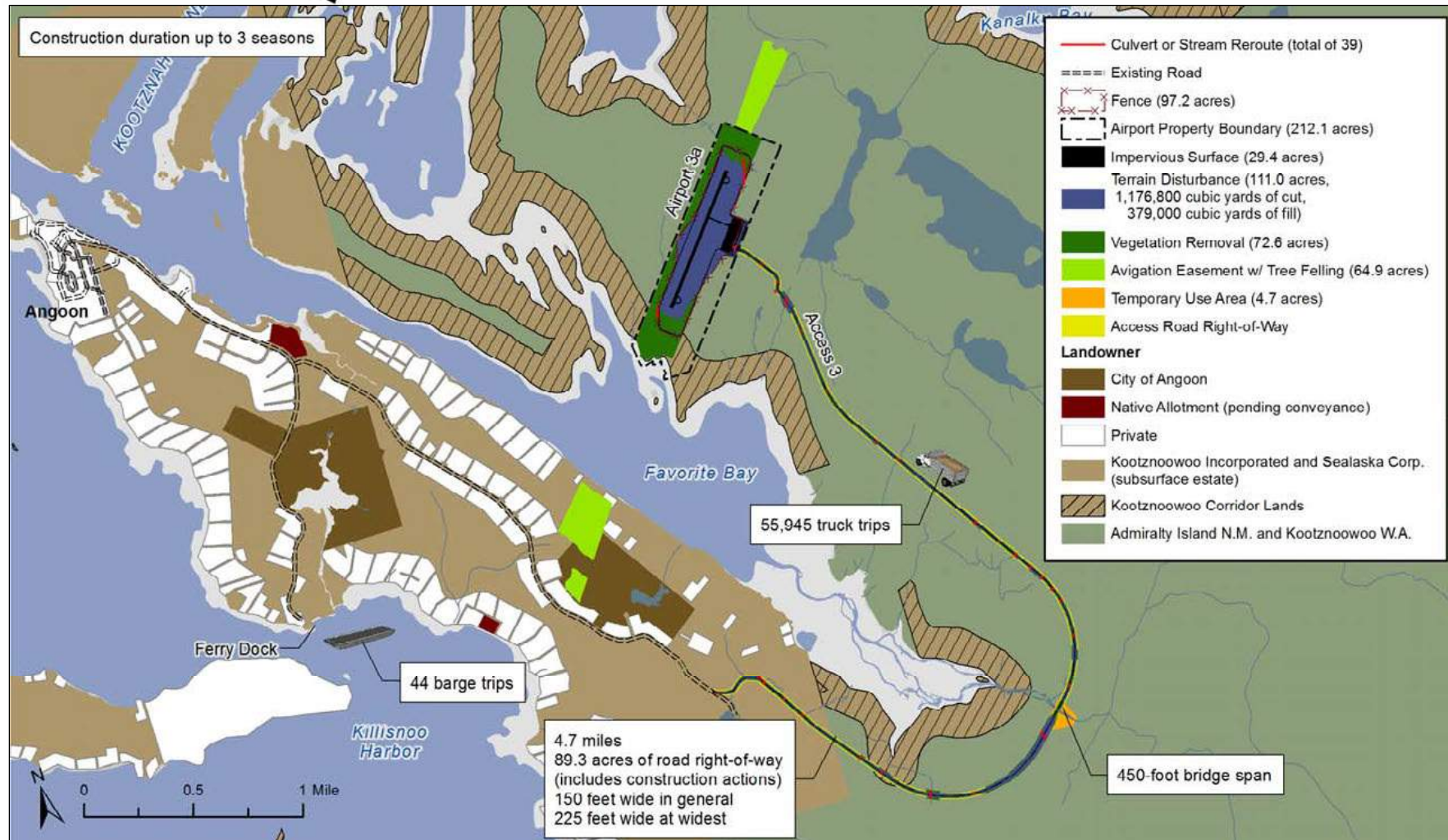


Figure 4. Characteristics of Airport 3a with Access 3, and requirements for its construction.

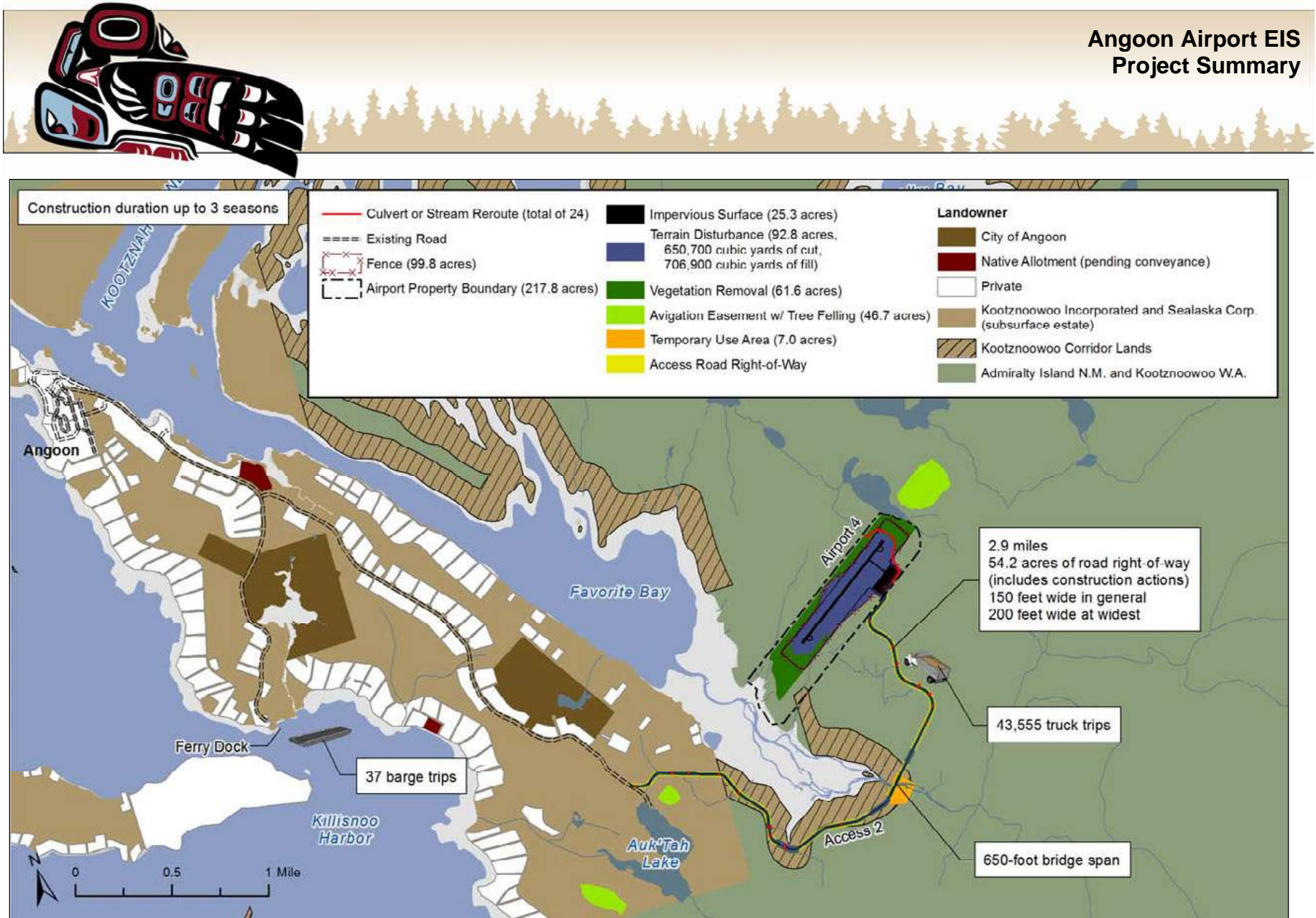


Figure 5. Characteristics of Airport 4 with Access 2, and requirements for its construction.

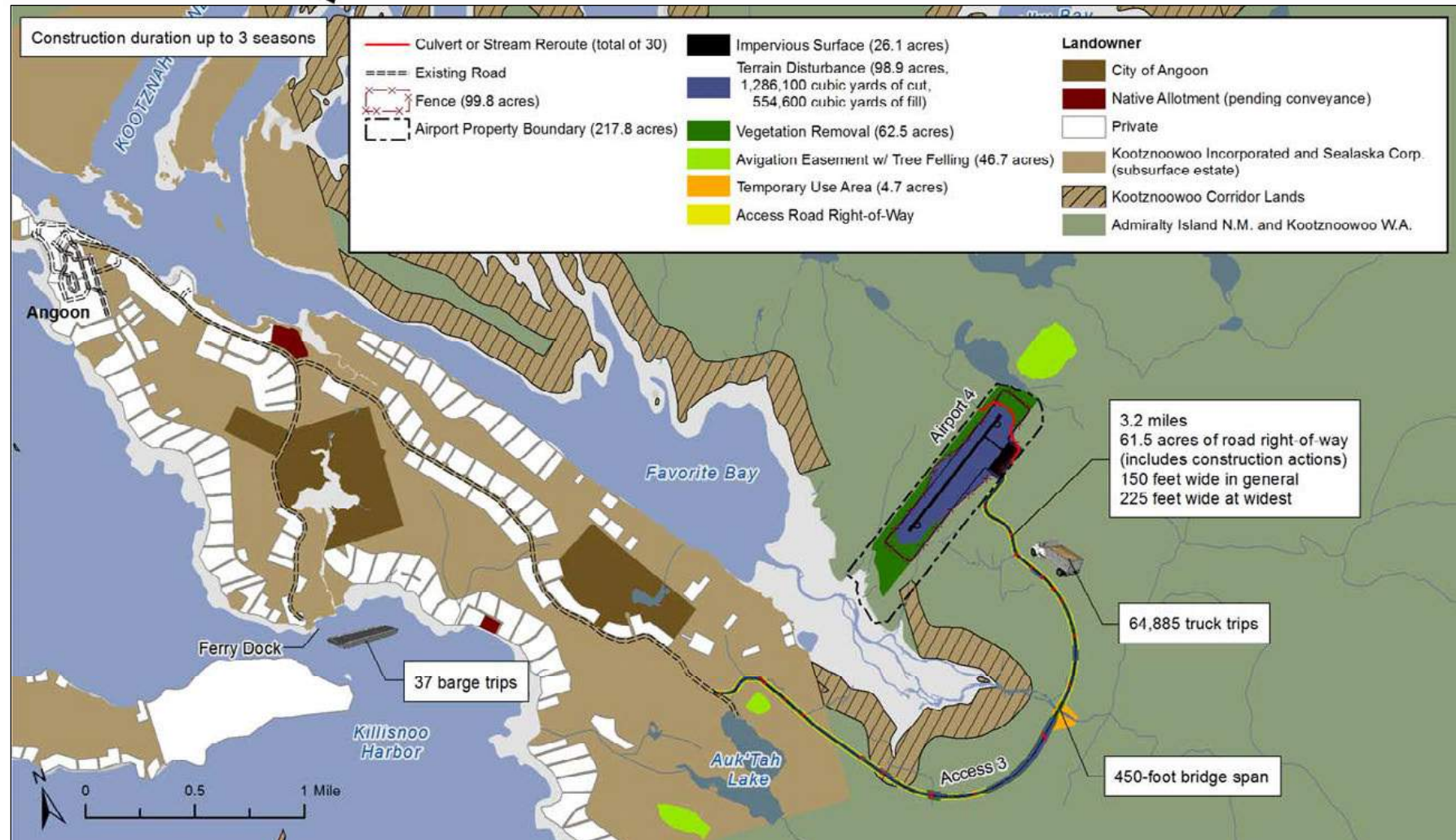


Figure 6. Characteristics of Airport 4 with Access 3, and requirements for its construction.

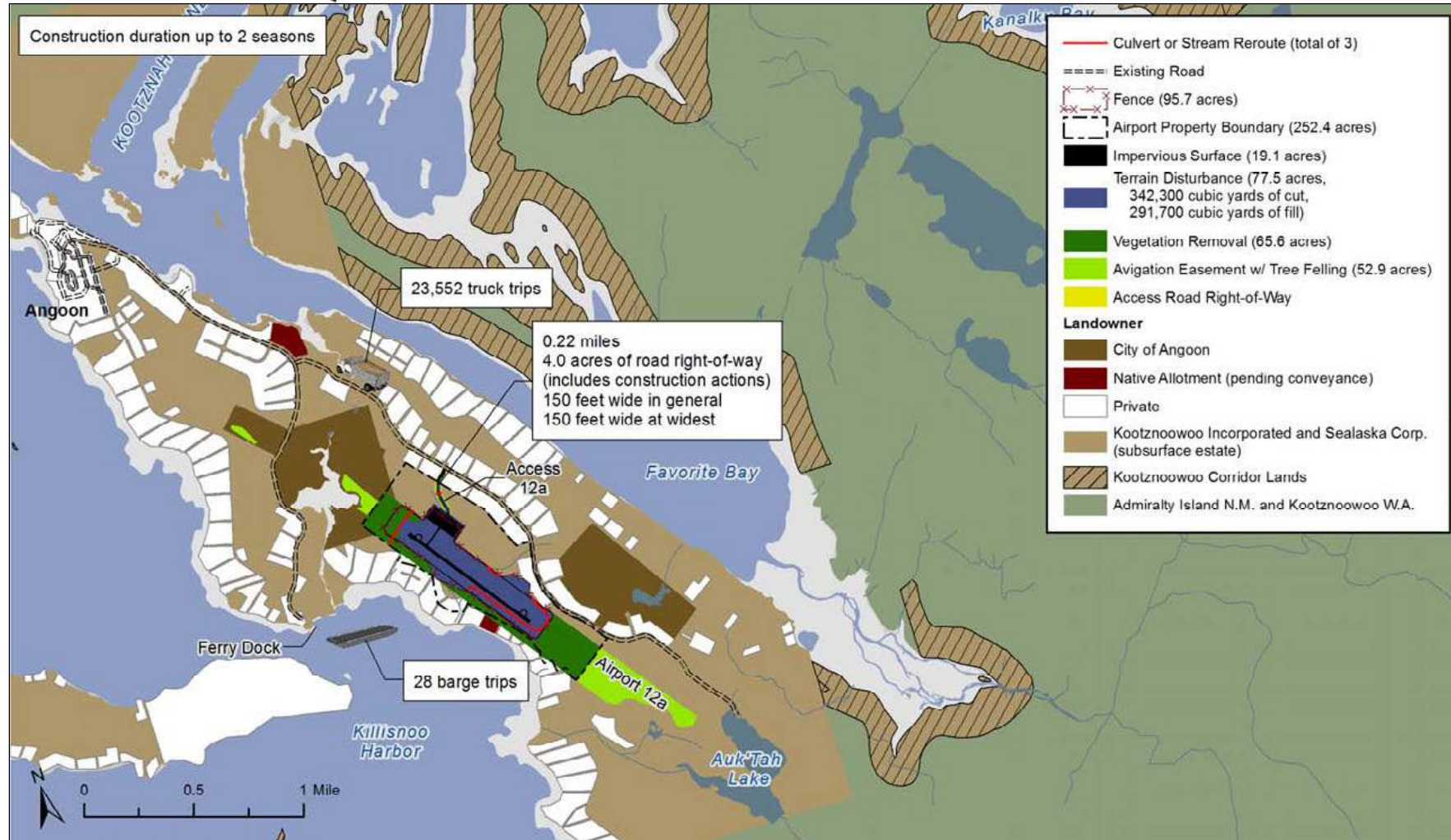


Figure 7. Characteristics of Airport 12a with Access 12a, and requirements for its construction.



Building in a Wilderness Area

A wilderness area is defined by the Wilderness Act (Public Law 88-577) as an area where the earth and community of life are not confined by humans, where humans are visitors who do not remain. A wilderness area is further defined as an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation.

An airport can only be built in a wilderness area under certain circumstances. To meet the socioeconomic and public safety needs unique to Alaska, Congress included in Alaska National Interest Lands Conservation Act (ANILCA) some exceptions in the ways Alaskans can use federal lands. An important use provided for in ANILCA is the placement of transportation and utility systems on lands such as the Admiralty Island National Monument and Kootznoowoo Wilderness Area. The required steps that must be followed before a transportation system can be placed in a wilderness area in Alaska include the following:

- An evaluation of impacts (an EIS)
- Public hearings in local Alaska areas and in Washington, D.C.
- An independent evaluation of the project by each involved federal agency
- Approval of the ANILCA project application by the President of the United States and Congress

The monument and wilderness area are managed by the U.S. Forest Service according to the provisions of the Wilderness Act of 1964 (applies only to the wilderness area lands within the monument), ANILCA, and the Tongass Land and Resource Management Plan (as amended by the U.S. Forest Service in 2008).

Building on ANCSA-conveyed lands

Airport 12a with Access 12a and the majority of Access 2 would be located on surface lands owned by private landowners, including Kootznoowoo Inc. Kootznoowoo, Inc., which was established in 1973 following the 1971 enactment of the Alaska Native Claims Settlement Act (ANCSA), is the for-profit Alaska Native village corporation for the community of Angoon. The corporation is the single largest non-federal landowner in the area of Angoon. Subsurface rights to these lands belong to Sealaska Corporation, the regional Native corporation under ANCSA. Specifically, no



written documentation is available for planned land uses or transactions regarding some of these land conveyances under ANCSA. Any land acquisition would be done according to fair market values.

Resource Reports

In 2009 and 2010, intensive surveys and on-the-ground research was conducted in Angoon. The technical reports that describe these results are available on the Angoon Airport EIS website:

http://www.angoonairporteis.com/tech_studies.html

[Socioeconomics](#) 9.12 Mb

[Land Use](#) 9.85 Mb

[Aquatics](#) 3.16 Mb

[Noise](#) 1.65 Mb

[Subsistence](#) 2.79 Mb

[Vegetation, Wetlands, and Wildlife](#) 4.08 Mb

[Visual](#) 2.50 Mb

[Water Resources](#) 8.63 Mb

[Cultural Resources](#) 5.5

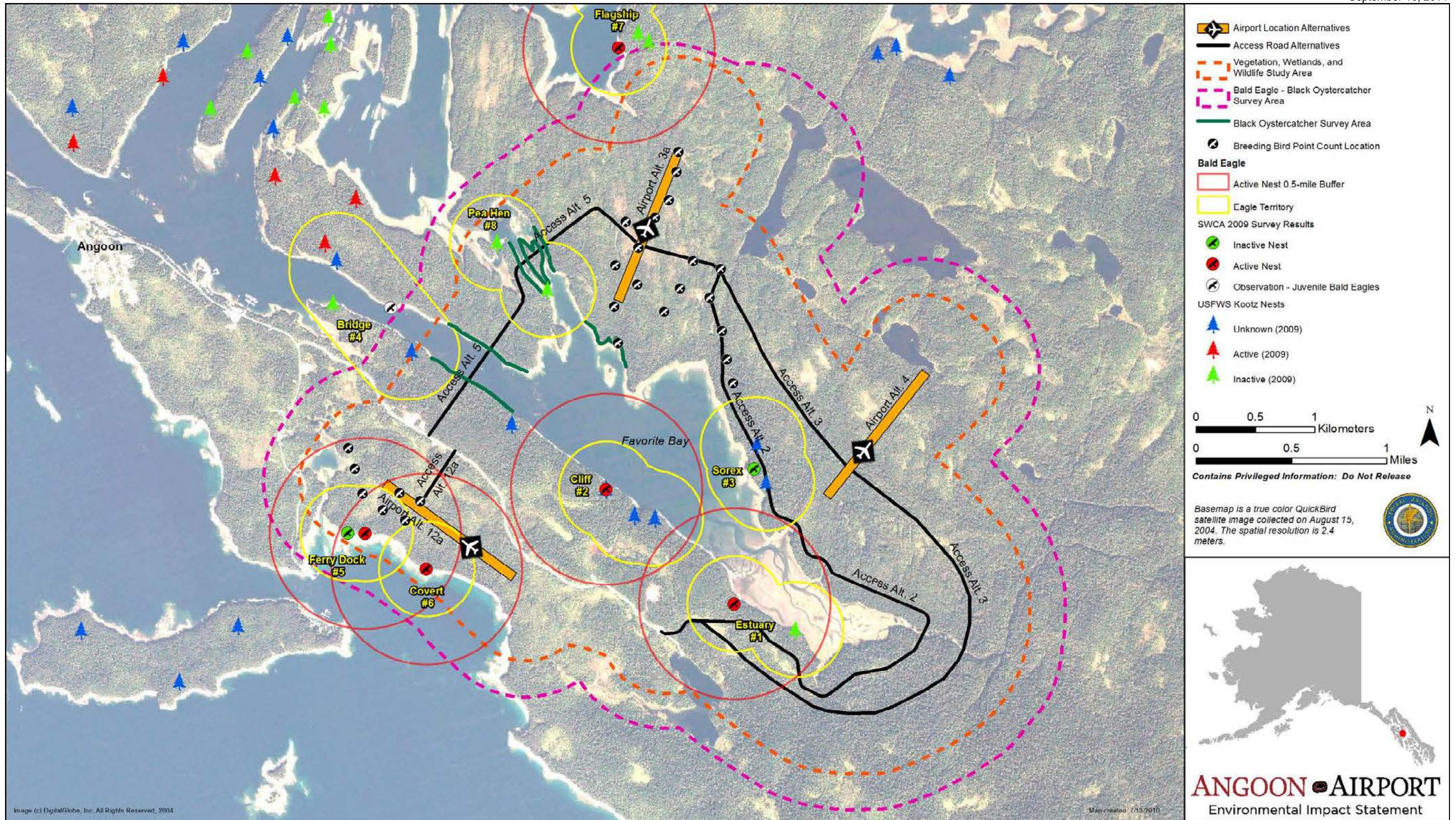
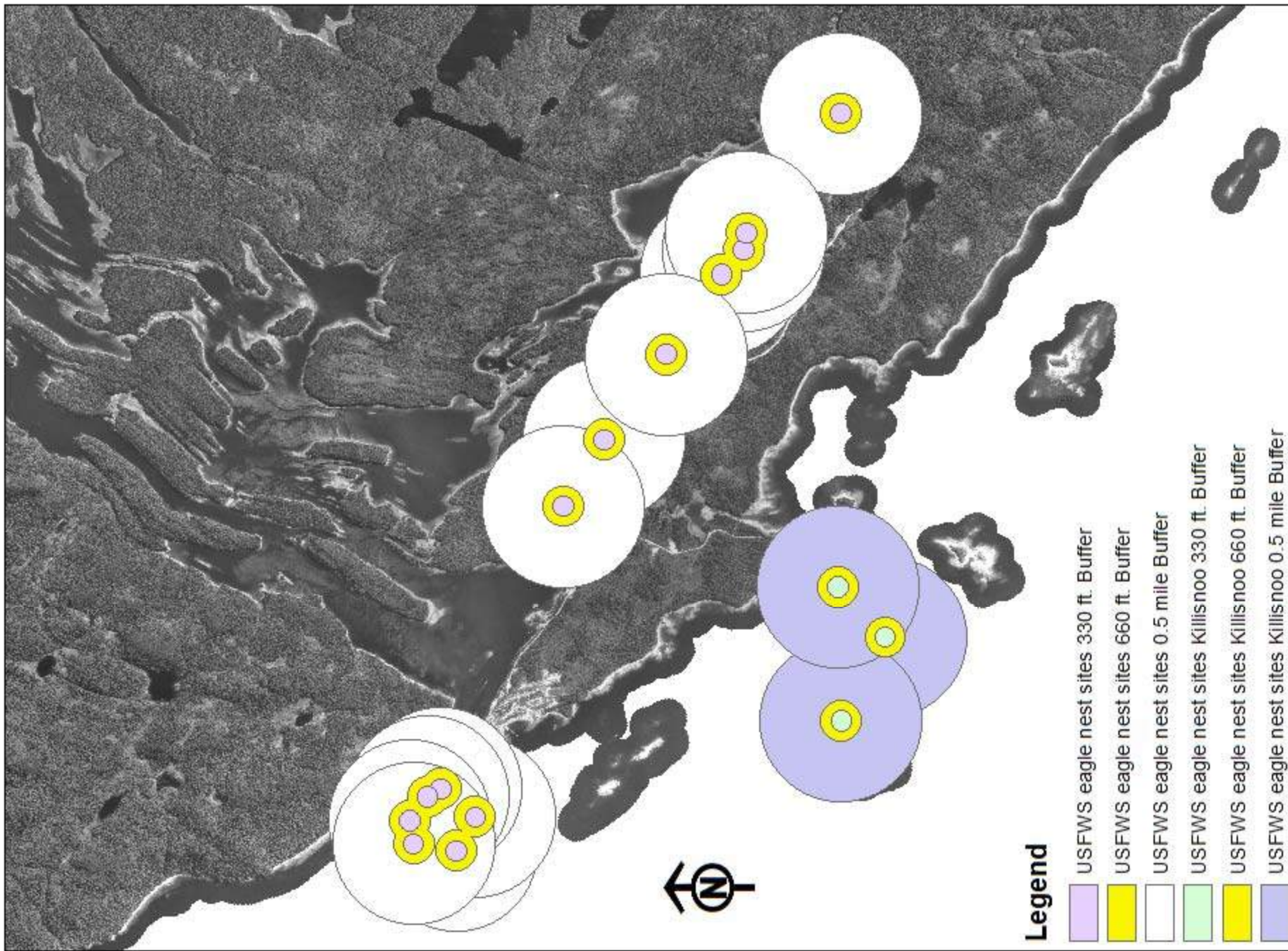


Figure 10. Bird surveys.

Bald Eagle Nest Locations - Angoon Airport Project



From: Enriquez, Richard [mailto:richard_enriquez@fws.gov]
Sent: Monday, September 23, 2013 10:45 AM
To: Jamie C. M. Young
Subject: Angoon Airport EIS: Informal USFWS consultation

Jamie, this responds to your consultation request regarding construction of the Angoon Airport at Alternative 12a location. For the purposes of the Endangered Species Act (ESA) Section 7 consultation, currently there are no listed threatened or endangered species under our jurisdiction in southeast Alaska.

Two candidate species, Yellow-Billed Loon and Kittlitz's Murrelet, utilize marine waters in Southeast Alaska. Both use marine waters within 200 miles of the coast of Southeast Alaska. Yellow-billed loons nest in northern and interior Alaska, and use inside waters in Southeast Alaska primarily during migration and during winter. We do not know how far offshore the species is found during winter. Primary food includes small fish, which they catch by diving (U.S. Fish & Wildlife Service, 2009).

Kittlitz's murrelets nest on the ground in rocky habitats, typically in recently deglaciated areas, and feed on small fish (sand lance, herring, capelin), amphipods and small crustaceans in marine waters (Day et al., 1999). During the summer breeding season, Kittlitz's murrelets are found in marine waters north of Wrangell.

During the winter, they are believed to disperse to the Gulf of Alaska, but specific locations are not known (Kissling et al., 2011). We anticipate the proposed airport project will have no effect on these species.

For future reference this email consultation response for the Angoon Airport EIS preferred alternative has been assigned consultation log number 07CAJN00-2013-SL-0054. Since there are no listed species in the project area identified in the email information package I received, there will not be any adverse effects to T&E species. You should reference the log number in your environmental documents, thus if there are any questions about this consultation, we will be readily able to access our records.

These comments are offered for endangered and threatened species for which the U.S. Fish and Wildlife Service (Service) has responsibility under Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1521 *et seq.*) and its amendments. The above comments are specific to the Endangered Species Act and do not reflect agency concerns regarding other organisms or habitats for which the Service has legislated responsibilities.

If you have any questions, please contact me by reply email, or at (907) 780-1162.

Richard Enriquez
Conservation Planning Assistance Biologist
Juneau Fish and Wildlife Field Office
3000 Vintage Blvd. #201
Juneau, AK 99801-7100

Literature References

Day, R.H., K.J. Kuletz, and D.A. Nigro. 1999. Kittlitz's Murrelet (*Brachyramphus brevirostris*). In: A. Poole and F. Gill (eds). The birds of North America. No. 435, Philadelphia & Washington, DC: Academy of Natural Sciences and American Ornithologists' Union.

Kissling, M.L. et al. 2011. Distribution and Abundance of the Kittlitz's Murrelet (*Brachyramphus brevirostris*) in selected areas of Southeastern Alaska. *Marine Ornithology* 39: 3-11.

U.S. Fish and Wildlife Service. 2009. Yellow-billed loon Factsheet. http://alaska.fws.gov/fisheries/endangered/pdf/ybl_factsheet.pdf. Downloaded on 29 November 2011.

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Tuesday, September 24, 2013 3:35 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News, Announcements, & Updates (9/24/13)

FAA is pleased to announce that we have posted the September Project Update to our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[September Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851
Email. Leslie.Grey@faa.gov

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September 2013 Monthly Project Update

As summer draws to a close, I wanted to share a bit more information with you about recent fieldwork in Angoon. In July, August, and September, crews visited Angoon to conduct cultural and natural resource surveys at the Airport 12a site. This additional fieldwork was prompted by the FAA's identification of the Airport 12a site as the preferred alternative. Results from these surveys will be provided in the Public Draft of the EIS.

Each of our crews was required to have bear guards during surveys. We were lucky enough to have Angoon residents, Alvin and Donald Johnson, fill this roll at different times during surveys.



Molly Odell, the field director for cultural resources, visited Angoon with five other archaeologists, for 10 days in July. This crew investigated locations where the probability of finding cultural resources is high. Molly and the cultural resources crew were especially thankful for the help they received from Angoon residents. *"With the help of our knowledgeable bear guards, we were able to visit all our project areas without seeing a single bear. Alvin and Donald and the many seniors we met at the senior center were very gracious in sharing their traditional knowledge with us. That knowledge helped us conduct our survey and helped us understand the deep, rich history of Angoon."*

Taya MacLean and Stacey Reed went to Angoon to conduct wetland and stream surveys in August and September. Stacey described their 12-hour days this way: *"We had a wonderful experience in Angoon! The weather was sunny and dry. The berries were plentiful and ripe and we indulged in wild blueberries, huckleberries, cloudberries, thimbleberries, and salmon berries."* Stacey and Taya offered this appreciation of Alvin's skills: *"Alvin's experience and natural connection and intuition with the wilderness and knowledge in bear behavior, helped keep us from potentially dangerous encounters with the Alaskan brown bear. Alvin taught us skills on how to avoid bear encounters that we will incorporate into our company's safety plan for future work in bear habitat."*

I occasionally receive phone calls from Angoon residents with questions and comments. I always enjoy our conversations and like hearing what is on your mind about the airport project. Your opinions and perspectives about the proposed airport continue to be important to me and the process, and I hope you will continue to stay in touch. You can reach me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov. I always enjoy hearing from you.

Best regards,

Leslie Grey



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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 3:53 PM
To: Enriquez, Richard
Cc: Amanda Childs; Lara Bjork
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Richard,

I just left you a voicemail, and we understand that when you return to work once federal funding has been restored, you will be able to respond to us.

Schedule:

We think that the 30-day agency review of the Angoon Airport Preliminary DEIS will begin October 28. Next week I will provide you an updated overarching schedule.

Fish & Wildlife Service (FWS) team members:

We assume that you are still the FWS project contact. Please let us know by October 9th if there will be any other FWS reviewers and provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

As you have observed, the EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

Instead of using our client access site, we are planning to make the document available for download using a password-protected login at the project's website. Upon request, we can also provide the files on CD, as long as you request that by October 9.

Submitting Comments:

The cover letter on the website version will discuss comment submittal via letter, please ignore this. Please still use the comment database to enter your comments. We'll assume that you are coordinating and reviewing all of the FWS comments.

Thank you for your time, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
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Ketchikan, Alaska 99901
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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 3:48 PM
To: Randy Vigil (randal.p.vigil@usace.army.mil)
Cc: Amanda Childs; Lara Bjork
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Randy,
Thank you for calling me back. Here's a recap of what we just discussed.

Schedule:

We think that the 30-day agency review of the Angoon Airport Preliminary DEIS will begin October 28. Next week I will provide you an updated overarching schedule.

Corps team members:

You are still the lead Corps contact for this project. Please let us know by October 9th if there will be any other Corps reviewers and provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

As you have observed, the EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

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Submitting Comments:

The cover letter on the website version will discuss comment submittal via letter, please ignore this. Please still use the comment database to enter your comments. As the Corps' lead contact, we'll assume that you are coordinating and reviewing all of the Corps' comments.

Thank you for your time, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 4:18 PM
To: Amanda Childs; Lara Bjork
Subject: RE: Angoon Airport EIS: 30-day agency review to start 10/28/13

FYI: Sue Magee's out of the office 'til 10/15, but in her absence, Jen will coordinate for us.

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 3:16 PM
To: Jen Wing (jennifer.wing@alaska.gov)
Cc: Amanda Childs; Lara Bjork; Sue Magee (susan.magee@alaska.gov)
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Jen,
Thank you again for your time, here's a recap of what we just discussed.

Schedule:

We think that the 30-day agency review of the Angoon Airport preliminary draft EIS will begin October 28th.

State of Alaska team members:

We assume that Sue is the lead project contact for the State of Alaska, and we will provide the preliminary draft EIS to you and Sue for dissemination to all other State of Alaska reviewers (other than DOT&PF). Please let us know by October 9th if we need to plan to provide the document to any other State of Alaska reviewers and provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairporteis.com). Upon request, we can also provide the files on CD, as long as you request that by October 9th.

Thank you for your help, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

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Ketchikan, Alaska 99901
P 907.220.9016 ☐ 907.821.0404 ☐ 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 4:48 PM
To: Lillian Woodbury (angooncityclerk@hotmail.com)
Cc: Lara Bjork; Amanda Childs
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Lillian,
Thank you again for your time, here's a recap of what we just discussed.

Schedule:

We think that the 30-day agency review of the Angoon Airport preliminary draft EIS will begin October 28th.

Angoon City Council review:

We will provide the preliminary draft EIS to you for dissemination to the Mayor and City Council members.

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairporteis.com). We will also mail you the files on CD.

Thank you for your help, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 02, 2013 5:11 PM
To: Raynelle Jack (rjackagntribe@gmail.com)
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Raynelle,
Thank you again for your time, here's a recap of what we just discussed.

Schedule:

We think that the 30-day agency review of the Angoon Airport preliminary draft EIS will begin October 28th.

Angoon City Council review:

We will provide the preliminary draft EIS to you for dissemination to the ACA Council members.

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairporteis.com). We will also mail you: 3 printed documents and 5 CDs containing the document.

Thank you for your help, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Thursday, October 03, 2013 1:11 PM
To: VanOrmer, Chad M -FS; Berger, Jennifer -FS
Cc: Amanda Childs; Lara Bjork
Subject: RE: Angoon Airport EIS: 30-day agency review to start 10/28/13

Thanks for your time, Chad!

Once funding is restored and Jenn's able to respond, we'll evaluate the preliminary DEIS review period, and readjust, as necessary.

Looking forward to the end of the furlough! Sincerely, Jamie (907.821.0404)

From: VanOrmer, Chad M -FS [mailto:cvanormer@fs.fed.us]
Sent: Thursday, October 03, 2013 9:05 AM
To: Jamie C. M. Young; Berger, Jennifer -FS
Cc: Amanda Childs; Lara Bjork
Subject: RE: Angoon Airport EIS: 30-day agency review to start 10/28/13

Thanks for the message Jamie. Yes, all of my staff are currently on furlough. I am still working intermittently as an 'excepted' employee limited to duties only associated with the orderly shut-down. We will do our best to respond to your message in a timely manner when Congress restores funding and we return back to work. I think you may want to plan on some contingencies as the word I am getting is that this furlough could last weeks.

Thanks
-Chad

Chad VanOrmer

Monument Ranger
Admiralty Island National Monument
8510 Mendenhall Loop Road
Juneau, Alaska 99801
907-789-6202 (landline)
907-789-8808 (fax)

From: Jamie C. M. Young [mailto:jyoung@swca.com]
Sent: Wednesday, October 02, 2013 2:40 PM
To: Berger, Jennifer -FS
Cc: achilds@swca.com; Lara Bjork; VanOrmer, Chad M -FS
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Jenn,

I just left you a voicemail, and we understand that when you return to work once federal funding has been restored, you will be able to respond to us.

Schedule:

We think that the 30-day agency review of the Angoon Airport Preliminary DEIS will begin October 28. Next week I will provide you an updated overarching schedule.

Forest Service (FS) team members:

We assume that you are still the FS lead contact for this project. Here are the other FS team members that we assume will be part of the FS review team, and the contact information that we have for them. If possible, please let us know by October 9th if there will be any other FS reviewers.

First Name	Last Name	Title	Organization	Address	Ad
Jennifer (Jenn)	Berger	Special Use Administration	US Forest Service	Admiralty Island National Monument / Juneau Ranger District	85
Shane	King	Natural Resource Specialist	US Forest Service	Admiralty Island National Monument / Juneau Ranger District	85
Melissa	Dinsmore	Realty/Lands Specialist	US Forest Service	Sitka Forest Supervisor's Office	20
Kevin	Hood	Wilderness & Special Uses Specialist	US Forest Service	Admiralty Island National Monument / Juneau Ranger District	85
Chad	VanOrmer	District Ranger	US Forest Service	Admiralty Island National Monument / Juneau Ranger District	85

Document Format:

As you have observed, the EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

Instead of using our client access site, we are planning to make the document available for download using a password-protected login at the project’s website. Upon request, we can also provide the files on CD, as long as you request that by October 9.

Submitting Comments:

The cover letter on the website version will discuss comment submittal via letter, please ignore this. Please still use the comment database to enter your comments. We’ll assume that you are coordinating and reviewing all of the FS comments. Sometime soon, we’ll be contacting you to discuss some of Tom Banks’ comments. Please review those ahead of time, when you get a moment.

Thank you for your time, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☐ 907.821.0404 ☐ F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Thursday, October 03, 2013 5:10 PM
To: Peter Naoroz
Cc: Floyd Kookesh; Sharon Love; Lara Bjork; Amanda Childs
Subject: RE: Angoon Airport EIS: 30-day agency review to start 10/28/13

Embarrassing! Please note that I meant to type "Kootznoowoo, Inc." below where I incorrectly typed "Angoon City Council". I apologize for this mistake on my part! Thank you for your understanding. Sincerely, Jamie

From: Peter Naoroz [<mailto:peter.naoroz@gmail.com>]
Sent: Wednesday, October 02, 2013 9:41 PM
To: Jamie C. M. Young
Cc: Floyd Kookesh; Sharon Love
Subject: Re: Angoon Airport EIS: 30-day agency review to start 10/28/13

thanks Jamie!

On Wed, Oct 2, 2013 at 4:15 PM, Jamie C. M. Young <jyoung@swca.com> wrote:

Hello Peter and Sharon,

We have a project update for you. Please give me a call, when you have a moment tomorrow (10/3).

Schedule:

We think that the 30-day agency review of the Angoon Airport preliminary draft EIS will begin October 28th.

Angoon City Council review:

We will provide the preliminary draft EIS to you for dissemination to the Kootznoowoo, Inc. Board. Please let us know by October 9th if we need to plan to provide the document to any other Kootznoowoo, Inc. reviewers and provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairports.com). Upon request, we can also provide the files on CD, as long as you request that by October 9th.

Thank you for your time, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive

Ketchikan, Alaska 99901

P [907.220.9016](tel:907.220.9016) ☎ [907.821.0404](tel:907.821.0404) ☎ F [907.279.7922](tel:907.279.7922)



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From: Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]
Sent: Tuesday, October 15, 2013 2:30 PM
To: Kate Savage - NOAA Federal
Cc: Amanda Childs; Jamie C. M. Young; Chiska.Derr@noaa.gov; jon.kurland@noaa.gov; Leyla Arsan; Leslie.Grey@faa.gov
Subject: Fw: Angoon Airport EIS: NOAA NMFS coordination re: preferred alternative

Kate,

Thanks for discussing this with Jamie in June. We are proceeding with a "no effect" determination and have documented our rationale in the Draft EIS. Upon your review of the Special Status Species section of the Draft EIS, if you determine that we should proceed with a BA and a "may affect/not likely to adversely affect" determination, please contact us right away. Thanks again, Leslie

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453

From: Kate Savage - NOAA Federal [mailto:kate.savage@noaa.gov]
Sent: Friday, June 14, 2013 1:07 PM
To: Jamie C. M. Young
Cc: Chiska Derr (Chiska.Derr@noaa.gov); Leslie.Grey@faa.gov; Amanda Childs; jon.kurland@noaa.gov; Leyla Arsan
Subject: Re: Angoon Airport EIS: NOAA NMFS coordination re: preferred alternative

Hi Jamie,

When Leslie and I spoke, it was with the understanding that, based upon the information and maps provided, there was no significant marine component to the project. However, based upon your email above, there is a marine component with the barging of materials.

I will be happy to discuss MMPA compliance with you as well as mandates under the ESA Section 7. Section 7 of the ESA specifies a process for interagency cooperation and consultation during project review to ensure that actions funded, authorized or implemented by a Federal agency are not likely to jeopardize the continued existence of any listed species, or result in the destruction or adverse modification of critical habitat.

Further information on Section 7 consultation may be found at:

<http://www.alaskafisheries.noaa.gov/protectedresources/esa/>

It is ultimately the responsibility of the action agency to determine whether the project:

1. will have no effect on listed species
2. may affect, but is not likely to adversely affect listed species or
3. is likely to adversely affect listed species.

While I can not make that determination for you, I will be happy to help you in discussing the best approach for you to take in assessing impacts. I suggest we continue our discussion over the phone and then, if deemed necessary, can meet in person the week of June 24th while you are in town.

Regards,
Kate Savage

On Tue, Jun 11, 2013 at 4:04 PM, Jamie C. M. Young <jyoung@swca.com> wrote:

Dear Kate and Chiska (cc Jon Kurland),

Leslie Grey, FAA's Angoon Airport project manager, mentioned that Kate called her and didn't think that it would be necessary for the FAA to have an in-person coordination meeting with NMFS while we're in Juneau the week of June 24th. We requested a meeting with you because we want to obtain your concurrence of our determination that the Angoon Airport EIS preferred alternative (Airport 12a with Access 12a) is:

- 1) compliant with the Marine Mammal Protection Act (MMPA) and
- 2) does not require an essential fish habitat assessment or a biological assessment (BA)

The only potential effects to marine mammals from the project would be from barging because most of the project materials would be barged in. The preferred alternative proposes up to 28 barge trips in addition to current incoming Angoon barge traffic. However, because the EIS' Mitigation chapter includes this BMP: "Barge speeds will be maintained at less than 7 knots to minimize the potential for ship strikes to marine mammals," we believe that the project will be MMPA compliant.

Also, because the two streams intersected by the proposed Airport location are both assumed to be resident or non-fish-bearing, we do not anticipate adverse effects to essential fish habitat.

If you determine that it is sufficient concurrence for you to respond to this email as such, then we will archive your response in the project record. Otherwise, we would like to discuss our determinations further with you in-person, and we are available Wed (6/26) at noon, 2PM or 4PM. Thank you very much for your time. Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants

317 Forest Park Drive

Ketchikan, Alaska 99901

P [907.220.9016](tel:907.220.9016) | C [907.821.0404](tel:907.821.0404) | F [907.279.7922](tel:907.279.7922)



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--
Kate Savage, DVM
Marine Mammal Specialist
Protected Resources Division
NOAA Fisheries

Juneau, AK.
(907) 586-7312

Lara Bjork

From: Jamie C. M. Young
Sent: Wednesday, October 16, 2013 1:56 PM
To: Jennifer Curtis (Curtis.jennifer@Epamail.epa.gov)
Cc: Matt Lacroix (Lacroix.matthew@Epamail.epa.gov); Lara Bjork; Amanda Childs
Subject: FW: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Jennifer, I realized that I should've also included you on this communication. When you and Matthew are able to return to work, please let us know who the lead EPA contact will be for the Angoon Airport EIS, and we can discuss logistics of providing you the internal agency draft EIS electronically for review.

Thank you for your time! Sincerely, Jamie (907.821.0404)

From: Jamie C. M. Young
Sent: Thursday, October 03, 2013 4:11 PM
To: Matt Lacroix (Lacroix.matthew@Epamail.epa.gov)
Cc: Amanda Childs; Lara Bjork
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Matthew,

I just left you a voicemail, and we understand that when you return to work once federal funding has been restored, you will be able to respond to us.

Schedule:

We think that the 30-day agency review of the Angoon Airport preliminary draft EIS will begin October 28th.

U.S. Environmental Protection Agency (USEPA) review:

We assume that you are the lead project contact for the USEPA, and we will provide the preliminary draft EIS to you for dissemination to all other USEPA reviewers. If possible, please let us know by October 9th if we need to plan to provide the document to any other reviewers and provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairporteis.com). Upon request, we can also provide the files on CD, as long as you request that by October 9th.

Thank you for your time, we appreciate it! Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎F 907.279.7922



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Lara Bjork

From: Jamie C. M. Young
Sent: Friday, October 18, 2013 12:51 PM
To: Kate Savage (kate.savage@noaa.gov)
Cc: Lara Bjork; Amanda Childs; Jeanne Hanson (Jeanne.Hanson@noaa.gov); Chiska Derr (Chiska.Derr@noaa.gov); Leslie.Grey@faa.gov
Subject: RE: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Kate,

I apologize for the phone tag that we've had going on! I received your message acknowledging our courtesy review offer of the DEIS. We will remove you from the distribution list, as you've requested.

Again, thank you for your time. Sincerely, Jamie

From: Jamie C. M. Young
Sent: Wednesday, October 16, 2013 1:51 PM
To: Chiska Derr (Chiska.Derr@noaa.gov); Kate Savage (kate.savage@noaa.gov)
Cc: Lara Bjork; Amanda Childs; Jeanne Hanson (Jeanne.Hanson@noaa.gov)
Subject: Angoon Airport EIS: 30-day agency review to start 10/28/13

Hello Chiska and Kate,

I left voicemails for you, as well. We understand that when you return to work once federal funding has been restored, you will be able to respond to us.

Schedule:

We anticipate the 30-day internal agency review of the Angoon Airport draft EIS will begin October 28th.

National Marine Fisheries Service (NMFS) Review:

We assume that you are the lead project contacts for the NMFS, and we will provide the document to you for dissemination to all other NMFS reviewers. If we need to work directly with add any reviewers, please provide their full contact information (name, title, physical mailing address, phone number, and email).

Document Format:

The EIS is intended to be read on a computer. As a full color hyperlinked PDF document, it functions best when viewed electronically, and the functionality and accessibility are dramatically decreased in the hard copy version.

Obtaining the Document:

We are planning to make the document available for download using a password-protected login at the project's website (www.angoonairporteis.com).

Thank you for your time, and I look forward to speaking with you soon. Sincerely, Jamie

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
317 Forest Park Drive
Ketchikan, Alaska 99901
P 907.220.9016 ☎ 907.821.0404 ☎F 907.279.7922



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Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:35 AM
To: Richard_Enriquez@fws.gov
Cc: Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: Angoon_PDEIS_Agency_Online_Comment_Instructions_10_22_2013.pdf;
InternalAgencyDEIS_Ltr_1.pdf

Richard,

The internal agency draft of the Angoon Airport EIS is now available for your review. FAA welcomes and appreciates your comments on any chapter and/or sections pertaining to the assessment of resources for which your organization has special expertise and jurisdiction. Please submit your comments on the internal agency draft EIS by November 25, 2013.

Please note that this internal draft is not intended for review by the public; it is only intended for agency and tribal government review. Please do not share the EIS or its contents with persons outside of your agency or organization without written consent from the FAA project manager.

The attached documents contain additional information that is important for your review.

- The **Agency Online Comment Instructions** provides information on how to use the online comment database.
- The **Reviewer Letter** contains background information on the content and format of the EIS, along with suggestions for how to provide feedback on the document.

To download a hyperlinked PDF of the complete EIS, click on this link or paste it in your browser: Click on this link or paste it into your browser: <http://angoonairporteis.com/internalagencydraft.html>

- Enter the username: angoonairporteis
- Enter the password: angoonairporteis2013

Please note I will be out of the office November 18 through December 22, 2013. During this time, Mike Edelmann will be FAA's acting project manager. Should you have any questions during your review, he can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

On behalf of FAA and the project team, thank you very much for your assistance with this project.

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453



Angoon Airport Internal Agency Draft EIS (DEIS) Comments

The Angoon Airport internal agency DEIS is now available for your review and comment. Please provide comments on sections that deal with resources that you have management or regulatory authority over. Note that this is a “live,” linked PDF. We encourage you to use the hyperlinks, Back to Last, and Table of Contents buttons. You can also use Adobe’s Bookmark feature to navigate by section headings.

Please take a moment to read the instructions below, as they will provide you with additional guidance on how to submit your comments on the internal agency DEIS.

Obtaining the Internal Agency DEIS from the Project Website

- Click on this link: <http://angoonairporteis.com/internalagencydraft.html>
- Enter the username: angoonairporteis
- Enter the password: angoonairporteis2013

Commenting via the Online Comment Database

We have developed an online comment database where you can enter your comments while reviewing the internal agency DEIS. The steps are outlined below. If you have any questions or concerns regarding the **database**, please contact Jamie Young at 907.821.0404 or jyoung@swca.com. Should you have any questions on the **EIS** during your review, contact Mike Edelmann, FAA’s acting project manager. He can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions on either the EIS or the database. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

- Using your email address, a user account for the [Angoon Airport Draft EIS comment database](#) has been established for you. This database, which is described below, will allow you to comment securely online. If you have not already, you will receive an email invite to log in to the database that will include a password in a subsequent email. **It is our preference that you use the database to provide comments.** By using the database we can ensure that no comment has been lost and that all comments are appropriately responded to in a timely manner.
- To request a user account for an additional commenter from your agency, please contact **Jamie Young at jyoung@swca.com or 907.821.0404.**
- You can enter comments into the online database through-out the 30-day internal agency DEIS review period (October 28 thru November 25, 2013). Following this review period, the comment database will be closed for comment entry.



Commenting Tips

Public and agency comments are the cornerstone of a successful EIS. We use these comments to help us correct areas in the EIS where information is missing or inaccurate and expand upon our analyses and justifications for EIS conclusions, thereby making the EIS a stronger document as a whole. We encourage you to structure your comments in a manner that provides specific, clear guidance to the FAA on what the agency should do to improve the EIS. When reading the EIS, some questions that may help you provide specific feedback include:


- What is missing from the section? Are there topics we have not addressed or data and other information sources we should use?
- Is our analysis and methodology appropriate? If you believe it is not, what do you recommend and why?
- Have we properly supported our conclusions and significance determinations?
- Are there additional ways we can avoid or reduce effects to resources that we haven't identified?



Steps for Commenting via the Online Comment Database

Step 1

- Download and save the internal agency DEIS as described above.
- This document will NOT have line numbers; it will only have page numbers for reference. You will enter the page numbers into the online comment database.



Angoon Airport Draft Environmental Impact Statement
Chapter 4: Existing Conditions and Project Effects
4.5.1. Terrestrial Habitats and Associated Species

4.5.1. Terrestrial Habitats and Associated Species

This section addresses the existing conditions of terrestrial habitats and associated plant, animal, and bird species in the area of the airport and access road alternatives. It also addresses the potential changes to those conditions from construction and operation of the proposed land-based airport.

The information contained in this section is summarized from *Vegetation, Wetlands, and Wildlife Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement Angoon, Alaska* (SWCA 2011a), included as Appendix H. A list of all bird species observed in the study area is included in Table E-1 in Appendix H, and common and characteristic bird species in the study area are also described in the section 4.3 of Appendix II.

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

The term *terrestrial* refers to land. *Habitat* refers to the composition and structure of the plant life and physical or geological features of an area. The habitats discussed in this section are defined by terrestrial vegetation—or plant species that live on land. Terrestrial wildlife includes species that are land-based (such as deer and songbirds), species that live in terrestrial habitats but forage in aquatic habitats (such as mink and otter), and species that occupy both terrestrial and *aquatic* habitats (such as beaver, muskrat, and waterbirds including loons, mallard, and Vancouver Canada goose). Vegetation communities—distinct collections of plant species that grow in similar environments and conditions—form the basis for habitats used by animals. The plant and animal species that occupy or use a habitat are its *associated species*. In an assessment of project effects on the vegetation itself and its function as habitat for the species that live in or use it, effects to individuals, populations, and species of animals must be considered.

What is discussed in this section?

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

4.5.2.1. Existing conditions

4.5.3.1. Project effects

Terms to know

Aquatic: Relating to water.

Associated species: The plant and animal species that live in or use a habitat type for all or part of their lifecycle.

Habitat: An area with the combination of environmental conditions that supports a given species’ life.

Terrestrial: Relating to the land surface.

175 NOT FOR PUBLIC RELEASE Table of Contents Back to Last Location

The internal agency DEIS will not have line numbers. You’ll refer to page numbers when making comments about text.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

Step 2

Click on the comment database link here: [Angoon Airport Draft EIS comment database](#). The login page will come up as shown below. Use your email address and password to log in as described above.

The screenshot shows a web browser window displaying the login page for the Angoon Airport Draft EIS Comment Database. The page features a header with the Angoon First Nation logo and the text "Angoon Airport Draft EIS Comment Database". Below the header is a navigation bar with a "Home" link. The main content area is titled "Login" and contains the following elements:

- E-mail:
- Password:
- Remember me (for 30 days)
-
- [lost password](#)

At the bottom of the page, there is a footer with the SWCA logo and the text "Copyright © 2011".



Step 3

After logging in, you'll reach the home page. Click on the link that corresponds to the sections that you are going to review. For this example, we'll use 4.2, Air Quality. Note that not all of the sections of the EIS are shown in this example image.

The screenshot shows the 'Angoon Airport Draft EIS Comment Database' website. At the top left is the Angoon Airport logo. The title 'Angoon Airport Draft EIS Comment Database' is centered. Below the title is a 'Home' button. The main content area is titled 'Reviewer Comments' and is organized into several columns:

- Front Matter:**
 - [Cover and Title Page](#)
 - [Readers Guide](#)
 - [Executive Summary](#)
- Chapter 1:**
 - [Project Background: Planning for a Land-Based Airport at Angoon](#)
- Chapter 2:**
 - [Purpose and Need for a Land-Based Airport at Angoon](#)
- Chapter 3:**
 - [Alternatives](#)
- Chapter 4:**
 - [4.1 Introduction](#)
 - [4.2 Air Quality](#)
 - [4.3 Compatible Land Use](#)
 - [4.4 U.S. Department of Transportation Act Section 4\(f\) Evaluation Summary](#)
 - [4.5 Biological Resources Introduction](#)
 - [4.5.1 Terrestrial Habitats and Associated Species](#)
 - [4.5.2 Aquatic Habitats and Associated Species](#)
 - [4.5.3 Special Status Species](#)
 - [4.6 Floodplains, Stream Geomorphology, and Hydrology](#)
 - [4.7 Hazardous Materials, Pollution Prevention, and Solid Waste](#)
 - [4.8 Cultural Resources](#)
 - [4.9 Light Emissions and Visual Resources](#)
 - [4.10 Nat. Res. Energy Sustainable](#)
 - [4.11 Noise](#)
 - [4.12 Socioeconomic Conditions](#)
 - [4.13 Subsistence Resources and Uses](#)
 - [4.14 Water Quality](#)
 - [4.15 Wetlands](#)
 - [4.16 Wilderness Character](#)
 - [4.17 Climate Change and Greenhouse Gas Emissions](#)
 - [4.18 Environmental Justice and Children's Health and Safety](#)
- Chapter 5:**
 - [Requirements of the Alaska National](#)
- Appendices:**
 - [Alternatives Eliminated from Detailed Analysis](#)



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

When you click on the name of the section/chapter you're going to review, the database table for that chapter/section will open. If no one has commented on that section, it will look like the image below.

Home

Comments for Chapter/Section: 4.5.2 - Aquatic Habitats and Associated Species

[Comment on Text](#) [Comment on Graphic/Element](#)

#	Page/Elem	Comment/Suggested Resolution
No data available in table		

Click here to comment on text.

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You will need to fill in the page number of the text that you want to comment on.

The screenshot shows a web form titled "Add Comment". The form contains the following fields and information:

- Section: 4.5.2
- Page:
- Commenter: USACE Guest USACE (43)
- Created: 2013-10-22 22:22:16
- Comment/Suggested Resolution:
- Submit:

Two red callout boxes with arrows point to specific parts of the form:

- The first callout box points to the "Page" input field and contains the text: "Enter the page number where the text you're commenting on begins."
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When you are finished, click the green submit button.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

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Enter the page number of the terms to know box, navigation box, table, figure, or sidebar box that you're commenting on.

Select the type of element from this pull-down menu.

Enter your comment here.

Angoon Airport Draft EIS
Comment Database

Home

Add Comment

Section: 4.2

Page:

Element:

- Terms to Know
- Navigation Box
- Table
- Figure
- Sidebar Box

Commenter:

Created:

Comment/Suggested

Resolution:

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Click here to edit.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

Edit Comment #95

Section: 4.5.2
Page: 176
Element: Table
Commentor: USACE Guest USACE (43)
Created: 2013-10-22 22:27:30
Comment/Suggested Resolution: Please add an additional row to this table to discuss the other species in the text.

Delete?

Submit

Check this box if you want to delete a comment completely.

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

October 28, 2013

To: Cooperating and Consulting Agencies and Tribal Governments

Re: Angoon Airport – 30-day Agency and Tribal Review of Internal Agency Draft Environmental Impact Statement

Enclosed for your review and comment is the internal agency draft environmental impact statement (EIS) for the proposed land-based Angoon Airport. FAA welcomes and appreciates your comments on any chapter and/or sections pertaining to the assessment of resources for which your organization has special expertise and jurisdiction. There are a few items concerning this draft that I would like to highlight.

This document is an internal draft that is not intended for review by the public; it is only intended for agency and tribal government review. Please do not share the EIS or its contents with persons outside of your agency or organization without my written consent.

As we communicated to you early this summer, the FAA has identified Airport 12a with Access 12a as the preferred alternative. There are several key factors to this decision as follows:

- 1) The FAA has determined that the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument-Wilderness Area) is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument-Wilderness lands, leaving Airport 12a with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.
- 2) Section 1104(g)(2)(B) of the Alaska National Interests Lands Conservation Act (ANILCA) states that federal agencies should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the transportation system through or within a conservation system unit.” Analysis in the EIS indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument-Wilderness lands (which are considered a conservation system).

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Half of the document that we're providing you is appendices. The majority of these appendices have been available to the public for some time, and we've already incorporated comments that we received on them. These are static documents that do not require further revisions. However, there are three appendices that have not been previously made available, and we welcome your comments on them. They are:

- Appendix B: Alternatives Eliminated from Detailed Analysis
- Appendix D: U.S. Department of Transportation Section 4(f) Evaluation
- Appendix N: Alaska National Interest Lands Conservation Act (ANILCA) Section 810 Evaluation

We have prepared this EIS differently than other EISs that you have reviewed in the past. It is important that you read our Reader's Guide at the beginning of the document. Please let us know if you have any questions as you review this document.

Public and agency comments are the cornerstone of a successful EIS. We use these comments to help us correct areas in the EIS where information is missing or inaccurate and expand upon our analyses and justifications for EIS conclusions, thereby making the EIS a stronger document as a whole. We encourage you to structure your comments in a manner that provides specific, clear guidance to the FAA on what the agency should do to improve the EIS. When reading the EIS, some questions that may help you provide specific feedback include:

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- Have we properly supported our conclusions and significance determinations?
- Are there additional ways we can avoid or reduce effects to resources that we haven't identified?

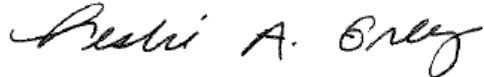
Please submit your comments on the internal agency Draft EIS via the online comment database by November 25, 2013. Separate instructions are attached for online commenting.

Please note I will be out of the office November 18 through December 22, 2013. During this time, Mike Edelman will be FAA's acting project manager. Should you

have any questions during your review, he can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

On behalf of FAA and the project team, thank you very much for your assistance with this project.

Sincerely,



Leslie Grey
FAA, Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Lead Contacts for Distribution of Agency and Tribal Review: The FAA has coordinated with these individuals, who have committed to distributing the internal agency review Draft EIS to the appropriate reviewers at their respective agencies and tribal governments.

Angoon Community Association □ Raynelle Jack
City of Angoon □ Lillian Woodbury
Kootznoowoo, Inc. □ Peter Naoroz, Sharon Love
ADOT&PF □ Verne Skagerberg
U.S. Forest Service □ Jenn Berger
U.S. Army Corps of Engineers □ Randy Vigil
U.S. Fish & Wildlife Service □ Richard Enriquez
State of Alaska □ Susan Magee, Jen Wing
U.S. Environmental Protection Agency □ Matthew Lacroix, Jennifer Curtis
U.S. National Marine Fisheries Service □ Chiska Derr

Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:35 AM
To: jberger@fs.fed.us
Cc: shaneking@fs.fed.us; mdinsmore@fs.fed.us; kehood@fs.fed.us; cvanormer@fs.fed.us; Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: Angoon_PDEIS_Agency_Online_Comment_Instructions_10_22_2013.pdf; InternalAgencyDEIS_Ltr_1.pdf

Jennifer,

The internal agency draft of the Angoon Airport EIS is now available for your review. FAA welcomes and appreciates your comments on any chapter and/or sections pertaining to the assessment of resources for which your organization has special expertise and jurisdiction. Please submit your comments on the internal agency draft EIS by November 25, 2013.

Please note that this internal draft is not intended for review by the public; it is only intended for agency and tribal government review. Please do not share the EIS or its contents with persons outside of your agency or organization without written consent from the FAA project manager.

The attached documents contain additional information that is important for your review.

- The **Agency Online Comment Instructions** provides information on how to use the online comment database.
- The **Reviewer Letter** contains background information on the content and format of the EIS, along with suggestions for how to provide feedback on the document.

To download a hyperlinked PDF of the complete EIS, click on this link or paste it in your browser: Click on this link or paste it into your browser: <http://angoonairporteis.com/internalagencydraft.html>

- Enter the username: angoonairporteis
- Enter the password: angoonairporteis2013

Please note I will be out of the office November 18 through December 22, 2013. During this time, Mike Edelmann will be FAA's acting project manager. Should you have any questions during your review, he can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

On behalf of FAA and the project team, thank you very much for your assistance with this project.

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453



Angoon Airport Internal Agency Draft EIS (DEIS) Comments

The Angoon Airport internal agency DEIS is now available for your review and comment. Please provide comments on sections that deal with resources that you have management or regulatory authority over. Note that this is a “live,” linked PDF. We encourage you to use the hyperlinks, Back to Last, and Table of Contents buttons. You can also use Adobe’s Bookmark feature to navigate by section headings.

Please take a moment to read the instructions below, as they will provide you with additional guidance on how to submit your comments on the internal agency DEIS.

Obtaining the Internal Agency DEIS from the Project Website

- Click on this link: <http://angoonairporteis.com/internalagencydraft.html>
- Enter the username: angoonairporteis
- Enter the password: angoonairporteis2013

Commenting via the Online Comment Database

We have developed an online comment database where you can enter your comments while reviewing the internal agency DEIS. The steps are outlined below. If you have any questions or concerns regarding the database, please contact Jamie Young at 907.821.0404 or jyoung@swca.com. Should you have any questions on the EIS during your review, contact Mike Edelmann, FAA’s acting project manager. He can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions on either the EIS or the database. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

- Using your email address, a user account for the [Angoon Airport Draft EIS comment database](#) has been established for you. This database, which is described below, will allow you to comment securely online. If you have not already, you will receive an email invite to log in to the database that will include a password in a subsequent email. **It is our preference that you use the database to provide comments.** By using the database we can ensure that no comment has been lost and that all comments are appropriately responded to in a timely manner.
- To request a user account for an additional commenter from your agency, please contact **Jamie Young at jyoung@swca.com or 907.821.0404.**
- You can enter comments into the online database through-out the 30-day internal agency DEIS review period (October 28 thru November 25, 2013). Following this review period, the comment database will be closed for comment entry.



Commenting Tips

Public and agency comments are the cornerstone of a successful EIS. We use these comments to help us correct areas in the EIS where information is missing or inaccurate and expand upon our analyses and justifications for EIS conclusions, thereby making the EIS a stronger document as a whole. We encourage you to structure your comments in a manner that provides specific, clear guidance to the FAA on what the agency should do to improve the EIS. When reading the EIS, some questions that may help you provide specific feedback include:

- What is missing from the section? Are there topics we have not addressed or data and other information sources we should use?
- Is our analysis and methodology appropriate? If you believe it is not, what do you recommend and why?
- Have we properly supported our conclusions and significance determinations?
- Are there additional ways we can avoid or reduce effects to resources that we haven't identified?



Steps for Commenting via the Online Comment Database

Step 1

- Download and save the internal agency DEIS as described above.
- This document will NOT have line numbers; it will only have page numbers for reference. You will enter the page numbers into the online comment database.

Angoon Airport Draft Environmental Impact Statement
Chapter 4: Existing Conditions and Project Effects
4.5.1. Terrestrial Habitats and Associated Species

4.5.1. Terrestrial Habitats and Associated Species

This section addresses the existing conditions of terrestrial habitats and associated plant, animal, and bird species in the area of the airport and access road alternatives. It also addresses the potential changes to those conditions from construction and operation of the proposed land-based airport.

The information contained in this section is summarized from *Vegetation, Wetlands, and Wildlife Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement Angoon, Alaska* (SWCA 2011a), included as Appendix H. A list of all bird species observed in the study area is included in Table E-1 in Appendix H, and common and characteristic bird species in the study area are also described in the section 4.3 of Appendix II.

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

The term *terrestrial* refers to land. *Habitat* refers to the composition and structure of the plant life and physical or geological features of an area. The habitats discussed in this section are defined by terrestrial vegetation—or plant species that live on land. Terrestrial wildlife includes species that are land-based (such as deer and songbirds), species that live in terrestrial habitats but forage in aquatic habitats (such as mink and otter), and species that occupy both terrestrial and *aquatic* habitats (such as beaver, muskrat, and waterbirds including loons, mallard, and Vancouver Canada goose). Vegetation communities—distinct collections of plant species that grow in similar environments and conditions—form the basis for habitats used by animals. The plant and animal species that occupy or use a habitat are its *associated species*. In an assessment of project effects on the vegetation itself and its function as habitat for the species that live in or use it, effects to individuals, populations, and species of animals must be considered.

What is discussed in this section?

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

4.5.2.1. Existing conditions

4.5.3.1. Project effects

Terms to know

Aquatic: Relating to water.

Associated species: The plant and animal species that live in or use a habitat type for all or part of their lifecycle.

Habitat: An area with the combination of environmental conditions that supports a given species’ life.

Terrestrial: Relating to the land surface.

175

NOT FOR PUBLIC RELEASE

Table of Contents

Back to Last Location

The internal agency DEIS will not have line numbers. You’ll refer to page numbers when making comments about text.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

Step 2

Click on the comment database link here: [Angoon Airport Draft EIS comment database](#). The login page will come up as shown below. Use your email address and password to log in as described above.

The screenshot shows a web browser window with the following elements:

- Header:** On the left is the Angoon First Nation logo. To its right, the text reads "Angoon Airport Draft EIS" in a large, bold font, and "Comment Database" in a smaller font below it.
- Navigation:** A grey bar below the header contains a "Home" link.
- Login Section:** Titled "Login" in bold. It includes:
 - An "E-mail:" label followed by a white text input field.
 - A "Password:" label followed by a white text input field with a yellow border.
 - A checkbox labeled "Remember me (for 30 days)".
 - A green "Submit" button.
- Footer:** A grey bar at the bottom contains the "SWCA" logo and the text "Copyright © 2011".
- Links:** A "lost_password" link is located below the password field.



Step 3

After logging in, you'll reach the home page. Click on the link that corresponds to the sections that you are going to review. For this example, we'll use 4.2, Air Quality. Note that not all of the sections of the EIS are shown in this example image.

The screenshot shows the 'Angoon Airport Draft EIS Comment Database' website. At the top left is the Angoon Airport logo. The title 'Angoon Airport Draft EIS' is prominently displayed, with 'Comment Database' underneath. A 'Home' button is visible in a grey bar. Below this is the 'Reviewer Comments' section, which is organized into several columns:

- Front Matter:**
 - [Cover and Title Page](#)
 - [Readers Guide](#)
 - [Executive Summary](#)
- Chapter 1:**
 - [Project Background: Planning for a Land-Based Airport at Angoon](#)
- Chapter 2:**
 - [Purpose and Need for a Land-Based Airport at Angoon](#)
- Chapter 3:**
 - [Alternatives](#)
- Chapter 4:**
 - [4.1 Introduction](#)
 - [4.2 Air Quality](#)
 - [4.3 Compatible Land Use](#)
 - [4.4 U.S. Department of Transportation Act Section 4\(f\) Evaluation Summary](#)
 - [4.5 Biological Resources Introduction](#)
 - [4.5.1 Terrestrial Habitats and Associated Species](#)
 - [4.5.2 Aquatic Habitats and Associated Species](#)
 - [4.5.3 Special Status Species](#)
 - [4.6 Floodplains, Stream Geomorphology, and Hydrology](#)
 - [4.7 Hazardous Materials, Pollution Prevention, and Solid Waste](#)
 - [4.8 Cultural Resources](#)
 - [4.9 Light Emissions and Visual Resources](#)
 - [4.10 Nat. Res. Energy Sustainable](#)
 - [4.11 Noise](#)
 - [4.12 Socioeconomic Conditions](#)
 - [4.13 Subsistence Resources and Uses](#)
 - [4.14 Water Quality](#)
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**Federal Aviation
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Airports Division

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Because the preferred alternative is not located in the Monument Wilderness Area, the Alaska Department of Transportation and Public Facilities (ADOT&PF) will not be submitting an ANILCA application at this time as had been initially planned. An ANILCA application would only need to be filed if after receiving and reviewing comments received on the public Draft EIS, FAA decides not to select Airport 12a and instead decides to select Airport 3a or Airport 4.

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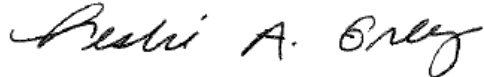
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On behalf of FAA and the project team, thank you very much for your assistance with this project.

Sincerely,



Leslie Grey
FAA, Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Lead Contacts for Distribution of Agency and Tribal Review: The FAA has coordinated with these individuals, who have committed to distributing the internal agency review Draft EIS to the appropriate reviewers at their respective agencies and tribal governments.

Angoon Community Association □ Raynelle Jack
City of Angoon □ Lillian Woodbury
Kootznoowoo, Inc. □ Peter Naoroz, Sharon Love
ADOT&PF □ Verne Skagerberg
U.S. Forest Service □ Jenn Berger
U.S. Army Corps of Engineers □ Randy Vigil
U.S. Fish & Wildlife Service □ Richard Enriquez
State of Alaska □ Susan Magee, Jen Wing
U.S. Environmental Protection Agency □ Matthew Lacroix, Jennifer Curtis
U.S. National Marine Fisheries Service □ Chiska Derr

Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:33 AM
To: randal.p.vigil@usace.army.mil
Cc: Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: Angoon_PDEIS_Agency_Online_Comment_Instructions_10_22_2013.pdf;
InternalAgencyDEIS_Ltr_1.pdf

Randy,

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The attached documents contain additional information that is important for your review.

- The **Agency Online Comment Instructions** provides information on how to use the online comment database.
- The **Reviewer Letter** contains background information on the content and format of the EIS, along with suggestions for how to provide feedback on the document.

To download a hyperlinked PDF of the complete EIS, click on this link or paste it in your browser: Click on this link or paste it into your browser: <http://angoonairporteis.com/internalagencydraft.html>

- Enter the username: angoonairporteis
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Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453



Angoon Airport Internal Agency Draft EIS (DEIS) Comments

The Angoon Airport internal agency DEIS is now available for your review and comment. Please provide comments on sections that deal with resources that you have management or regulatory authority over. Note that this is a “live,” linked PDF. We encourage you to use the hyperlinks, Back to Last, and Table of Contents buttons. You can also use Adobe’s Bookmark feature to navigate by section headings.

Please take a moment to read the instructions below, as they will provide you with additional guidance on how to submit your comments on the internal agency DEIS.

Obtaining the Internal Agency DEIS from the Project Website

- Click on this link: <http://angoonairporteis.com/internalagencydraft.html>
- Enter the username: angoonairporteis
- Enter the password: angoonairporteis2013

Commenting via the Online Comment Database

We have developed an online comment database where you can enter your comments while reviewing the internal agency DEIS. The steps are outlined below. If you have any questions or concerns regarding the database, please contact Jamie Young at 907.821.0404 or jyoung@swca.com. Should you have any questions on the EIS during your review, contact Mike Edelmann, FAA’s acting project manager. He can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions on either the EIS or the database. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

- Using your email address, a user account for the [Angoon Airport Draft EIS comment database](#) has been established for you. This database, which is described below, will allow you to comment securely online. If you have not already, you will receive an email invite to log in to the database that will include a password in a subsequent email. **It is our preference that you use the database to provide comments.** By using the database we can ensure that no comment has been lost and that all comments are appropriately responded to in a timely manner.
- To request a user account for an additional commenter from your agency, please contact **Jamie Young at jyoung@swca.com or 907.821.0404.**
- You can enter comments into the online database through-out the 30-day internal agency DEIS review period (October 28 thru November 25, 2013). Following this review period, the comment database will be closed for comment entry.



Commenting Tips

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Steps for Commenting via the Online Comment Database

Step 1

- Download and save the internal agency DEIS as described above.
- This document will NOT have line numbers; it will only have page numbers for reference. You will enter the page numbers into the online comment database.



Angoon Airport Draft Environmental Impact Statement
Chapter 4: Existing Conditions and Project Effects
4.5.1. Terrestrial Habitats and Associated Species

4.5.1. Terrestrial Habitats and Associated Species

This section addresses the existing conditions of terrestrial habitats and associated plant, animal, and bird species in the area of the airport and access road alternatives. It also addresses the potential changes to those conditions from construction and operation of the proposed land-based airport.

The information contained in this section is summarized from *Vegetation, Wetlands, and Wildlife Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement Angoon, Alaska* (SWCA 2011a), included as Appendix H. A list of all bird species observed in the study area is included in Table E-1 in Appendix H, and common and characteristic bird species in the study area are also described in the section 4.3 of Appendix II.

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

The term *terrestrial* refers to land. *Habitat* refers to the composition and structure of the plant life and physical or geological features of an area. The habitats discussed in this section are defined by terrestrial vegetation—or plant species that live on land. Terrestrial wildlife includes species that are land-based (such as deer and songbirds), species that live in terrestrial habitats but forage in aquatic habitats (such as mink and otter), and species that occupy both terrestrial and *aquatic* habitats (such as beaver, muskrat, and waterbirds including loons, mallard, and Vancouver Canada goose). Vegetation communities—distinct collections of plant species that grow in similar environments and conditions—form the basis for habitats used by animals. The plant and animal species that occupy or use a habitat are its *associated species*. In an assessment of project effects on the vegetation itself and its function as habitat for the species that live in or use it, effects to individuals, populations, and species of animals must be considered.

What is discussed in this section?

4.5.1.1. Background information

4.5.1.1.1. What do the terms “terrestrial habitat” and “associated species” mean?

4.5.2.1. Existing conditions

4.5.3.1. Project effects

Terms to know

Aquatic: Relating to water.

Associated species: The plant and animal species that live in or use a habitat type for all or part of their lifecycle.

Habitat: An area with the combination of environmental conditions that supports a given species’ life.

Terrestrial: Relating to the land surface.

175

NOT FOR PUBLIC RELEASE

Table of Contents

Back to Last Location

The internal agency DEIS will not have line numbers. You’ll refer to page numbers when making comments about text.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

Step 2

Click on the comment database link here: [Angoon Airport Draft EIS comment database](#). The login page will come up as shown below. Use your email address and password to log in as described above.

The screenshot shows a web browser window displaying the login page for the Angoon Airport Draft EIS Comment Database. The page features a header with the Angoon First Nation logo and the text "Angoon Airport Draft EIS Comment Database". Below the header is a navigation bar with a "Home" link. The main content area is titled "Login" and contains the following elements:

- E-mail:
- Password:
- Remember me (for 30 days)
-
- [lost password](#)

At the bottom of the page, there is a footer with the SWCA logo and the text "Copyright © 2011".



Step 3

After logging in, you'll reach the home page. Click on the link that corresponds to the sections that you are going to review. For this example, we'll use 4.2, Air Quality. Note that not all of the sections of the EIS are shown in this example image.

The screenshot shows the 'Angoon Airport Draft EIS Comment Database' website. At the top left is the Angoon Airport logo. The title 'Angoon Airport Draft EIS Comment Database' is centered. Below the title is a 'Home' button. The main content area is titled 'Reviewer Comments' and is organized into several sections:

- Front Matter:**
 - [Cover and Title Page](#)
 - [Readers Guide](#)
 - [Executive Summary](#)
- Chapter 1:**
 - [Project Background: Planning for a Land-Based Airport at Angoon](#)
- Chapter 2:**
 - [Purpose and Need for a Land-Based Airport at Angoon](#)
- Chapter 3:**
 - [Alternatives](#)
- Chapter 4:**
 - [4.1 Introduction](#)
 - [4.2 Air Quality](#)
 - [4.3 Compatible Land Use](#)
 - [4.4 U.S. Department of Transportation Act Section 4\(f\) Evaluation Summary](#)
 - [4.5 Biological Resources Introduction](#)
 - [4.5.1 Terrestrial Habitats and Associated Species](#)
 - [4.5.2 Aquatic Habitats and Associated Species](#)
 - [4.5.3 Special Status Species](#)
 - [4.6 Floodplains, Stream Geomorphology, and Hydrology](#)
 - [4.7 Hazardous Materials, Pollution Prevention, and Solid Waste](#)
 - [4.8 Cultural Resources](#)
 - [4.9 Light Emissions and Visual Resources](#)
 - [4.10 Nat. Res. Energy Sustainable](#)
 - [4.11 Noise](#)
 - [4.12 Socioeconomic Conditions](#)
 - [4.13 Subsistence Resources and Uses](#)
 - [4.14 Water Quality](#)
 - [4.15 Wetlands](#)
 - [4.16 Wilderness Character](#)
 - [4.17 Climate Change and Greenhouse Gas Emissions](#)
 - [4.18 Environmental Justice and Children's Health and Safety](#)
- Chapter 5:**
 - [Requirements of the Alaska National](#)
- Appendices:**
 - [Alternatives Eliminated from Detailed Analysis](#)



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

When you click on the name of the section/chapter you're going to review, the database table for that chapter/section will open. If no one has commented on that section, it will look like the image below.

Home

Comments for Chapter/Section: 4.5.2 - Aquatic Habitats and Associated Species

[Comment on Text](#) [Comment on Graphic/Element](#)

#	Page/Elem	Comment/Suggested Resolution
No data available in table		

Click here to comment on text.

Click here to comment on a graphic or other element.

If someone has commented already, it will look like the following image.

Home

Comments for Chapter/Section: 4.5.2 - Aquatic Habitats and Associated Species

[Comment on Text](#) [Comment on Graphic/Element](#)

#	Page/Elem	Comment/Suggested Resolution	Edit
93	1/5	UU(10/22): The definition of associated species should be expanded. Note: this is a test comment.	Edit
94	p180:FIG	UU(10/22): Figure THAS2 does not show alternatives clearly enough. Note: this is a test comment.	Edit



Step 4

There's a part of the document that I want to comment on. What do I do?

There are two broad categories for comments: comments on text and comments on graphics/elements.

- To comment on text, click the green button.
- To comment on a graphic or other element (terms to know boxes, navigation boxes, tables, figures, and sidebar boxes), click on the blue button.

How do I comment on text?

After clicking the green button, you'll see the following screen. The section number will populate automatically, and so will your name (USACE Guest, in this example) and the date and time of your entry.

You will need to fill in the page number of the text that you want to comment on.

The screenshot shows a web form titled "Add Comment". The form fields are as follows:

- Section: 4.5.2
- Page:
- Commenter: USACE Guest USACE (43)
- Created: 2013-10-22 22:22:16
- Comment/Suggested Resolution:

A green "Submit" button is located at the bottom left of the form. Two red callout boxes with arrows point to the form:

- The first callout box points to the "Page:" input field and contains the text: "Enter the page number where the text you're commenting on begins."
- The second callout box points to the "Comment/Suggested Resolution:" input field and contains the text: "Enter your comment here."

When you are finished, click the green submit button.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

How do I comment on a graphic or element?

After clicking the blue button, you'll see the following screen. The section number will populate automatically, and so will your name and the date and time of your entry—note that the Commenter and Created lines are blocked in this image.

Similar to text comments, you will fill in the page number of the graphic or element, and select the element type from the pull-down menu shown below. Note that the shading in the pull-down menu corresponds to the colors of the boxes in the PDF.

Enter the page number of the terms to know box, navigation box, table, figure, or sidebar box that you're commenting on.

Select the type of element from this pull-down menu.

Enter your comment here.

Angoon Airport Draft EIS
Comment Database

Home

Add Comment

Section: 4.2

Page:

Element:

- Terms to Know
- Navigation Box
- Table
- Figure
- Sidebar Box

Commenter:

Created:

Comment/Suggested

Resolution:

Submit

When you are finished, click the green submit button.



Step 5

What happens after I submit a comment? What if I want to edit my comment?

After you submit a comment, you'll be able to see it on the comment table for your section. Each item in the Comment/Suggested Resolution column begins with the initials of the person who made the comment.

To edit a comment that you made, simply click on the edit button at the right. The Edit Comment screen will reopen, with the information that you have already entered. You can make any changes that you like. Please note that no other user can edit your comments, nor can you edit other user comments.

If you decide that you want to delete a comment entirely, there is a check box on the Edit Comment screen that will let you do so. Please note that no other user can delete your comments, nor can you delete other user comments.

When you are done, click on the green submit button, and you'll see your changes reflected in the comment table.

#	Page/Elem	Comment/Suggested Resolution	
93	1/5	UU(10/22): The definition of associated species should be expanded. Note: this is a test comment.	Edit
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Click here to edit.



Angoon Airport Environmental Impact Statement Internal Agency DEIS Comment Instructions

Edit Comment #95

Section: 4.5.2
Page: 175
Element: Table
Commentor: USACE Guest USACE (43)
Created: 2013-10-22 22:27:30
Comment/Suggested Resolution: Please add an additional row to this table to discuss the other species in the text.

Delete?

Submit

Check this box if you want to delete a comment completely.

I've entered my comments, and the 30-day review period for this document has ended. What happens now?

At the end of the 30-day review period for the internal agency DEIS, the comment database will be locked. No new comments can be entered at that time, and the FAA team will begin responding to all agency comments received.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

October 28, 2013

To: Cooperating and Consulting Agencies and Tribal Governments

Re: Angoon Airport – 30-day Agency and Tribal Review of Internal Agency Draft Environmental Impact Statement

Enclosed for your review and comment is the internal agency draft environmental impact statement (EIS) for the proposed land-based Angoon Airport. FAA welcomes and appreciates your comments on any chapter and/or sections pertaining to the assessment of resources for which your organization has special expertise and jurisdiction. There are a few items concerning this draft that I would like to highlight.

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As we communicated to you early this summer, the FAA has identified Airport 12a with Access 12a as the preferred alternative. There are several key factors to this decision as follows:

- 1) The FAA has determined that the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument-Wilderness Area) is the only qualifying Section 4(f) publicly owned recreational property in the vicinity of the alternatives. Both Airport Alternatives 3a and 4 are located on Monument-Wilderness lands, leaving Airport 12a with Access 12a as the only alternative that would avoid actual use of Section 4(f) resources.
- 2) Section 1104(g)(2)(B) of the Alaska National Interests Lands Conservation Act (ANILCA) states that federal agencies should consider “alternative routes and modes of access, including a determination with respect to whether there is any economically feasible and prudent alternative to the routing of the transportation system through or within a conservation system unit.” Analysis in the EIS indicates that Airport 12a with Access 12a is an economically feasible and prudent alternative to the alternatives located on Monument-Wilderness lands (which are considered a conservation system).

Because the preferred alternative is not located in the Monument Wilderness Area, the Alaska Department of Transportation and Public Facilities (ADOT&PF) will not be submitting an ANILCA application at this time as had been initially planned. An ANILCA application would only need to be filed if after receiving and reviewing comments received on the public Draft EIS, FAA decides not to select Airport 12a and instead decides to select Airport 3a or Airport 4.

Half of the document that we're providing you is appendices. The majority of these appendices have been available to the public for some time, and we've already incorporated comments that we received on them. These are static documents that do not require further revisions. However, there are three appendices that have not been previously made available, and we welcome your comments on them. They are:

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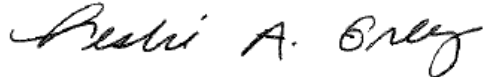
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Lara Bjork

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Sent: Friday, October 25, 2013 9:33 AM
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Cc: jennifer.wing@alaska.gov; Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: InternalAgencyDEIS_Ltr_3.pdf

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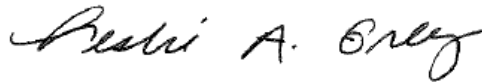
Hard copy: Angoon Airport EIS
1220 SW Morrison, Suite 700

Portland, OR 97205
 FAX: 503-224-1851

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On behalf of FAA and the project team, thank you very much for your assistance with this project.

Sincerely,



Leslie Grey
 FAA, Alaskan Region Airports Division
 Angoon Airport EIS Project Manager

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Angoon Community Association □ Raynelle Jack
 City of Angoon □ Lillian Woodbury
 Kootznoowoo, Inc. □ Peter Naoroz, Sharon Love
 ADOT&PF □ Verne Skagerberg
 U.S. Forest Service □ Jenn Berger
 U.S. Army Corps of Engineers □ Randy Vigil
 U.S. Fish & Wildlife Service □ Richard Enriquez
 State of Alaska □ Susan Magee, Jen Wing
 U.S. Environmental Protection Agency □ Matthew Lacroix, Jennifer Curtis
 U.S. National Marine Fisheries Service □ Chiska Derr

Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:32 AM
To: Chiska.Derr@noaa.gov
Cc: Mike.Edelmann@faa.gov; Leslie.Grey@faa.gov; Amanda Childs
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: InternalAgencyDEIS_Ltr_3.pdf

Chiska,

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Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453



U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

October 28, 2013

To: Cooperating and Consulting Agencies and Tribal Governments

Re: Angoon Airport – 30-day Agency and Tribal Review of Internal Agency Draft Environmental Impact Statement

Enclosed for your review and comment is the internal agency draft environmental impact statement (EIS) for the proposed land-based Angoon Airport. FAA welcomes and appreciates your comments on any chapter and/or sections pertaining to the assessment of resources for which your organization has special expertise and jurisdiction. There are a few items concerning this draft that I would like to highlight.

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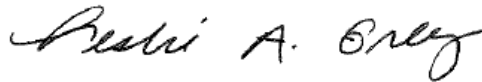
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Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:31 AM
To: peter.naoroz@gmail.com
Cc: fmkookesh@hotmail.com; sharonlove65@gmail.com; Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: InternalAgencyDEIS_Ltr_2.pdf

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FAA - Alaskan Region, Airports Division
907-271-5453



U.S. Department
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Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

October 28, 2013

To: Cooperating and Consulting Agencies and Tribal Governments □
Kootznoowoo, Inc.

**Re: Angoon Airport – 30-day Agency and Tribal Review of Internal Agency
Draft Environmental Impact Statement**

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- Appendix N: Alaska National Interest Lands Conservation Act (ANILCA) Section 810 Evaluation

Thank you again for your help obtaining the most current mapping for the 14(c)3 parcels and Kootznoowoo, Inc.'s planned expansion of the existing materials source site. Unfortunately, we were not able to revise the sections containing information about these for this internal agency review of the Draft EIS, but we will incorporate this information into the public Draft EIS.

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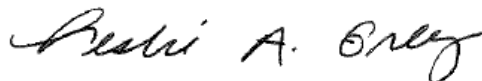
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Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:30 AM
To: Lacroix.matthew@Epamail.epa.gov; Curtis.jennifer@Epamail.epa.gov
Cc: Mike.Edelmann@faa.gov; Leslie.Grey@faa.gov; Amanda Childs
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review
Attachments: InternalAgencyDEIS_Ltr_3.pdf

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U.S. Department
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Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

October 28, 2013

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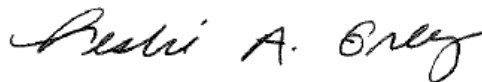
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Lara Bjork

From: Leslie.Grey@faa.gov
Sent: Friday, October 25, 2013 9:38 AM
To: verne_skagerberg@dot.state.ak.us
Cc: Mike.Edelmann@faa.gov; Amanda Childs; Leslie.Grey@faa.gov
Subject: Angoon Airport Internal Agency Draft EIS available for 30-day review / MOU amendment signature

Hi Verne,

Hope you are doing well!

The Angoon Airport PDEIS is scheduled to arrive in your office today about noon. Three separate packages are being sent to your office addressed to and enclosed with:

- Verne - 2 hard copies and 1 CD
- Pat - 1 hard copy
- Jane - 1 hard copy

The instructions for providing comments are included with the document.

How's everything going with getting the MOU amendment signed? I will be out of the office from November 18 through December 20 on my trip to South America, so I'd really like to get this wrapped up before I go if possible.

Did you have any further question on the schedule I last sent? Leslie

Leslie A. Grey
Environmental Protection Specialist
FAA - Alaskan Region, Airports Division
907-271-5453



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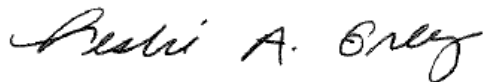
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FAA, Alaskan Region Airports Division
Angoon Airport EIS Project Manager

Lead Contacts for Distribution of Agency and Tribal Review: The FAA has coordinated with these individuals, who have committed to distributing the internal agency review Draft EIS to the appropriate reviewers at their respective agencies and tribal governments.

Angoon Community Association □ Raynelle Jack
City of Angoon □ Lillian Woodbury
Kootznoowoo, Inc. □ Peter Naoroz, Sharon Love
ADOT&PF □ Verne Skagerberg
U.S. Forest Service □ Jenn Berger
U.S. Army Corps of Engineers □ Randy Vigil
U.S. Fish & Wildlife Service □ Richard Enriquez
State of Alaska □ Susan Magee, Jen Wing
U.S. Environmental Protection Agency □ Matthew Lacroix, Jennifer Curtis
U.S. National Marine Fisheries Service □ Chiska Derr

AMENDMENT TO
MEMORANDUM OF UNDERSTANDING BETWEEN THE UNITED STATES
FEDERAL AVIATION ADMINISTRATION AND
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Angoon Airport Environmental Impact Statement

I. INTRODUCTION AND PURPOSE

A. This Amendment to the Memorandum of Understanding (MOU) between the Federal Aviation Administration (FAA) and the Alaska Department of Transportation and Public Facilities (Sponsor) is amended by adding the language indicated in bold italics on the following pages. All other sections of the original MOU are still in effect and reflected in this amended document.

B. This Memorandum of Understanding ("MOU") provides a framework in which the United States Federal Aviation Administration ("FAA") will prepare an Environmental Impact Statement (EIS) for proposed construction of the Angoon Airport. The MOU describes the relationship of the FAA and the Alaska Department of Transportation and Public Facilities ("Sponsor"), in preparing the EIS. Subject to completion of the EIS, the FAA will determine whether to proceed with the proposed airport construction. This determination will be set forth in a Record of Decision ("ROD").

C. As lead agency, the FAA, with the assistance and input from the Sponsor, will select an independent contractor ("Contractor") to prepare the EIS. The Sponsor shall be the party responsible for engaging and retaining a contractor.

D. The EIS and any related documents shall comply with the provisions of the National Environmental Policy Act of 1969 ("NEPA") and appropriate Council on Environmental Quality ("CEQ"), United States Department of Transportation ("DOT"), and FAA

environmental regulations and guidance, as well as all applicable local, state and Federal laws, as appropriate.

E. It is the purpose of this MOU to establish an understanding between the Sponsor and the FAA regarding the responsibilities of the parties and the conditions and procedures to be followed in the development and preparation of the EIS.

F. The parties hereto intend that development and preparation of the EIS as provided in this MOU will satisfy the pertinent environmental requirements of the FAA.

II. GENERAL PROVISIONS

A. As the lead agency, the FAA will be responsible for ensuring compliance with all the requirements of NEPA (42 U.S.C. 4321 et seq.), CEQ Regulations (40 C.F.R. Parts 1500- 1508), and appropriate DOT and FAA environmental orders. The procurement process shall be conducted in accordance with Alaska Statute 36.30, unless otherwise in conflict with federal requirements or prohibitions, with particular reference to 36.30.890 Federal Assistance. The FAA shall ensure that all pertinent environmental issues and impacts, and reasonable alternatives and their impacts are treated in the EIS, and shall be responsible for the scope and content of the EIS.

B. The Sponsor will engage and retain a Contractor, selected by the FAA with the assistance and input from the Sponsor, for the preparation of the EIS. The Contractor, with the approval of the FAA and Sponsor, may employ such other contractors and experts (collectively referred to as "Subcontractors"), as are required for the adequate development and preparation of the EIS.

C. The Contractor will provide, through its staff or by Subcontractor, the expertise, staffing, and technical capabilities required for the preparation of the EIS. The FAA will direct the scope of the EIS and will independently evaluate all information, environmental data and analyses submitted by the Contractor, or others, and revise or cause additional study and analyses to be performed as necessary.

D. The Contracts between the Sponsor and Contractor and between the Contractor and Subcontractors (collectively the "Contract") shall be consistent with the provisions of this MOU and shall specifically incorporate those provisions herein, which address the conduct of the Contractor. The Contract shall provide, and the Sponsor hereby represents, consistent with FAA Order 5050.4A, Paragraph 76(g), that the Contractor and any Subcontractors has not entered into and, during the lifetime of the EIS preparation, will not enter into any agreement affording the Contractor and any Subcontractors with any direct or indirect financial interest in the planning, design, construction or operation of the Project except with regard to the preparation of the EIS.

(1) Prior to beginning work on the EIS, the Contractor and any Subcontractors shall sign a "Disclosure Statement" provided by the FAA per the requirements of FAA Order 5050.4B, specifying they have no financial or other interest in the outcome of the project.

(2) The FAA shall evaluate the Disclosure Statement prior to its approval.

E. The FAA and Sponsor shall make all reasonable efforts to ensure the satisfactory and timely performance of the duties of the Contractor as specified in this MOU. The FAA agrees that the Sponsor will be reimbursed for allowable costs per FAA Order 5100.38b, not to exceed the amount available from AIP Grant.

F. The Sponsor and FAA shall:

(1) Appoint such representatives as necessary to accomplish the coordination necessary for the satisfactory preparation of the EIS. Notice to any such representative shall constitute notice to that party.

(2) Review substantive phases of preparation of the EIS as each deems necessary.

(3) Have their respective representatives attend meetings with other Federal, state, regional, and local agencies for the purpose of increasing communications

and receiving comments, as the same may be necessary, desirable, or required by law in preparation of the EIS.

(4) Facilitate the coordination of effort and the exchange of information related to the planning, design and construction of the proposed Angoon Airport, as these activities relate to the preparation of the EIS among and between the Contractor and its Subcontractors, the Sponsor and the FAA.

G. All costs incurred in connection with the employment of the Contractor and any and all Subcontractors, or other persons retained or employed by the Sponsor, shall be paid by the Sponsor upon receipt of the FAA Project Manager' s endorsement on the contractor' s invoice. The FAA agrees to reimburse the Sponsor for all FAA approved costs incurred by the Sponsor in connection with the EIS.

III. PROCEDURES

A. Under the direction of the FAA, the Contractor shall develop and submit a scope of work to the FAA for approval. The scope of work shall include detailed descriptions of all work to be performed, the methodologies proposed to perform the work, the name and qualifications of the person performing each aspect of the work, estimated hours required for completion of each aspect, the schedule for performing each aspect and a description of the internal and external review procedures to assure quality control. Also, the scope of work shall include a provision for a thorough literature search and bibliography of references and methodologies to be used in the acquisition of the environmental data and analyses and the development and preparation of the EIS. The scope of work shall include maintenance and access of a complete administrative file.

B. The FAA will forward the contract scope of work to the Sponsor for review and comment. After receiving comments from the Sponsor, and the scoping process conducted pursuant to 40 C.F.R. Sec. 1501.7, the FAA will finalize and approve the contract scope of work. The scope of work and this MOU shall establish the scope of work required of the Contractor in the development and preparation of the EIS.

C. The scope of work may be amended by the FAA from time to time as the work of the Contractor or its Subcontractors proceeds, but any amendments or changes which require the expenditure of additional funds by the Sponsor must be agreed to by the Sponsor. The Sponsor will be notified and consulted prior to any significant amendments or modifications to the scope of work.

D. Unless otherwise directed by the FAA, any and all work performed by the Contractor and its Subcontractors in preparation of the EIS shall be submitted directly to the FAA, and upon request of the FAA, to the Sponsor. The Sponsor may communicate with the Contractor and its Subcontractors during the development of the EIS, but no prior review or discussion of data or analyses developed by the Contractor or Subcontractor as related to the EIS shall be afforded the Sponsor. In no case will the Sponsor discuss, review, modify, or edit the Contractor's work or the work of its Subcontractors prior to submission to the FAA, or be provided the opportunity to do so. All suggestions for modifications or changes to such sections shall be recommended by the Sponsor only to the FAA.

E. The FAA reserves the right to review periodically and modify the work of the Contractor to ensure that requirements under NEPA and other applicable laws and regulations are satisfied. The Contractor shall submit monthly written reports on the progress of its work to the FAA, with a concurrent copy to the Sponsor. This report shall describe the present status of each aspect of the work, any problems encountered, and recommendations for modifications to the scope of work and any changes in personnel, methodology or schedules for completion.

F. As each portion of any draft or final document is completed, the FAA shall review each portion and those tasks completed there under and, after consultation with the Sponsor, shall approve, modify, comment thereon and/or direct further work with regard to such portion or tasks as necessary. Said directions and/or comments shall be made by the FAA in a timely manner, and the Contractor shall ensure incorporation of such comments into any editorial changes to the satisfaction of the FAA. Final drafts of any

documents will require FAA approval. Prior to approval, the FAA will forward final drafts to the Sponsor for review and comment. Comments from the Sponsor shall be sent to the FAA. The Contractor will make modifications only as the FAA directs regarding these comments.

G. If requested, the Contractor will provide the FAA access to and review of all procedures and underlying data used by the Contractor in developing submitted sections of the EIS, including, but not limited to, field reports, Subcontractor reports, and interviews with concerned private and public parties, whether or not such information may be contained in a draft or final EIS. The Sponsor will also have access to such procedures and underlying data. Such access by the FAA and Sponsor shall be governed by paragraph III.T hereunder.

H. To facilitate the development and preparation of the EIS, joint meetings among the FAA, Sponsor, and Contractor may be held. However, the FAA reserves the right to work directly with the Contractor for purposes of assuring objectivity in preparing reports and/or for assuring expeditious communications. The Contractor will notify the FAA and Sponsor of any substantive meetings that are scheduled and of their purpose and will provide an opportunity for the parties to attend if desired. No meeting will be held between the Contractor or Sponsor without prior notification to and approval of the FAA. A summary of all matters relating to EIS discussions in any meetings or communications between the Contractor and a party hereto without the participation of the other said party will be included in each formal monthly report submitted by the Contractor to the FAA and Sponsor. The FAA reserves the right to consult directly with other Federal, state, and local officials and agencies during the preparation of the EIS to ensure compliance with NEPA and other applicable laws and regulations. The contractor shall provide minutes of milestone meetings for review and comment by agency representatives present at the meeting prior to submitting the official minutes.

I. The FAA shall direct the full cooperation of the Contractor and its Subcontractors with respect to participating in any public workshops, hearings, or meetings as required by

the FAA to foster public familiarity and participation with respect to the assessment of impacts related to the Project.

J. The Contractor shall be responsible for the costs associated with the printing and publication of the draft and final copies of the EIS and the administrative record associated with the EIS. The Contractor shall be responsible for all costs associated with the publication of notices announcing public workshops, meetings, hearings, and the like. The Contractor shall also be responsible for costs of stenographic and clerical services, preparation of graphics and visual aids associated with any public workshops, meetings, and hearings. All such costs shall be deemed Airport Improvement Program (AIP) eligible costs under the Contract.

K. The Contract may be amended to provide for a Subcontractor employed by the Contractor, to analyze impacts of the Project on floodplains, wetlands, and other waters of the U.S. for the EIS, to perform work necessary to support applications for permits for the Project under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act ("Permit-Related Work"). Any such amendment is subject to the following conditions:

- 1. The Subcontractor shall execute a disclosure statement in accordance with paragraph II.D reflecting its involvement in the performance of Permit-Related Work.*
- 2. The Subcontractor's responsibilities on the EIS will be limited to analyzing impacts to floodplains, wetlands, and waters of the U.S.*
- 3. The Contractor shall ensure that none of its personnel participate or otherwise assist in the Permit-Related Work. Similarly, the Subcontractor shall ensure that none of its personnel performing Permit-Related Work also perform work related to the EIS.*
- 4. The Subcontractor's personnel performing Permit-Related Work may communicate regarding that work only with the FAA and the Sponsor. Neither the Contractor nor the Subcontractor's personnel performing work on the EIS*

may share any information regarding the Project with the Subcontractor' s personnel performing Permit-Related Work without prior approval by the FAA.

- 5. The Subcontractor must not proceed with any Permit-Related Work until the FAA has notified the Sponsor of the FAA' s preferred alternative(s) for the project. If the FAA notifies the Sponsor that the no-action alternative is the preferred alternative for a runway included in the Project, the Sponsor shall promptly direct the Subcontractor to cease all Permit-Related Work for that runway.*

L. At such time as the FAA, after consultation with the Sponsor, has approved the Draft EIS developed and prepared by the Contractor and its Subcontractors, the FAA shall direct the Contractor to print the contracted quantity of Draft EIS and submit the same to the FAA. The FAA shall submit an appropriate number of copies of the Draft EIS to the Sponsor. The FAA shall proceed expeditiously to comply with the provisions of NEPA.

M. In all instances involving questions as to the content or relevance of the environmental data and analyses, and evaluations and wording prepared by the Contractor, the FAA, with appropriate advice and consultation where deemed necessary by the FAA, will make the final determination on the inclusion, deletion or modification of the same in the Draft or Final EIS.

N. Upon completion of the Draft EIS, the FAA, with the Contractor's assistance, shall be responsible for organizing and conducting any public hearings.

O. The FAA will receive all comments during the Draft EIS review and comment period. This period (at least 45 days) will be initiated when the Environmental Protection Agency (EPA) publishes the "Draft EIS Notice of Availability" in the Federal Register.

P. At the close of the Draft EIS review and comment period, the FAA shall identify the issues and comments submitted which will require response in the Final EIS. The FAA will direct those comments to the Contractor for preparation of proposed responses, and shall furnish the Sponsor with copies of all comments received. The Contractor will furnish proposed responses to the FAA and Sponsor for review and comment. The

FAA, after consulting with and considering any advice from the Sponsor, shall modify the proposed responses, as it deems necessary.

Q. After receipt of comments and preparation of responses, the FAA, after consulting with and considering any advice from the Sponsor, may direct the Contractor to make changes to the text of the Draft EIS as necessary.

R. At such time as the FAA has approved the Final EIS, the FAA shall direct the Contractor to print the contracted quantity of Final EIS. The FAA shall submit an appropriate number of copies of the Final EIS to the Sponsor. The FAA shall proceed expeditiously to comply with the provisions of NEPA.

S. The FAA will receive all comments on the Final EIS during the mandatory "hold period". This period (at least 30 days) will be initiated when the EPA publishes the "Final EIS Notice of Availability" in the Federal Register.

T. The FAA, with assistance from the Contractor, will prepare and issue the FAA Record of Decision.

U. The parties recognize that statutory record disclosure requirements affect both the FAA and the Sponsor. The parties agree to develop document control procedures in the future that will provide for confidential evaluations and discussion of materials not appropriate for, and legally exempt from, public disclosure. The FAA will maintain the confidentiality of, and will not release or allow access to, any information, documents or materials which in its opinion are validly designated as confidential by the Sponsor or Contractor and which contain trade secrets, proprietary data, or commercial or financial information. Information developed under this MOU is disclosable to the public to the extent required by law. In any instance where the FAA proposes to release to the public or allow access to any information, documents or materials which the Sponsor or Contractor has designated as confidential, it shall notify the Sponsor or Contractor of its intention to do so and provide the Sponsor or Contractor the opportunity to appeal the

decision in accordance with the applicable regulations on such release or access prior to any such release or access.

IV. CESSATION AND TERMINATION

Any of the parties to this MOU may withdraw from the terms of this MOU for good cause upon 30 days written notice to the other party. During this period, the parties will actively attempt to resolve any disagreement. Termination of this MOU shall in no way impair the Sponsor's eligibility for reimbursement for costs and obligations incurred prior to termination, including all costs, obligations and damages arising out of the Contract.

In the event of a termination of this MOA, and if the preparation of an EIS by the FAA is still required, it is agreed as follows:

- (1) The FAA shall have access to all documentation, reports, analyses, and data by the Contractor and Subcontractors with confidentiality governed by paragraph III.T.
- (2) The Sponsor shall no longer be responsible for the payment of costs associated with preparation of the EIS under the terminated MOA, apart from costs already incurred, invoiced, and endorsed by the FAA under the contract with the Contractor.
- (3) Liability for termination shall be in accordance with paragraph II.G. hereof.

V. NO RIGHTS FOR NON-PARTIES

No rights or privileges are created or intended to be created by this MOU in anyone not a signatory of this MOU.

VI. MODIFICATION

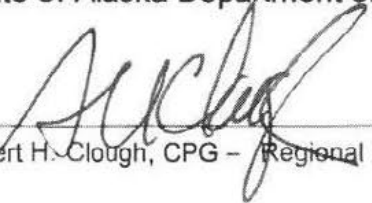
This MOU represents the entire agreement and may be modified by the parties hereto only by written agreement by all the parties.

United States Federal Aviation Administration


Byron Huffman – Division Manager, Airports Division, Alaskan Region

11/2/13
Date

State of Alaska Department of Transportation and Public Facilities


Albert H. Clough, CPG – Regional Director, Southeast Region, ADOT&PF

10.25.2013
Date

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Thursday, November 14, 2013 8:57 AM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News, Announcements, & Updates (11/14/13)

FAA is pleased to announce that we have posted the November Project Update to our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[November Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851
Email. Leslie.Grey@faa.gov

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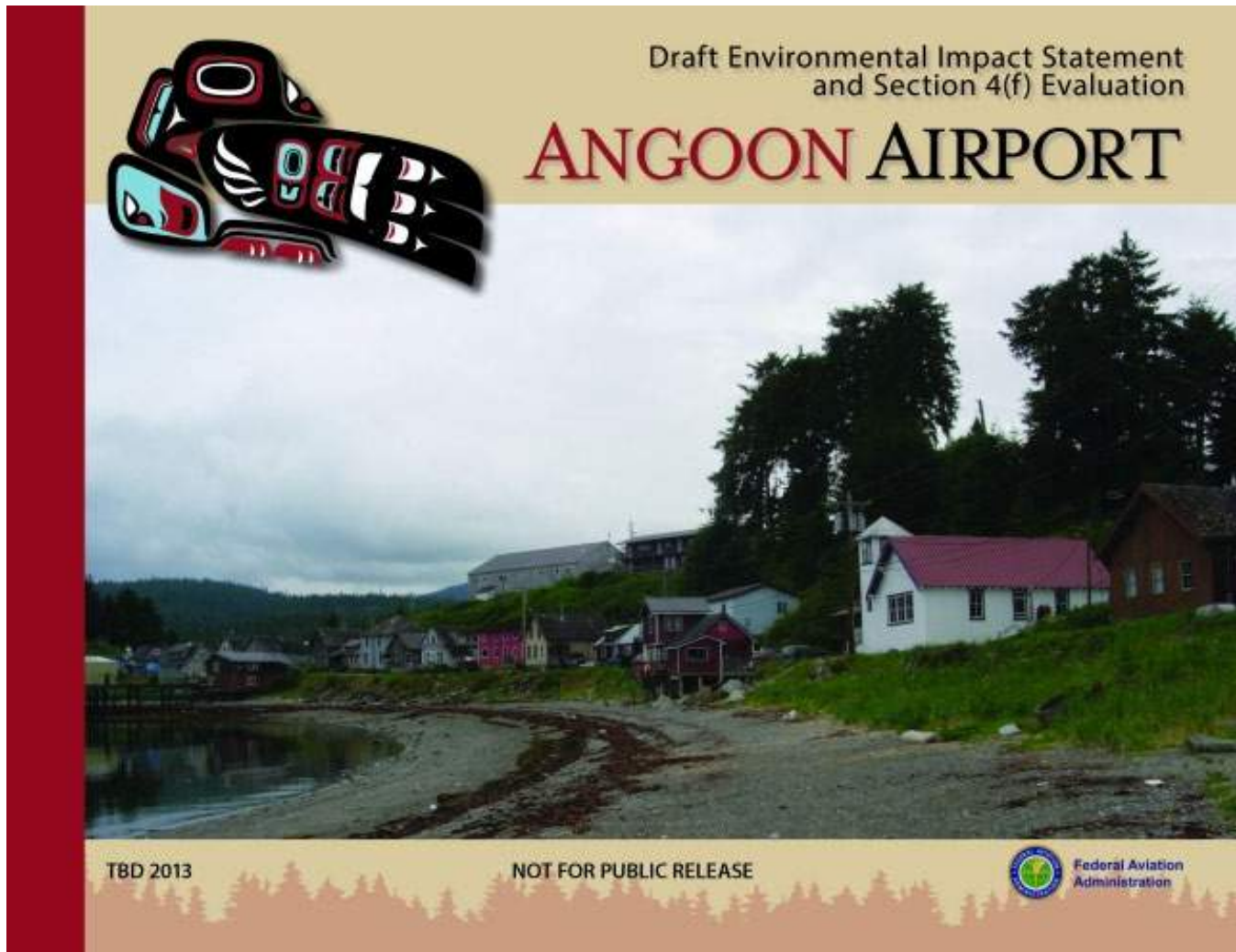


November 2013 Monthly Project Update

For those of us in northern climates, winter is officially here! We had our first "big" storm last weekend in Anchorage with more on the way, and I know that Southeast Alaska has had some snow too. I love this time of year, and I hope you're enjoying the change in the seasons, too.

The Angoon Airport EIS team has reached a major milestone. An internal draft of the EIS has been sent out to state and federal agencies, the Angoon Community Association, Kootznoowoo, Inc., and the City of Angoon for an early review. It's a standard part of developing an EIS to release a draft to agencies and tribes before it goes to the general public. This review is very important to the process because it allows these entities to provide comments on analysis and conclusions for which they have special expertise or legal jurisdiction. For example, the U.S. Fish and Wildlife Service is consulted for effects to special status species. Other entities such as U.S. Forest Service and Kootznoowoo, Inc. review for potential effects to lands they manage. This ensures that concerns of key stakeholders are addressed before the document goes to the public.

After we receive comments from all the early reviewers, our next step will be working with these entities to resolve any comments they have on this draft. Once this step is complete, the draft EIS will be finalized and provided to the public for comment. I am very excited about how far we have come and eager to share the EIS with you. For now, here's a preview of the cover.



I also wanted to use this update to let you know that I will be out of the office from November 18 through December 22, 2013. During this time, Mike Edelmann will be FAA's acting project manager. Should you have any questions during this time, he can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

I wish you all a peaceful holiday season!

Best regards,

Leslie Grey

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From: Skagerberg, Verne R (DOT) [mailto:verne.skagerberg@alaska.gov]
Sent: Wednesday, November 20, 2013 11:26 AM
To: Mike.Edelmann@faa.gov
Cc: Leslie.Grey@faa.gov; Amanda Childs; Carroll, Lawrence P (DOT); Barnett, John C (DOT); Gendron, Jane D (DOT); Magee, Susan E (DNR)
Subject: Angoon PDEIS Review

Hello Mike,

As we discussed, our review of the draft is progressing, but because of other high priority issues demanding our small staff's attention, we are not moving quickly enough to meet the review deadline. This is a large document and it deserves our very thorough review. In order to give this our best effort and provide you with good comments, we would like a little additional time. An extension to Dec 6th should be sufficient. Please let me know if you can grant this extension.

Regards,
Verne

*Verne R. Skagerberg
Airport Planner
AK DOT&PF, Southeast Region
PO Box 112506
Juneau, AK 99811-2506
(907) 465-4477*

From: Mike.Edelmann@faa.gov [mailto:Mike.Edelmann@faa.gov]

Sent: Thursday, November 21, 2013 1:19 PM

To: jberger@fs.fed.us; shaneking@fs.fed.us; mdinsmore@fs.fed.us; kehood@fs.fed.us; cvanormer@fs.fed.us; randal.p.vigil@usace.army.mil; Richard_Enriquez@fws.gov; peter.naoroz@gmail.com; sharonlove65@gmail.com; susan.magee@alaska.gov; jennifer.wing@alaska.gov; Lacroix.matthew@Epamail.epa.gov; Curtis.jennifer@Epamail.epa.gov; Chiska.Derr@noaa.gov; angooncityclerk@hotmail.com; rjackagntribe@gmail.com; verne.skagerberg@alaska.gov

Cc: Leslie.Grey@faa.gov; Amanda Childs; Mike.Edelmann@faa.gov

Subject: Angoon Airport EIS Extension of Review Period

The FAA has received a request from the Alaska Department of Transportation and Public Facilities to extend the review period for the Angoon internal agency draft EIS. Based on this request, the FAA is officially extending the comment period to **December 6, 2013**.

Please see the attached letter and contact me if you have any questions or concerns

Thank you,
Mike Edelmann
907-271-5026



U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports Division

Alaskan Region
222 West 7th Ave #14
Anchorage, Alaska 99513

November 21, 2013

To: Cooperating and Consulting Agencies and Tribal Governments

Re: Angoon Airport – Extension of the 30-day Agency and Tribal Review of Internal Agency Draft Environmental Impact Statement

The FAA has received a request from the Alaska Department of Transportation and Public Facilities to extend the review period for the Angoon internal agency draft EIS. Based on this request, the FAA is officially extending the comment period to **December 6, 2013**.

To email, mail, or fax your comments, please use the contact information below:

Email: comments@angoonairporteis.com
Hard copy: Angoon Airport EIS
1220 SW Morrison, Suite 700
Portland, OR 97205
Fax: 503-224-1851

I would also like to remind you that this document is an internal draft that is not intended for review by the public; it is only intended for agency and tribal government review. Please do not share the EIS or its contents with persons outside of your agency or organization without my written consent.

Please feel free to contact me if you have any questions.

Sincerely,

Mike Edelman
FAA, Alaskan Region Airports Division
Acting Angoon Airport EIS Project Manager

Cc: Leslie Grey, FAA
Amanda Childs, SWCA

RECORD OF CONVERSATION	Time: 12:00PM	Date: 11/26/2013
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TYPE
 In-person Conversation
 Meeting/Conference
 Telephone
 E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)

Incoming
 Outgoing

Location of In-person Conversation, Meeting, or Conference:

Name of Persons Contacted or in Contact with You Randy Vigil	Organization U.S. Army Corps of Engineers	Telephone No. 907.790.4490
--	---	--------------------------------------

Subject: upcoming changes to the Wetlands section of the Public Draft EIS

Summary of Conversation

- JYoung made RVigil aware of changes that SWCA will be making to the Wetlands section of the Public Draft EIS.
- During preparation of the preferred alternative (Airport 12a with Access 12a) wetland delineation, SWCA determined that the NWI GIS dataset better represents the on-the-ground wetlands (vs. the 2009 ground-truthed aerial imagery modeling).
- SWCA revisited the DOT's Airport 3 wetland delineation and it is also better reflected by the NWI GIS dataset.
- Therefore, SWCA is revising the Wetlands analysis in the Public Draft EIS to use the NWI GIS as its base wetlands dataset, instead of the dataset that was created during the 2009 fieldwork and reported in the subsequent tech report.
- RVigil agreed with this approach.

Action Required: None

Name of Person Documenting Conversation: Jamie Young, SWCA Environmental Consultants

From: Jamie C. M. Young
Sent: Monday, December 09, 2013 12:43 PM
To: Johnny Zutz (johnny.zutz@alaska.gov)
Cc: Leyla Arsan; Amanda Childs; Lara Bjork
Subject: Angoon Airport AWC nominations from 2009 fieldwork

Hello Johnny,

The internal agency review of the Angoon Airport Draft EIS closed on Friday (12/6), and the italicized comment below was included in the State of Alaska's letter. Please see the attached AWC nominations and submission outcome from our 2009 fieldwork. In many cases our nominations were not incorporated because we did not have multiple "fish in hand." Can you please provide ADF&G's concurrence that our nominations were incorporated into the AWC to ADF&G's satisfaction? Thanks for your help! Sincerely, Jamie (208.262.9323)

ADF&G Comment included in the State of Alaska's comments from the Internal Agency Review of the Angoon Airport Draft EIS:

Alaska Department of Fish and Game

The Alaska Department of Fish and Game (ADFG) reviews and permits, when appropriate, activities in anadromous water bodies per AS 16.05.871(b) and in resident fish water bodies per AS 16.05.841. Fresh water bodies described in the draft EIS are identified as Class 1 (anadromous) and Class 2 (resident), per US Forest Service convention. Anadromous and resident water bodies are present in proposed alternatives 3a and 4a with access 3. Anadromous water bodies are present in proposed alternative 4a with access 2. Resident fish streams are present in the preferred alternative, 12a.

The preferred alternative, 12a, will not negatively impact those resources and habitats for which ADF&G has responsibility. In the event another alternative is chosen to fulfill the project purpose and need, we would work with the applicant through the fish habitat permitting review process to minimize short-term construction impacts. The overall impacts of any of the alternatives would not jeopardize resource sustainability or our ability to manage stocks.

ADF&G annually updates the Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes (Catalog). The Catalog is the basis for our fish habitat permitting and U.S. Forest Service concurrence programs throughout the state. The information provided in the draft EIS is more comprehensive than that currently found in the Catalog. We request the applicant provide us the information on fish use, fish species, and life history stage present used to develop the EIS so we can complete and submit nominations for these water bodies during the next Catalog update.

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
C 907.821.0404 | F 907.279.7922



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From: [Jamie C. M. Young](#)
To: [Jennifer Rideout](#)
Subject: FW: resolution
Date: Wednesday, August 05, 2015 10:37:46 AM
Attachments: [CITY OF ANGOON RESOLUTION airport 3A.DOCX](#)

From: Jamie C. M. Young
Sent: Tuesday, December 10, 2013 2:14 PM
To: 'albert kookesh'
Cc: Lillian Woodbury (angooncityclerk@hotmail.com); Amanda Childs; Lara Bjork; 'Mike.Edelmann@faa.gov'; 'Leslie.Grey@faa.gov'
Subject: RE: resolution

Thank you Albert, I wanted to confirm our receipt of the City's resolution.

Will you be submitting any other comments from the City, ie. so that we make sure to be on the lookout for them?

Thanks for your help! Sincerely, Jamie (208.262.9323)

From: albert kookesh [<mailto:albertkookesh@hotmail.com>]
Sent: Tuesday, December 10, 2013 2:00 PM
To: comments@angoonairports.com; Jamie C. M. Young
Subject: FW: resolution

If your neighbor's house is on fire, you don't haggle over the price of your garden hose. -
Franklin Roosevelt

Albert Kookesh III
City of Angoon
907-723-5232
albertkookesh@hotmail.com

From: albertkookesh@hotmail.com
To: angooncityclerk@hotmail.com
Subject: resolution
Date: Wed, 11 Sep 2013 12:55:47 -0800

need to type up these minutes for you still but found the date and the votes

If your neighbor's house is on fire, you don't haggle over the price of your garden hose. -
Franklin Roosevelt

Albert Kookesh III
City of Angoon
907-723-5232

albertkookesh@hotmail.com

From: Angoon Airport EIS <maillist@angoonairporteis.com>
Sent: Wednesday, December 11, 2013 12:50 PM
To: Angoon Airport EIS
Subject: Angoon Airport EIS News & Announcements



Angoon Airport EIS News, Announcements, & Updates (12/11/13)

FAA is pleased to announce that we have posted the December Project Update to our Angoon Airport project website. We invite you to visit the site at www.angoonairporteis.com. You can view the update by clicking on the link below:

[December Monthly Update](#)

Please visit our web page at www.angoonairporteis.com and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at Leslie.Grey@faa.gov.

Sincerely,
Leslie

Angoon Airport EIS Project Manager



Leslie Grey, Federal Aviation Administration
Alaskan Region Airports Division
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513-7587
Phone. 907-271-5453 **Fax.** 907-271-2851
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December 2013 Monthly Project Update

The EIS team and I send you our sincere good wishes for a happy holiday season as a prelude to a vibrant 2014. I look forward to visiting Angoon again soon. Until then, please know that we are working diligently with the comments that we have received from state and federal agencies, Kootznoowoo, Inc., the Angoon Community Association, and the City of Angoon. We will update you in January about our next steps based on these comments, and in the meantime, don't hesitate to be in touch with me at 907-271-5453 or Leslie.Grey@faa.gov.

As a reminder, I will be out of the office until December 22, 2013. During this time, Mike Edelmann will be FAA's acting project manager. Should you have any questions during this time, he can be reached at 907-271-5026 or Mike.Edelmann@faa.gov. Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at achilds@swca.com or 503-224-0333, extension 6256.

Warm regards,

Leslie Grey



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From: Jamie C. M. Young
Sent: Monday, December 16, 2013 4:38 PM
To: Legere, Nicole M (DFG)
Cc: Johnny Zutz (johnny.zutz@alaska.gov); Leyla Arsan; Amanda Childs; Lara Bjork
Subject: RE: Angoon Airport AWC nominations from 2009 fieldwork

Thank you for providing this confirmation, Nicole! Sincerely, Jamie (208.262.9323)

From: Legere, Nicole M (DFG) [<mailto:nicole.legere@alaska.gov>]
Sent: Monday, December 16, 2013 3:30 PM
To: Jamie C. M. Young
Subject: RE: Angoon Airport AWC nominations from 2009 fieldwork

Hi Jamie,

I just looked in the catalog and most of the information submitted is there. Unfortunately, some of the data was not accepted due to not having two fish in hand. The information you provided in the report is still very useful to ADF&G giving us a baseline of streams that we should resurvey in the future. Thanks for confirming this with me.

If you have any questions in the future please feel free to give me a call.

Sincerely,
Nicole

Nicole Legere
Habitat Biologist I
ADF&G - Habitat Division
802 3rd Street, Room 209
Douglas, AK 99824
Phone: 907-465-6979
Fax: 907-465-4759

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Monday, December 16, 2013 1:11 PM
To: Zutz, Johnny D (DFG); Legere, Nicole M (DFG)
Subject: RE: Angoon Airport AWC nominations from 2009 fieldwork

Thanks Johnny!

Nicole, here are my attachments, as well, if you need/want to review them.

From: Zutz, Johnny D (DFG) [<mailto:johnny.zutz@alaska.gov>]
Sent: Monday, December 16, 2013 2:07 PM
To: Jamie C. M. Young; Legere, Nicole M (DFG)
Subject: RE: Angoon Airport AWC nominations from 2009 fieldwork

Jamie - I am forwarding your email to Nicole Legere who is working on this project. Her phone is (907)465-6979.

Nicole – See Jamie’s Comments below regarding nominations relating to the Angoon Airport.

Thanks,

Johnny Zutz

Habitat Biologist

(907)465-6474

From: Jamie C. M. Young [<mailto:jyoung@swca.com>]
Sent: Monday, December 09, 2013 11:43 AM
To: Zutz, Johnny D (DFG)
Cc: Leyla Arsan; Amanda Childs; Lara Bjork
Subject: Angoon Airport AWC nominations from 2009 fieldwork

Hello Johnny,

The internal agency review of the Angoon Airport Draft EIS closed on Friday (12/6), and the italicized comment below was included in the State of Alaska’s letter. Please see the attached AWC nominations and submission outcome from our 2009 fieldwork. In many cases our nominations were not incorporated because we did not have multiple “fish in hand.” Can you please provide ADF&G’s concurrence that our nominations were incorporated into the AWC to ADF&G’s satisfaction? Thanks for your help! Sincerely, Jamie (208.262.9323)

ADF&G Comment included in the State of Alaska’s comments from the Internal Agency Review of the Angoon Airport Draft EIS:

Alaska Department of Fish and Game

The Alaska Department of Fish and Game (ADF&G) reviews and permits, when appropriate, activities in anadromous water bodies per AS 16.05.871(b) and in resident fish water bodies per AS 16.05.841. Fresh water bodies described in the draft EIS are identified as Class 1 (anadromous) and Class 2 (resident), per US Forest Service convention. Anadromous and resident water bodies are present in proposed alternatives 3a and 4a with access 3. Anadromous water bodies are present in proposed alternative 4a with access 2. Resident fish streams are present in the preferred alternative, 12a.

The preferred alternative, 12a, will not negatively impact those resources and habitats for which ADF&G has responsibility. In the event another alternative is chosen to fulfill the project purpose and need, we would work with the applicant through the fish habitat permitting review process to minimize short-term construction impacts. The overall impacts of any of the alternatives would not jeopardize resource sustainability or our ability to manage stocks.

ADF&G annually updates the Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes (Catalog). The Catalog is the basis for our fish habitat permitting and U.S. Forest Service concurrence programs throughout the state. The information provided in the draft EIS is more comprehensive than that currently found in the Catalog. We request the applicant provide us the information on fish use, fish species, and life history stage present used to develop the EIS so we can complete and submit nominations for these water bodies during the next Catalog update.

Jamie C. M. Young
 Natural Resources Specialist

SWCA Environmental Consultants
 C 907.821.0404 | F 907.279.7922



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U.S. Department
of Transportation
**Federal Aviation
Administration**

AAL-614
Alaskan Region Airports Division
222 West 7th Ave #14
Anchorage, AK 99513

January 8, 2014

Randy Vigil
Juneau Regulatory Field Office
U.S. Army Corps of Engineers
8800 Glacier Highway, Suite 106
Juneau, AK 99801-8079

RE: Wetland and Waters Delineation for the Angoon Airport Environmental Impact Statement Preliminary Jurisdictional Determination Report (JDR)
T51S, R68E, Sections 5, 6, and 8; Copper River Meridian (C.R.M.), Southeast Alaska
Site centroid = 57.4722°N; -134.5468°W; Study Area = 163.54 acres
Directions to Site: From the Angoon float plane dock, travel southeast on Killisnoo Road (NF-7430). Take the first gravel road to the left. Travel approximately 0.5 miles to the project site, located to the south of the gravel road.

Dear Randy:

Please find attached the preliminary JDR for the Angoon Airport Environmental Impact Statement located in Sections 5, 6, and 8 of T51S, R68E, C.R.M., on Admiralty Island in the Hoonah-Angoon Borough. This report was prepared by SWCA Environmental Consultants (SWCA) under the direction of the Federal Aviation Administration (FAA) and under contract with the Alaska Department of Transportation and Public Facilities (DOT&PF) to determine the extent of likely jurisdictional wetlands and waters in the 163.54-acre study area located in southeast Alaska, on the Sitka B-2 Alaska U.S. Geological Survey quadrangle. The study area consists of lands owned by private individuals, the City of Angoon, and Kootznoowoo, Inc. The purpose of this preliminary JDR is to define the extent of likely jurisdictional wetlands and waters in the study area for a wetland permit application for the proposed Angoon Airport.

The study area contains palustrine forested needle-leaved evergreen saturated organic (PFO4Bg), palustrine scrub-shrub needle-leaved/deciduous and broad-leaved deciduous saturated organic (PSS4/1Bg), and palustrine emergent persistent saturated organic (PEM1Bg) wetlands. In total, 128.43 acres of potentially jurisdictional wetlands were delineated in the study area. Two potentially jurisdictional perennial waters, totaling 1.31 acres, were also delineated in the study area. The wetland and waters delineation was conducted by Wetland Scientists Stacey Reed and Taya MacLean of SWCA from August 19 through August 22, 2013, and from September 14 through September 16, 2013.

The FAA will provide written land owner permission when necessary if you would like to conduct a site visit. Please let me know if you have any questions concerning the attached report, and whether you would like to schedule a site visit.

Sincerely,

Leslie Grey
FAA Alaskan Region Airports Division

Angoon Airport EIS Project Manager

Attachment

cc: A. Childs (SWCA)
V. Skageberg (ADOT&PF)



**WETLAND AND WATERS DELINEATION
PRELIMINARY JURISDICTIONAL DETERMINATION REPORT
ANGOON AIRPORT ENVIRONMENTAL IMPACT STATEMENT
ADMIRALTY ISLAND, T51S, R68E, SECTIONS 5, 6, AND 8,
COPPER RIVER MERIDIAN, ALASKA**

Prepared for
**Federal Aviation Administration
Alaska Department of Transportation and Public Facilities**

Prepared by
SWCA Environmental Consultants

January 2014

**Wetland and Waters Delineation
Preliminary Jurisdictional Determination Report
Angoon, Admiralty Island, T51S, R68E, Sections 5, 6, and 8
Copper River Meridian, Alaska**

Prepared for

**Federal Aviation Administration
Alaska Department of Transportation and Public Facilities**

Prepared by

SWCA Environmental Consultants

1220 SW Morrison Street, Suite 700
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503-224-0333, fax 503-224-1851

January 8, 2013

Contents

1.0	Introduction and Study Area.....	1
2.0	Landscape Setting, Land Use, and Background Mapping	1
3.0	Site Alterations	2
4.0	Precipitation Data and Analysis.....	2
5.0	Wetland Delineation Methods	5
6.0	Mapping Methods.....	6
7.0	Description of All Wetlands, Non-Wetlands, and Waters	7
7.1	Wetlands	7
7.1.1	Palustrine Forested Needle-leaved Evergreen Saturated Organic (PFO4Bg).....	8
7.1.2	Palustrine Scrub-Shrub Needle-leaved Evergreen and Broad-leaved Deciduous Saturated Organic (PSS4/1Bg)	8
7.1.3	Palustrine Emergent Persistent Saturated Organic (PEM1Bg).....	9
7.2	Non-Wetlands (Uplands).....	9
7.3	Waters.....	10
8.0	Results and Conclusions.....	10
9.0	List of Preparers.....	11
10.0	Literature Cited.....	12

Tables

Table 1. Observed Precipitation Data at NWS Juneau Airport Station.....	3
Table 2. GHCN-Recorded Precipitation Prior to August Fieldwork (in inches).....	4
Table 3. GHCN-Recorded Precipitation Prior to September Fieldwork.....	4
Table 4. Summary of Habitat Types.....	11

Appendices

Appendix A. Maps	A-Error! Bookmark not defined.
Appendix B. Precipitation Data	B-Error! Bookmark not defined.
Appendix C. Wetland Determination Data Forms.....	C-Error! Bookmark not defined.
Appendix D. Ground-Level Site Photographs.....	D-Error! Bookmark not defined.
Appendix E. Vegetation Tables	E-Error! Bookmark not defined.

1.0 INTRODUCTION AND STUDY AREA

The purpose of this wetland and waters preliminary jurisdictional determination report (JDR) is to define the extent of likely jurisdictional wetlands and waters in the project area for the proposed Angoon Airport located near the town of Angoon on Admiralty Island in the Hoonah-Angoon Borough of Southeast Alaska (Appendix A, Figure 1). The proposed land-based airport would be a small, commercial airport and include a 3,300-foot-long paved runway and paved access road.

The following construction activities would occur if an airport was constructed:

- Vegetation removal related to the airport and road (clearing for construction or for visibility)
- Terrain disturbance related to the airport and road (includes cutting and filling of soil, and ripping and blasting of shallow bedrock to level the ground)
- Terrain disturbance from potential extraction of construction materials such as gravel, soil, and rock from on-island materials sources
- Pavement related to the airport and road (creating smooth surfaces for airplanes and vehicles)
- Tree felling (cleared trees are left where they fall) related to certain aviation easements (creating visually open areas for flight approach and takeoff)
- Rerouting or culverting of streams (to continue water flow that otherwise would be impeded by newly filled areas)

The wetland and waters delineation fieldwork was conducted by SWCA Environmental Consultants from August 19 through August 22, 2013, and from September 14 through September 16, 2013. The total study area for the wetland and waters delineation is approximately 163.54 acres and includes private, City of Angoon, and Kootznoowoo, Inc. lands (Appendix A, Figure 2). The study area included all areas where airport construction actions are proposed to fill wetlands, including terrain disturbance, pavement, and rerouting or culverting of streams. In addition, the study area was extended into vegetation removal areas for the purposes of allowing for potential changes to alignment during the environmental impact statement review process.

This report has been prepared in accordance with the U.S. Army Corps of Engineers (USACE) Alaska District Special Public Notice 2010-45 dated January 29, 2010. This wetland delineation was conducted in accordance with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Alaska Region (Version 2.0)* (USACE 2007) and the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987).

Wetlands in the study area were classified using the U.S. Fish and Wildlife Service (USFWS) National Wetlands and Deepwater Habitats Classification System (Cowardin et al. 1979).

2.0 LANDSCAPE SETTING, LAND USE, AND BACKGROUND MAPPING

The study area is located on the western side of Admiralty Island, southwest of Favorite Bay and immediately north of Killisnoo Harbor of the Chatham Strait. Auk'Tah Lake is south of the study area. No saltwater resources are present in the study area, only freshwater wetlands and streams. The topography of the study area slopes down to the south, with drainage toward Killisnoo Harbor. According to the contours generated by R&M Engineering (2006) for the *Angoon Airport Master Plan* (DOT&PF 2007), the northern portion of the study area is approximately 180 feet above sea level, sloping down to approximately 25 feet above sea level in the southern portion of the study area (Appendix A, Figure 5).

The adjacent land use is undeveloped forest. There are two small recreation cabins along the Killisnoo Harbor shoreline immediately south of the study area, and one home is present immediately north of the study area. The City of Angoon water reservoir is located upslope, approximately 100 feet to the east of the study area at the end of an existing gravel road.

Palustrine forested needle-leaved evergreen wetlands with a saturated water regime (PFO4B) and palustrine scrub-shrub needle-leaved evergreen and emergent persistent wetlands with a saturated water regime (PSS4/EM1B) are mapped throughout the majority of the study area on the National Wetlands Inventory (NWI) map (Appendix A, Figure 3; USFWS 2013).

To date, a soil survey map has not yet been created for the study area.

3.0 SITE ALTERATIONS

The study area is undeveloped and consists of a mix of undisturbed, high-quality mature closed canopy forest, shrubby areas, and open fens. No roads or culverts are present in the study area. A dirt all-terrain vehicle (ATV) trail extends north-south through the eastern portion of the study area. No footpaths were observed in the study area. No pollutants or other environmental hazards appear to exist on the study area.

Anecdotal evidence and observations of spring board notches indicate historical timber harvest occurred in the area, but no confirmed records could be located to ascertain the level of that harvest (Johnson 2013; SWCA Environmental Consultants 2012). It is possible that undocumented historical logging affected hydrologic patterns on the peninsula. Only larger diameter Sitka spruce (*Picea sitchensis*) trees were observed in the southern portion of the study area. Other portions of the study area contained a less mature forest canopy.

4.0 PRECIPITATION DATA AND ANALYSIS

There are no dependable weather stations for Angoon. The study area is located approximately 60 miles southwest of Juneau and approximately 41 miles northeast of Sitka. According to the Western Regional Climate Center (WRCC), the Angoon area has a generally mild maritime climate, with an average of approximately 42 inches of annual rainfall (WRCC 2010). The National Weather Service (NWS) reports an annual average rainfall of approximately 54 inches at the Juneau Airport station (NWS 2013). Table 1 below lists the recorded rainfall at the NWS Juneau Airport station for each field day and the two weeks prior to each field day. Weather observed during the field visits from August 19 through 22, 2013, was dry and generally clear or slightly overcast throughout the day (even though rainfall was recorded at the Juneau Airport station). Weather during the September 14 and 15, 2013, site visits was dry and sunny, with unusually high temperatures reaching the low 60 degrees. Periods of heavy rain were received during the September 16, 2013, field day.

According to the National Oceanic and Atmospheric Administration's (NOAA's) Global Historical Climatology Network (GHCN), the Southeast Alaska region experienced a drier than normal 2013 summer. However, if rainfall at the Juneau International Airport weather station is used as a proxy for determining whether rainfall in Angoon was within the normal range due to their similar annual rainfall, it suggests that although weather conditions were generally drier than normal in Southeast Alaska, weather conditions may have been within the normal range in the study area. Tables 2 and 3 below show the rainfall recorded at GHCN stations located in the vicinity of Angoon for 90 days prior, two weeks prior, and one week prior to fieldwork. The location for each station listed in Tables 2 and 3 is included below for reference in proximity to Angoon and the study area.

Table 1. Observed Precipitation Data at NWS Juneau Airport Station

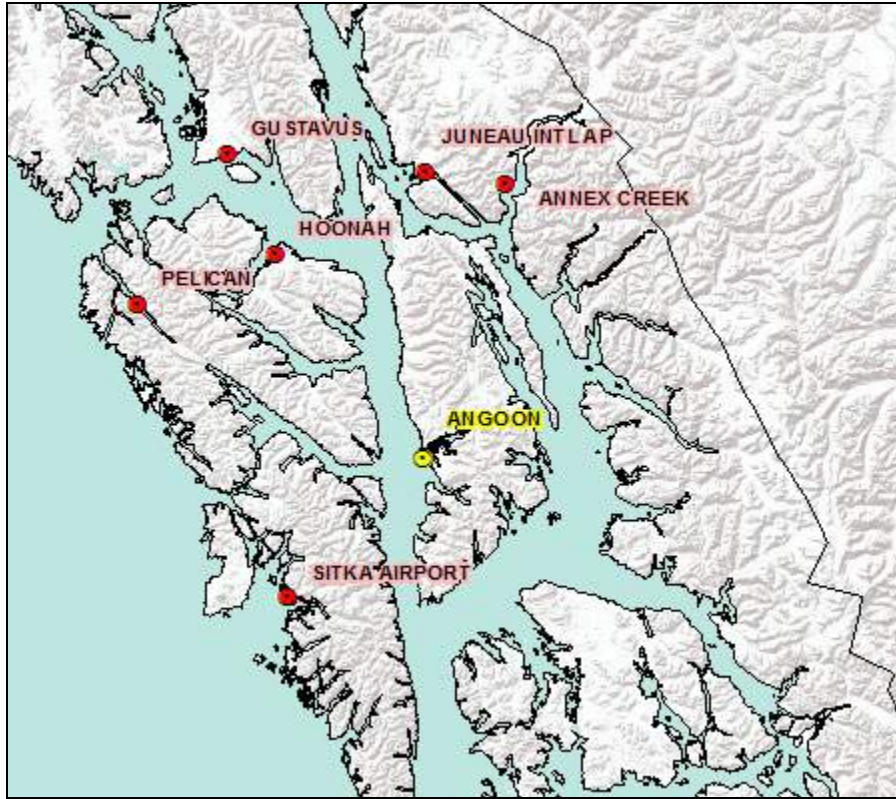
Site Visit	Precipitation Received Day Of Site Visit (inches)	Precipitation Received 2 Weeks Prior to Site Visit (inches)
August 19, 2013	0.11	2.40
August 20, 2013	0.11	2.34
August 21, 2013	0.07	2.45
August 22, 2013	Trace	2.52
September 14, 2013	0	4.66
September 15, 2013	0.10	3.65
September 16, 2013	0.17	2.45

Table 2. GHCN-Recorded Precipitation Prior to August Fieldwork (in inches)

	90 Days Prior to August 2013 Fieldwork			14 Days Prior to August 2013 Fieldwork			Week of Fieldwork (8/19–8/22)		
	Measured Rain	Normal Rain	Surplus/Deficit	Measured Rain	Normal Rain	Surplus/Deficit	Measured Rain	Normal Rain	Surplus/Deficit
Annex Creek	17.82	17.81	1.18	3.32	5.57	-1.97	0.84	1.37	-0.53
Gustavus	9.23	11.87	-2.50	2.25	3.01	-0.76	0.13	0.71	-0.58
Hoonah	8.00	10.05	-2.05	1.70	2.29	-0.59	0.63	0.60	0.03
Juneau Intl Airport	12.35	12.42	-0.07	3.24	3.30	-0.06	0.29	0.77	-0.48
Pelican	14.09	19.63	-5.23	2.37	5.76	-3.39	0.62	1.45	-0.83
Sitka Airport	10.17	12.24	-2.07	2.33	3.86	-1.53	0.00	0.95	-0.95

Table 3. GHCN-Recorded Precipitation Prior to September Fieldwork

	90 Days Prior to September 2013 Fieldwork			14 Days Prior to September 2013 Fieldwork			Week of Fieldwork (9/14–9/15)		
	Measured Rain	Normal Rain	Surplus/Deficit	Measured Rain	Normal Rain	Surplus/Deficit	Measured Rain	Normal Rain	Surplus/Deficit
Annex Creek	N/A	25.34	N/A	N/A	7.71	N/A	0.27	1.74	-1.47
Gustavus	10.45	13.74	-3.29	3.59	3.09	0.50	0.12	0.78	-0.66
Hoonah	8.68	12.66	-3.98	1.82	3.08	-1.26	0.09	0.78	-0.69
Juneau Intl Airport	14.03	15.46	-1.43	4.66	3.73	0.93	0.27	0.89	-0.62
Pelican	20.78	26.75	-5.97	9.37	7.86	1.51	0.12	2.02	-1.90
Sitka Airport	12.15	16.98	-4.83	3.56	4.90	-1.34	0.52	1.18	-0.66



Locations of GHCN stations.

According to the GHCN station data, weather conditions prior to the August 2013 site visits at every station in the vicinity of Angoon were below normal for that time of year. This suggests that the Angoon area was drier than normal. This was evident during the August 2013 fieldwork. The number of obligate wetland and facultative wetland vegetation species observed in the forested wetland communities was minimal. The water table at wetland plots was sometimes observed below 12 inches. Due to landscape position and the presence of hydric histosol soils, the water table would be expected to be near the surface or within 12 inches of the soil surface during the earlier portion of the growing season. Since the region had experienced drier-than-normal rainfall over the summer, wetland hydrology indicator C2 Dry-Season Water Table was used to document a water table observed between 12 and 40 inches in organic soils as meeting the wetland hydrology criterion.

According to the Regional Supplement (USACE 2007), the median beginning and ending dates of the growing season for Ecoregion No. 120, Coastal Western Hemlock–Sitka Spruce Forests, is April 29 through September 28. The site visits were conducted during the appropriate ecoregion growing season. Chapter 5 of the Regional Supplement states that the Southeast Alaska region typically lacks a significant dry period.

Precipitation data for the above tables are included for reference in Appendix B.

5.0 WETLAND DELINEATION METHODS

The wetland delineation fieldwork was conducted by Stacey Reed and Taya MacLean from August 19 through August 22, 2013, and from September 14 through September 16, 2013.

The study area was walked, and soils, vegetation, and indicators of hydrology were recorded on Alaska Regional Supplement Wetland Determination Data Forms at 56 sample plot locations (note that plots 17, 18, and 41 were not located in the study area and are not included in this report) to document representative site conditions. Paired plots documented wetland and adjacent upland transitional communities. Completed wetland determination data forms are included in Appendix C. The typical plot radius to document vegetation was 5 feet for herbaceous vegetation, 10 feet for scrub-shrub vegetation, and 30 feet for trees. Soil test pits were dug to a depth of 12 to 16 inches, or to bedrock refusal, to determine if hydric soil conditions were present. Soil probes were used to document the soil profiles below 16 inches. Several unrecorded sample plots were dug to verify hydric soil and wetland hydrology indicators throughout the study area to assist with the delineation of wetland boundaries.

Plants were identified to species using the following references: Douglas et al. 1998a, 1998b, 1999a, 1999b, 2000, 2001a, 2001b, 2002; Hitchcock et al. 1973; Hulten 1968; Klinkenberg 2013; Pojar and MacKinnon 2004; Schofield 1992; and Wilson et al. 2008.

The National Wetland Plant List (NWPL) for the Alaska Region (Lichvar 2013) was referenced in this delineation as required by the USACE. The wetland determination data forms in Appendix C and the table of vegetation observed in the study area in Appendix E use the nomenclature and the wetland indicator status of the NWPL Alaska Region list.

Soils were described with standardized color chips (X-Rite 2000) of hue, value, and chroma and by texture (sand, silt, clay, loam, muck, and peat) (Schoeneberger et al. 2002). Field indicators of hydric soils were recorded according to the indicators described in U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) 2005 and 2010.

Wetlands were classified according to Cowardin and hydrogeomorphic method (HGM) classification (Brinson 1993; Cowardin et al. 1979).

Photographs were taken at each of the plots, and representative site photographs and a photo location map are included in Appendix D. A list of vegetation (vascular plants) observed in the study area during the August and September 2013 site visits is included in Appendix E.

Potentially jurisdictional drainages with a continuous, well-defined bed and bank were walked, and drainage widths and ordinary high water mark indicators were recorded and photo-documented.

6.0 MAPPING METHODS

The GPS location data for the wetland boundaries, water centerlines, and sample plots locations were collected using a Trimble GeoExplorer XT mapping-grade GPS unit. Accuracy for all GPS-surveyed features is estimated at 1 meter or less based on the manufacturer's reported tolerance for the instrument and the post-processing report. Digitized mapping and cartography were completed in ArcGIS 10. The results are shown on a 2004 aerial photograph (Appendix A, Figures 4, 4a, and 4b) and on the 2006 Angoon Airport Master Plan contour base (Appendix A, Figures 5). The contours were not professionally land surveyed, and the accuracy of the contours is variable throughout the study area. Therefore, the wetland boundaries do not coincide with the contours in all areas. Wetland boundary points were collected in the field at representative locations using a Trimble GPS. Aerial photograph signatures for wetland/upland boundaries were field-verified to assist with mapping of wetland boundaries in geographic information system (GIS). Final wetland boundary mapping was completed in the office by hand digitizing using representative wetland boundaries mapped in the field along with field-verified vegetation signatures on high-resolution aerial photographs. Wetland boundaries and plot locations were not physically flagged in the field.

The boundaries of wetland Cowardin classifications (forested, scrub-shrub, emergent) were mapped by hand, based on aerial photograph interpretation and field-verification.

7.0 DESCRIPTION OF ALL WETLANDS, NON-WETLANDS, AND WATERS

7.1 Wetlands

Three different palustrine (freshwater) wetland vegetation classification communities were mapped within the study area, consisting of palustrine forested needle-leaved evergreen saturated organic (PFO4Bg); palustrine scrub-shrub needle-leaved/deciduous and broad-leaved deciduous saturated organic (PSS4/1Bg); and palustrine emergent persistent saturated organic (PEM1Bg). A total of approximately 128.43 acres of potentially jurisdictional wetlands were delineated. The delineation documented slightly greater upland in the study area and more interspersed polygons of palustrine scrub-shrub and emergent-dominated communities than the NWI map.

The wetland boundaries in the study area were determined by a change in the land form from lower elevation concave wetlands (depressions within hummocks, hill slope benches, and broad concave depressions on hill slope crests) to a convex land form in uplands. A change in the vegetation community generally coincided with a change in land form from a hydrophytic-dominated understory in wetlands to a non-hydrophytic-dominated understory in uplands. Upland communities contained a closed forested canopy dominated by larger diameter Western hemlock (*Tsuga heterophylla*) and Sitka spruce and had a less diverse understory compared to the adjacent wetland areas. Uplands lacked hydric soil and hydrology indicators during the August and September site visits.

Most wetland communities were dominated by a hydrophytic vegetation community with hydric histosol soils and wetland hydrology indicators. However, a few wetland plots did not pass the hydrophytic vegetation dominance or prevalence index tests. The shrub stratum at these plots were dominated by FACU (facultative upland) communities (rusty menziesia [*Menziesia ferruginea*], Oregon crabapple [*Malus fusca*], salmonberry [*Rubus spectabilis*], and devils-club [*Oplopanax horridus*]). These FACU shrubs appeared to be shallowly rooted and growing on slightly elevated hummocks. Oregon crabapple was only observed in wetlands and behaved as a hydrophyte throughout the study area. Rusty menziesia was observed in both wetland and upland areas, and devils-club seemed to favor wetland transitional areas over upland areas. Plots that did not meet the dominance test or prevalence index for hydrophytic vegetation indicators contained saturated hydric histosol soils and primary hydrology indicators; therefore, the problematic hydrophytic vegetation indicator was checked on the data sheets for these plots according to the problematic vegetation procedures in Chapter 5 of the Regional Supplement.

A wetland/upland mosaic was observed in the south-central portion of the study area (in the vicinity of Plots 28, 50, 51, 52, and 55). Small, isolated (not continuous), steeply sloped ($\geq 25\%$ slope) upland ridges were observed in this area that were surrounded by forested wetland (Photo 1, Appendix D). These upland ridges were not delineated because they were small, steep, and surrounded by wetland. The small uplands represented at most approximately 5% of the south-central study area, with 95% of this area being forested wetland.

Several intermittent groundwater seeps were observed within the delineated wetlands. These groundwater seep areas were not delineated separately as waters because they lacked a continuous, defined bed and bank and were sparsely vegetated (Photo 2, Appendix D). Therefore, these areas do not meet the definition of waters of the U.S. and were included in the delineated wetland areas.

7.1.1 PALUSTRINE FORESTED NEEDLE-LEAVED EVERGREEN SATURATED ORGANIC (PFO4Bg)

Representative Plots: 6, 10, 11, 14, 21, 23, 25, 27, 28, 30, 32, 33, 34, 35, 39, 42, 44, 47, 49, 50, 51, 52, 54, 55

Approximately 58.79 acres of palustrine forested needle-leaved evergreen (coniferous) wetlands with a saturated water regime and organic soils (PFO4Bg) were mapped within the study area. Wetland forested conditions appeared to extend outside the study area to the north, northwest, south, and east. Forested wetlands contained greater than 30% canopy dominated by Western hemlock with Sitka spruce as co-dominants (Photo 3, Appendix D). The typical understory within the forested wetlands consisted of oval-leaf blueberry (*Vaccinium ovalifolium*), rusty menziesia, devils-club, American skunkcabbage (*Lysichiton americanus*), lady fern (*Athyrium cyclosorum*), and fern-leaf goldthread (*Coptis asplenifolia*) (Photo 4, Appendix D). Lesser amounts of strawberry-leaf raspberry (*Rubus pedatus*) and bunchberry dogwood (*Cornus canadensis*) were observed in the palustrine forested understory communities. Buttressed Sitka spruce tree bases were common in the palustrine forested wetland areas.

Soils documented in forested wetlands were typically thick layers of saturated organic histosols (dominated by sapric rather than fibric soil material). The soil profile at most of the forested wetland plots contained greater than 16 inches of thick muck underlain by bedrock or gravels/coarse sands (Photo 5, Appendix D).

Wetland hydrology indicators consisted of surface soil saturation, and a water table within 12 inches of the soil surface was generally observed during the site visits in late August and in early September. A water table between 12 and 40 inches was observed at some of the forested wetland plots. These plots had soils that were saturated at or near the surface and met the C2 Dry-Season Water Table wetland hydrology indicator. Shallow ponding (an average of approximately 6 inches deep) was observed within micro-topographic depressions scattered throughout the forested wetland communities (Photo 6, Appendix D). Small areas of groundwater seeps and rivulets with a vegetated organic substrate were observed flowing southerly through the forested wetlands. These wetland drainages lacked continuous bed and bank, were sparsely vegetated with American skunkcabbage, had iron deposits consisting of an orange gel (Photo 7, Appendix D), and did not meet the definition of a water of the U.S.

The primary hydrology input for the forested wetlands consisted of groundwater discharging from the upslope land surface and direct precipitation. Forested wetlands belong to the slope HGM classification (Brinson 1993; NRCS 2008). Forested wetlands are connected to and drain downslope to the main perennial drainage delineated on the site.

7.1.2 PALUSTRINE SCRUB-SHRUB NEEDLE-LEAVED EVERGREEN AND BROAD-LEAVED DECIDUOUS SATURATED ORGANIC (PSS4/1Bg)

Representative Plots: 2, 5, 9, 12, 13, 15, 18, 22, 24, 27, 35, 45, 56.

Approximately 66.66 acres of palustrine scrub-shrub needle-leaved evergreen and broad-leaved deciduous wetlands with a saturated water regime and organic soils (PSS4Bg) were mapped within the study area. Scrub-shrub wetland communities had less than 30% tree canopy cover; the majority of the scrub-shrub wetlands were broad-leaved deciduous. The broad-leaved deciduous scrub-shrub wetlands were dominated by dense thickets of Oregon crabapple, Sitka alder (*Alnus viridis*), and blueberry, with lesser amounts of devils-club, rusty menziesia, and squashberry *Viburnum edule* (Photo 8, Appendix D). Skunkcabbage and lady fern were dominant in the herbaceous stratum of the broad-leaved deciduous communities. Scattered smaller/stunted Western hemlock and Sitka spruce trees were observed in the broad-leaved deciduous scrub-shrub communities. The Western hemlock and Sitka spruce tree canopy within the scrub-shrub communities was very open. The scrub-shrub needle-leaved evergreen communities occupied small areas in the lowest elevation areas in the north and western portions of the study area. The needle-leaved evergreen scrub-shrub areas

contained stunted Western hemlock and shore pine (*Pinus contorta*) tree growth with an open sedge-dominated understory (Photo 9, Appendix D). Many dead trees were observed in the scrub-shrub needle-leaved communities (Photo 10, Appendix D).

Soils documented in the needle-leaved evergreen areas contained a deep profile of saturated peat. Soils in the broad-leaved deciduous community contained deep saturated sapist organic (muck and mucky peat) layers. The groundwater table in the scrub-shrub communities was observed at the soil surface or within 12 inches of the soil surface during the August and September 2013 site visits. Many shallow, scattered micro-depressions within the scrub-shrub communities were ponded, with approximately 2- to 4-inch-deep pools during the August and September 2013 site visits.

Scrub-shrub communities are located in topographic depressions that intercept groundwater discharge from adjacent higher elevational uplands and forested wetlands. The scrub-shrub communities in the southeast portion of the study area lacked defined outlet channels. Scrub-shrub wetlands belong to the slope HGM classification.

7.1.3 PALUSTRINE EMERGENT PERSISTENT SATURATED ORGANIC (PEM1Bg)

Representative Plots: 1, 40

Approximately 2.98 acres of palustrine emergent persistent fens (graminoid fen) with a saturated water regime and organic soils (PEM1Bg) were mapped in the study area. The emergent communities were characterized as smaller depressional areas surrounded by scrub-shrub communities. Emergent fens were dominated by stunted shore pine trees with water and yellow sedge (*Carex aquatilis* and *C. flava*), scentbottle (*Piperia dilatata*), cloudberry (*Rubus chamaemorus*), sticky tofieldia (*Triantha glutinosa*), buck-bean (*Menyanthes trifoliata*), tall cotton-grass (*Eriophorum angustifolium*), and tufted leafless-bulrush (*Trichophorum caespitosum*) (Photo 11, Appendix D).

Soils in fens contained thick layers of saturated organic peats (fibrous histosols; Photo 12, Appendix D). The water table was generally at the surface or within 12 inches of the soil surface. Small, scattered pools of shallow ponding (an average of 2 inches deep; maximum 4 inches deep) were observed within the emergent communities. Soils in the fens had a sulfidic odor.

Emergent fens in the study area are located on broad concave hill slope benches and belong to the slope HGM classification. Drainage from the fens located in the northern portion of the study area discharges through a perennial stream.

7.2 Non-Wetlands (Uplands)

Representative Plots: 3, 4, 7, 8, 16, 19, 20, 26, 29, 31, 36, 37, 38, 43, 46, 48, 53

Approximately 33.80 acres of upland forest were delineated in the study area. The uplands were dominated by a mature Western hemlock and Sitka spruce closed canopy and contained a less diverse herbaceous understory than the adjacent forested wetlands. The dominant upland shrub community generally consisted of red huckleberry (*Vaccinium parvifolium*), rusty menziesia, and oval-leaf blueberry. The dominant understory consisted of bunchberry dogwood, queen's cup (*Clintonia uniflora*), heart-leaf twayblade (*Neottia cordata*), and mosses (Photo 13, Appendix D). Some upland plots were dominated by a facultative-dominated vegetation community, mainly due to the presence of a Western hemlock canopy with dense oval-leaf blueberry thickets in the understory. While these plots met the dominance test for hydrophytic vegetation, they lacked wetland hydrology and hydric soil indicators, and were determined to be upland.

Upland soils consisted of poorly decomposed, non-saturated folist organic soils (containing herbaceous matter, roots, and wood; Photo 14, Appendix D). The upland organic layers were not as decomposed as the saturated mucks and mucky peat soil profiles documented in wetlands. The upland folistic layers were shallow (less than 16 inches deep) and generally underlain by bedrock. Uplands were located on convex hill slope, a land form that does not support the concentration of water. Upland soils lacked saturation and primary and secondary wetland hydrology indicators. Upland conditions appeared to extend to the north, south, and east of the study area.

7.3 Waters

Approximately 1.31 acres of potentially jurisdictional waters were delineated in the study area.

The main drainage within the study area consists of a perennial drainage that originates in a fen located immediately off-site to the northwest. The drainage flows southerly through the study area through forest, scrub-shrub, and emergent wetland vegetation communities. The channel flows off-site to the south of the study area. The upstream portion of the channel bed was the narrowest, flowing through the fen and scrub-shrub wetland within a 1-foot -wide channel bed and 1.5-foot-tall banks (Photo 15, Appendix D). The dominant channel bed substrate in the upstream portions of the channel was muck. Downstream, the channel developed a broader bed (an average of between 6 and 8 feet wide) with an average of 2-foot-tall banks (Photo 16, Appendix D). The dominant substrate in the downstream portions of the channel was gravelly sandy loam with pockets of small cobbles (Photo 17, Appendix D). Continuous flow of a minimum 6-inch depth was observed throughout the channel during the September 14, 2013, site visit. Deeper pools contained flow up to 2 feet deep. Unvegetated lateral coarse sand bars and an abundance of large woody debris were also observed in the downstream portions of the channel bed.

The headwaters for a second potentially jurisdictional perennial water was delineated in the southwest portion of the study area. This tributary originates from a groundwater seep within palustrine forested wetland and develops a defined 3-foot-wide channel bed with 1-foot-tall banks (Photo 18, Appendix D). The dominant substrate was gravelly sandy loam. Approximately 4-inch-deep continuous flow was present in the channel during the September 14, 2013, site visit. The channel flows off-site to the south of the study area.

The ordinary high water marks for the delineated drainages coincided with the top of the stream banks. A change in the soil texture generally occurred just above the stream banks from gravelly sandy loam and cobbles in the channel bed to organic histosols in the adjacent wetland. The ordinary high water marks were also defined by the transition from the unvegetated channel bed to the adjacent vegetated wetland community. No fish were observed in any portion of the streams during the August or September 2013 site visits. The streams are riverine upper perennial unconsolidated bottom drainages with a permanent water regime (R3UBH). No gradient measurements were taken of the streams.

Streams delineated in the study area are not mapped in the Alaska Department of Fish and Game (ADF&G) *Catalog of Waters Important for the Spawning, Rearing, or Migration of Anadromous Fishes* (Johnson and Blanche 2012). The streams are not mapped on the Sitka B-2 U.S. Geological Survey (USGS) map (USGS 2013).

8.0 RESULTS AND CONCLUSIONS

A total of approximately 128.43 acres of potentially jurisdictional wetlands and 1.31 acres of potentially jurisdictional waters were delineated in the study area (Table 4).

Wetland conditions extend off-site to the south of the study area and are located immediately adjacent to Killisnoo Harbor (a tidally influenced traditional navigable water of the U.S.). Based on aerial photography, an

upland ridge may be present along the shoreline, separating the estuarine community from the palustrine wetlands. However, the perennial drainages delineated in the study area are non-navigable, perennial, relatively permanent waters that are directly adjacent to and drain wetlands in the study area. The drainages flow southerly and potentially flow directly into the harbor. Therefore, due to the potential hydrologic connection to Killisnoo Harbor, wetlands and drainages delineated in the study area may be determined to be jurisdictional by the Alaska District USACE.

Table 4 summarizes the acreages of wetlands, waters, and uplands delineated in the study area. Wetland vegetation types, Cowardin classification, HGM classification, representative sample plots, and the photo number for representative photographs are also summarized according to habitat type.

Table 4. Summary of Habitat Types

Habitat Type	Cowardin Class	HGM Classification	Sample Plots	Representative Photos	On-Site Acreage
Forest	PFO4Bg	Slope	6, 10, 11, 14, 21, 23, 25, 27, 28, 30, 32, 33, 34, 35, 39, 42, 44, 47, 49, 50, 51, 52, 54, 55	2, 3, 4, 5, 6, 7	58.79
Scrub-shrub	PSS4/PSS1Bg	Slope	2, 5, 9, 12, 13, 15, 18, 22, 24, 27, 35, 45, 56	8, 9, 10	66.66
Emergent	PEM1Bg	Slope	1, 40	11, 12	2.98
Total Wetland = 128.43 acres					
Unnamed main central drainage	R3SB1	None	None	15, 16, 17, 18	1.29
Unnamed western drainage	R3SB1	None	None	--	0.02
Total Waters = 1.31 acres					
Non-wetland	Upland	N/A	3, 4, 7, 8, 16, 19, 29, 31, 34, 36, 38, 41	13, 14	32.56
Total Upland = 33.80 acres					

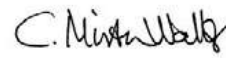
9.0 LIST OF PREPARERS



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Appendices

- A. Maps**
- B. Precipitation Data**
- C. Wetland Determination Data Sheets**
- D. Ground-Level Site Photographs**
- E. List of Vegetation Observed On-site**

Please see accompanying PDF for all appendices

APPENDIX A. MAPS

A-1

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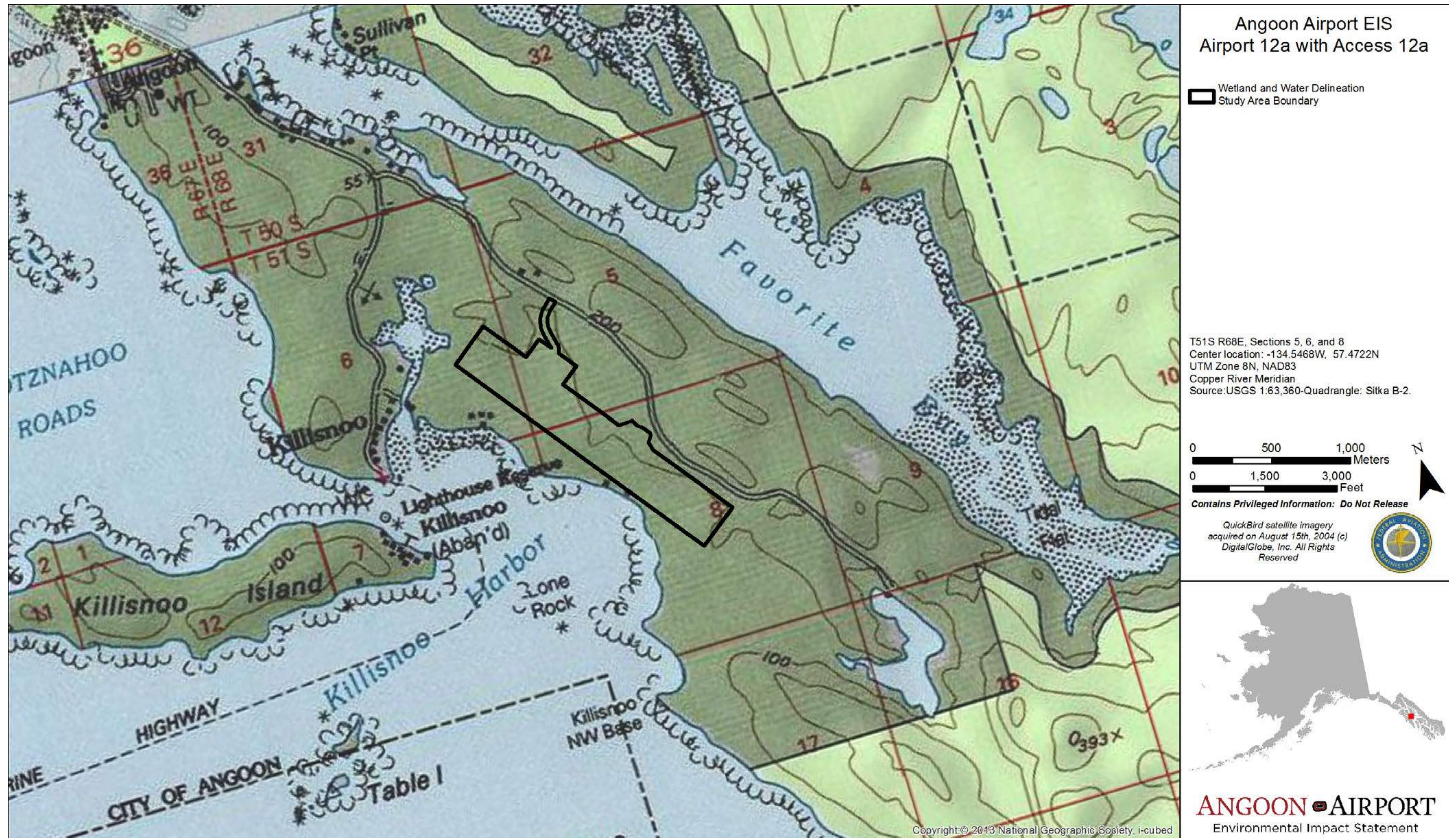


Figure 1. Site location map.

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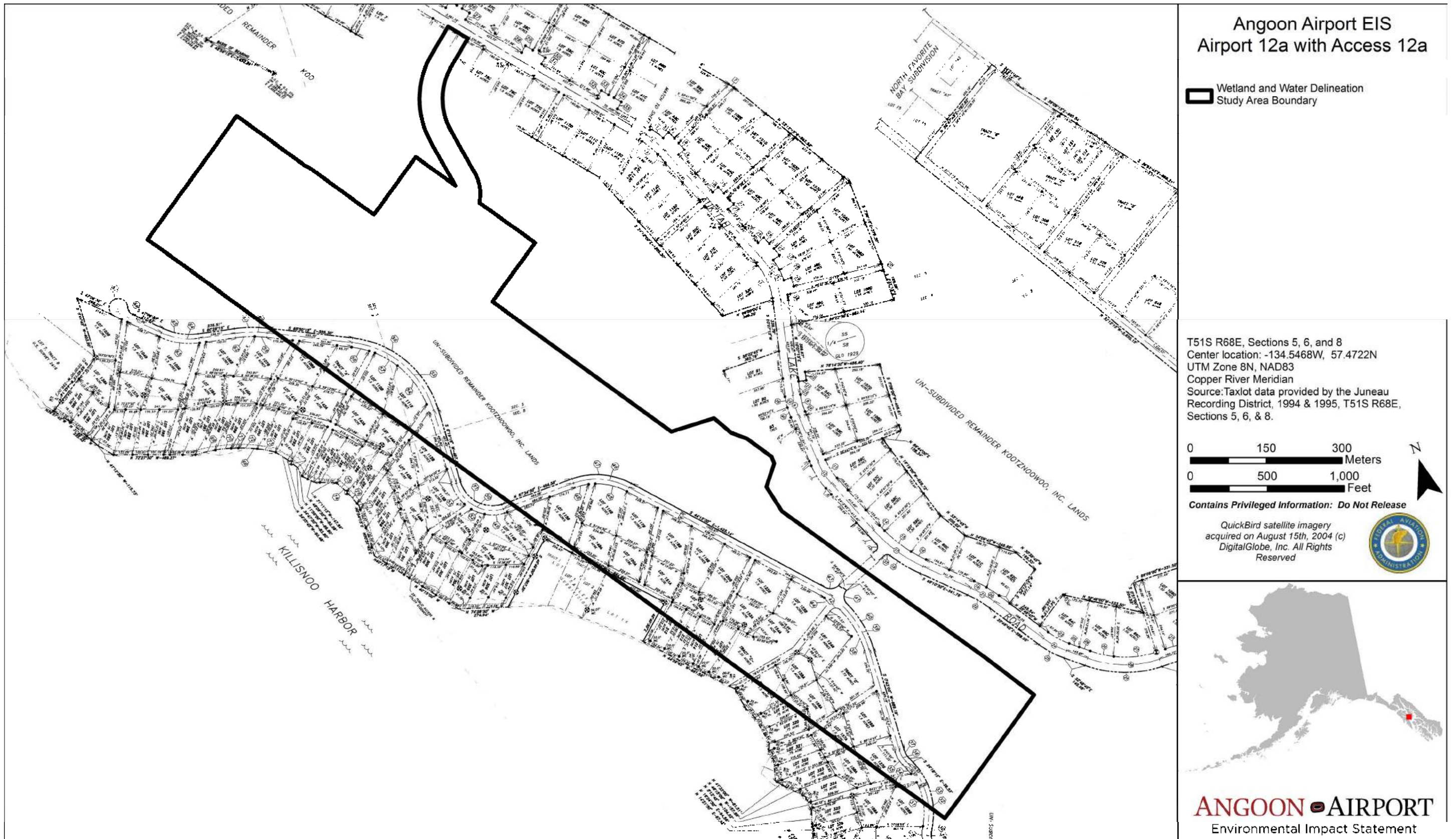


Figure 2. Parcel map.

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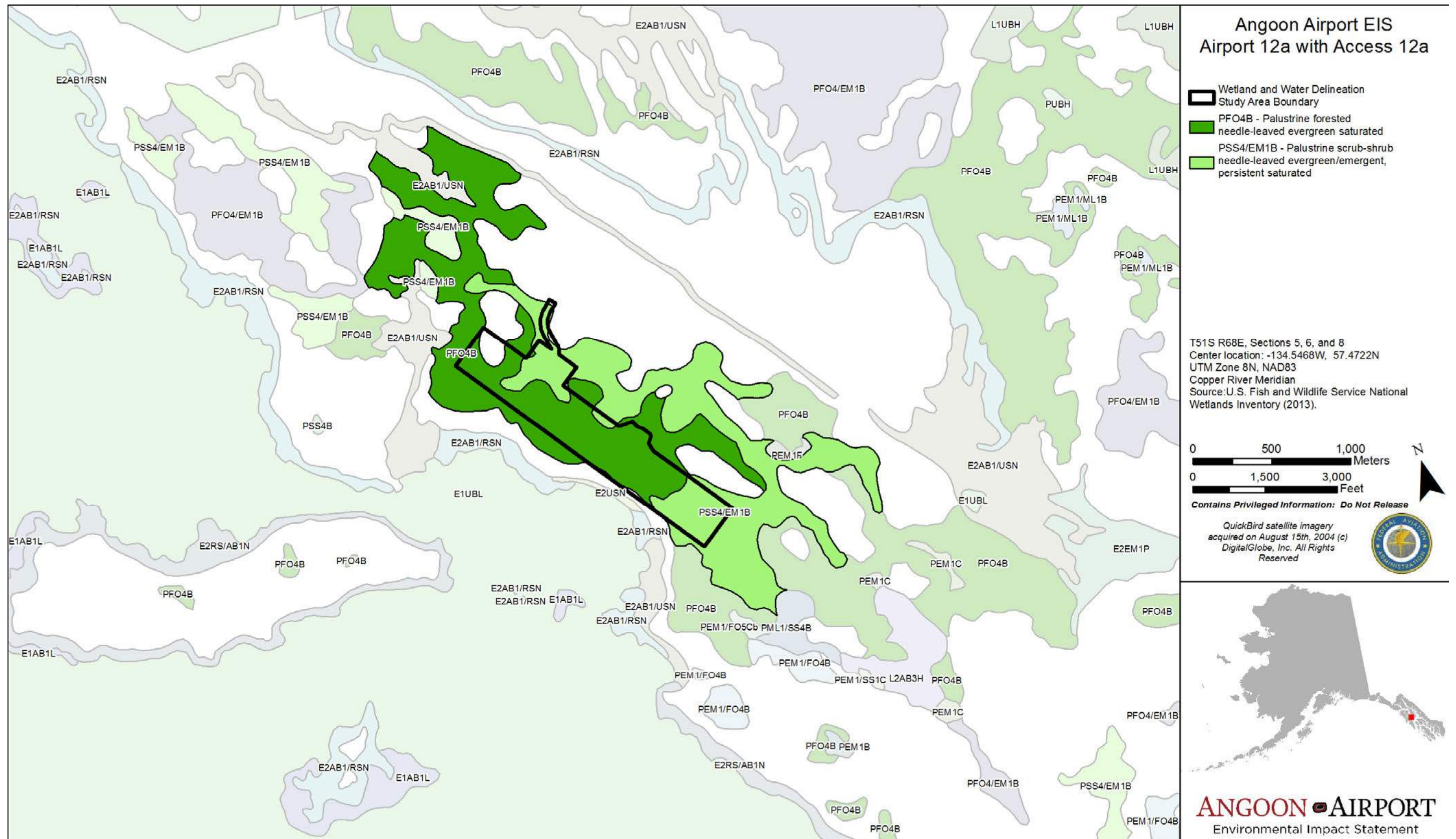


Figure 3. National Wetlands Inventory map.

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Figure 4. 2004 aerial wetland and waters delineation map.

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Figure 4a. Enlargement of NW wetland and waters delineation map.

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Figure 4b. Enlargement of SE wetland and waters delineation map.

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Figure 5. 2006 contour wetland and waters delineation map.

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APPENDIX B. PRECIPITATION DATA

B-1

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B-2

ANGOON, ALASKA (500310)

Period of Record Monthly Climate Summary

Period of Record : 9/ 1/1949 to 2/28/2011

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	31.9	36.8	40.9	47.1	53.4	58.8	62.0	61.5	56.6	48.4	39.9	34.3	47.6
Average Min. Temperature (F)	23.5	27.1	29.7	33.9	39.8	45.6	49.8	49.8	45.2	39.1	32.3	27.3	36.9
Average Total Precipitation (in.)	3.39	2.70	2.42	2.21	1.92	1.90	2.26	3.76	4.89	7.71	4.79	4.04	42.00
Average Total SnowFall (in.)	16.6	12.7	8.1	2.0	0.0	0.0	0.0	0.0	0.0	0.3	6.0	15.4	61.2
Average Snow Depth (in.)	7	8	4	1	0	0	0	0	0	0	1	4	2

Percent of possible observations for period of record.

Max. Temp.: 81% Min. Temp.: 80.9% Precipitation: 83.7% Snowfall: 85.2% Snow Depth: 85.3%

Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

Climatological Report (Daily)

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CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
325 AM AKDT TUE AUG 20 2013

.....
...THE JUNEAU CLIMATE SUMMARY FOR AUGUST 19 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
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.....
TEMPERATURE (F)

YESTERDAY

MAXIMUM	60	336 PM	80	1977	63	-3	66
MINIMUM	49	420 AM	34	1947	49	0	44
AVERAGE	55				56	-1	55

PRECIPITATION (IN)

YESTERDAY	0.11		1.50	1991	0.18	-0.07	0.00
MONTH TO DATE	3.06				3.18	-0.12	4.23
SINCE JUN 1	10.70				11.02	-0.32	16.29
SINCE JAN 1	39.07				30.62	8.45	36.03

DEGREE DAYS

HEATING

YESTERDAY	10				9	1	10
MONTH TO DATE	98				156	-58	179
SINCE JUN 1	534				722	-188	879
SINCE JUL 1	320				407	-87	485

COOLING

YESTERDAY	0	0	0	0
MONTH TO DATE	0	0	0	0
SINCE JUN 1	9	2	7	1
SINCE JAN 1	9	2	7	1

WIND (MPH)

HIGHEST WIND SPEED	13	HIGHEST WIND DIRECTION	SE (130)
HIGHEST GUST SPEED	16	HIGHEST GUST DIRECTION	E (90)
AVERAGE WIND SPEED	5.4		

SKY COVER

POSSIBLE SUNSHINE MM
AVERAGE SKY COVER 1.0

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
LIGHT RAIN
FOG

RELATIVE HUMIDITY (PERCENT)

HIGHEST	93	1200 AM
LOWEST	72	1200 PM
AVERAGE	83	

THE JUNEAU CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	62	83	1977
MINIMUM TEMPERATURE (F)	49	39	1973

SUNRISE AND SUNSET

AUGUST 20 2013.....	SUNRISE	532 AM AKDT	SUNSET	830 PM AKDT
AUGUST 21 2013.....	SUNRISE	534 AM AKDT	SUNSET	827 PM AKDT

- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

&&

AMOUNT OF DAYLIGHT TODAY (HOUR:MIN)14:58
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)-0:04:53

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

Climatological Report (Daily)

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 CLIMATE REPORT
 NATIONAL WEATHER SERVICE JUNEAU, AK
 326 AM AKDT WED AUG 21 2013

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...THE JUNEAU CLIMATE SUMMARY FOR AUGUST 20 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
 CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
--------------	----------------	------------	--------------	------	--------------	-----------------------	-----------

.....
 TEMPERATURE (F)

YESTERDAY

MAXIMUM	57	414 PM	83	1977	62	-5	68
MINIMUM	52	407 AM	39	1973	49	3	50
AVERAGE	55				55	0	59

PRECIPITATION (IN)

YESTERDAY	0.11		1.38	2011	0.20	-0.09	0.00
MONTH TO DATE	3.17				3.38	-0.21	4.23
SINCE JUN 1	10.81				11.22	-0.41	16.29
SINCE JAN 1	39.18				30.82	8.36	36.03

DEGREE DAYS

HEATING

YESTERDAY	10				10	0	6
MONTH TO DATE	108				166	-58	185
SINCE JUN 1	544				732	-188	885
SINCE JUL 1	330				417	-87	491

COOLING

YESTERDAY	0	0	0	0
MONTH TO DATE	0	0	0	0
SINCE JUN 1	9	2	7	1
SINCE JAN 1	9	2	7	1

WIND (MPH)

HIGHEST WIND SPEED	15	HIGHEST WIND DIRECTION	E (100)
HIGHEST GUST SPEED	18	HIGHEST GUST DIRECTION	E (100)
AVERAGE WIND SPEED	7.5		

SKY COVER

POSSIBLE SUNSHINE MM
 AVERAGE SKY COVER 1.0

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
 LIGHT RAIN
 FOG

RELATIVE HUMIDITY (PERCENT)

HIGHEST	100	400 AM
LOWEST	80	200 PM
AVERAGE	90	

THE JUNEAU CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	62	78	1977
MINIMUM TEMPERATURE (F)	48	38	1960

SUNRISE AND SUNSET

AUGUST 21 2013.....	SUNRISE	534 AM AKDT	SUNSET	827 PM AKDT
AUGUST 22 2013.....	SUNRISE	536 AM AKDT	SUNSET	824 PM AKDT

- INDICATES NEGATIVE NUMBERS.
- R INDICATES RECORD WAS SET OR TIED.
- MM INDICATES DATA IS MISSING.
- T INDICATES TRACE AMOUNT.

&&

AMOUNT OF DAYLIGHT TODAY (HOUR:MIN)14:53
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)-0:04:54

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

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Climatological Report (Daily)

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CDAK47 PAJK 221127
CLIJNU
AKZ025-222300-
CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
325 AM AKDT THU AUG 22 2013

.....
...THE JUNEAU CLIMATE SUMMARY FOR AUGUST 21 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
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.....
TEMPERATURE (F)

YESTERDAY

MAXIMUM	59	539 PM	78	1977	62	-3	58
MINIMUM	51	343 AM	38	1960	48	3	52
AVERAGE	55				55	0	55

PRECIPITATION (IN)

YESTERDAY	0.07		1.37	2000	0.19	-0.12	T
MONTH TO DATE	3.24				3.57	-0.33	4.23
SINCE JUN 1	10.88				11.41	-0.53	16.29
SINCE JAN 1	39.25				31.01	8.24	36.03

DEGREE DAYS

HEATING

YESTERDAY	10				10	0	10
MONTH TO DATE	118				176	-58	195
SINCE JUN 1	554				742	-188	895
SINCE JUL 1	340				427	-87	501

COOLING

YESTERDAY	0	0	0	0
MONTH TO DATE	0	0	0	0
SINCE JUN 1	9	2	7	1
SINCE JAN 1	9	2	7	1

WIND (MPH)

HIGHEST WIND SPEED	14	HIGHEST WIND DIRECTION	E (90)
HIGHEST GUST SPEED	17	HIGHEST GUST DIRECTION	E (110)
AVERAGE WIND SPEED	7.9		

SKY COVER

POSSIBLE SUNSHINE MM
AVERAGE SKY COVER 1.0

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
LIGHT RAIN
FOG

RELATIVE HUMIDITY (PERCENT)

HIGHEST	100	200 AM
LOWEST	77	200 PM
AVERAGE	89	

THE JUNEAU CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	62	79	1979
MINIMUM TEMPERATURE (F)	48	38	1954

SUNRISE AND SUNSET

AUGUST 22 2013.....	SUNRISE	536 AM AKDT	SUNSET	824 PM AKDT
AUGUST 23 2013.....	SUNRISE	538 AM AKDT	SUNSET	822 PM AKDT

- INDICATES NEGATIVE NUMBERS.
- R INDICATES RECORD WAS SET OR TIED.
- MM INDICATES DATA IS MISSING.
- T INDICATES TRACE AMOUNT.

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AMOUNT OF DAYLIGHT TODAY (HOUR:MIN)14:48
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)-0:04:54

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

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Climatological Report (Daily)

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 CDAK47 PAJK 161152
 CLIJNU
 AKZ025-162300-
 CLIMATE REPORT
 NATIONAL WEATHER SERVICE JUNEAU, AK
 350 AM AKDT MON SEP 16 2013

.....

...THE JUNEAU CLIMATE SUMMARY FOR SEPTEMBER 15 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
 CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
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 TEMPERATURE (F)

YESTERDAY

MAXIMUM	64	416 PM	72	2010	56	8	50
MINIMUM	39	456 AM	30	2006	45	-6	47
AVERAGE	52				50	2	49

PRECIPITATION (IN)

YESTERDAY	0.10		0.90	1992	0.29	-0.19	0.13
MONTH TO DATE	3.75				4.08	-0.33	7.09
SINCE SEP 1	3.75				4.08	-0.33	7.09
SINCE JAN 1	44.66				37.25	7.41	46.48

DEGREE DAYS

HEATING

YESTERDAY	13				15	-2	16
MONTH TO DATE	143				202	-59	217
SINCE SEP 1	143				202	-59	217
SINCE JUL 1	578				737	-159	840

COOLING

YESTERDAY	0	0	0	0
MONTH TO DATE	0	0	0	0
SINCE SEP 1	0	0	0	0
SINCE JAN 1	9	2	7	1

.....

WIND (MPH)

HIGHEST WIND SPEED	16	HIGHEST WIND DIRECTION	E (70)
HIGHEST GUST SPEED	21	HIGHEST GUST DIRECTION	E (80)
AVERAGE WIND SPEED	4.3		

SKY COVER

POSSIBLE SUNSHINE MM
AVERAGE SKY COVER 0.8

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
LIGHT RAIN
FOG
FOG W/VISIBILITY <= 1/4 MILE

RELATIVE HUMIDITY (PERCENT)

HIGHEST	100	200 AM
LOWEST	48	200 PM
AVERAGE	74	

.....

THE JUNEAU CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	56	70	2010
MINIMUM TEMPERATURE (F)	44	29	1969

SUNRISE AND SUNSET

SEPTEMBER 16 2013.....	SUNRISE	631 AM AKDT	SUNSET	714 PM AKDT
SEPTEMBER 17 2013.....	SUNRISE	633 AM AKDT	SUNSET	711 PM AKDT

- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

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AMOUNT OF DAYLIGHT TODAY (HOUR:MIN)12:43
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)-0:05:02

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

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Climatological Report (Daily)

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CDAK47 PAJK 171134
CLIJNU
AKZ025-172300-
CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
332 AM AKDT TUE SEP 17 2013

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...THE JUNEAU CLIMATE SUMMARY FOR SEPTEMBER 16 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
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TEMPERATURE (F)

YESTERDAY

MAXIMUM	58	1202 PM	70	2010	56	2	53
MINIMUM	50	1159 PM	29	1969	44	6	47
AVERAGE	54				50	4	50

PRECIPITATION (IN)

YESTERDAY	0.17		1.51	2000	0.30	-0.13	0.10
MONTH TO DATE	3.92				4.38	-0.46	7.19
SINCE SEP 1	3.92				4.38	-0.46	7.19
SINCE JAN 1	44.83				37.55	7.28	46.58

DEGREE DAYS

HEATING

YESTERDAY	11				15	-4	15
MONTH TO DATE	154				217	-63	232
SINCE SEP 1	154				217	-63	232
SINCE JUL 1	589				752	-163	855

COOLING

YESTERDAY	0	0	0	0
MONTH TO DATE	0	0	0	0
SINCE SEP 1	0	0	0	0
SINCE JAN 1	9	2	7	1

.....

WIND (MPH)

HIGHEST WIND SPEED	23	HIGHEST WIND DIRECTION	SE (120)
HIGHEST GUST SPEED	28	HIGHEST GUST DIRECTION	SE (120)
AVERAGE WIND SPEED	13.2		

SKY COVER

POSSIBLE SUNSHINE MM
 AVERAGE SKY COVER 0.9

WEATHER CONDITIONS

THE FOLLOWING WEATHER WAS RECORDED YESTERDAY.
 LIGHT RAIN
 FOG

RELATIVE HUMIDITY (PERCENT)

HIGHEST	100	700 AM
LOWEST	71	500 PM
AVERAGE	86	

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THE JUNEAU CLIMATE NORMALS FOR TODAY

	NORMAL	RECORD	YEAR
MAXIMUM TEMPERATURE (F)	55	70	1995
MINIMUM TEMPERATURE (F)	44	31	1973

SUNRISE AND SUNSET

SEPTEMBER 17 2013.....	SUNRISE	633 AM AKDT	SUNSET	711 PM AKDT
SEPTEMBER 18 2013.....	SUNRISE	635 AM AKDT	SUNSET	708 PM AKDT

- INDICATES NEGATIVE NUMBERS.
 R INDICATES RECORD WAS SET OR TIED.
 MM INDICATES DATA IS MISSING.
 T INDICATES TRACE AMOUNT.

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AMOUNT OF DAYLIGHT TODAY (HOUR:MIN)12:38
GAIN/LOSS SINCE YESTERDAY (HOUR:MIN:SEC)-0:05:02

The U.S. Naval Observatory (USNO) computes astronomical data. Therefore, the NWS does not record, certify, or authenticate astronomical data. Computed times of sunrise, sunset, moonrise, moonset; and twilight, moon phases and other astronomical data are available from USNO's Astronomical Applications Department (<http://www.usno.navy.mil>). See <http://www.usno.navy.mil/USNO/astronomical-applications/astronomical-information-center/litigation> for information on using these data for legal purposes.

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Climatological Report (Monthly)

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CXAK57 PAJK 011427
CLMAJK

CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
630 AM AKDT SAT JUN 1 2013

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...THE JUNEAU CLIMATE SUMMARY FOR THE MONTH OF MAY 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER	OBSERVED VALUE	DATE (S)	NORMAL VALUE	DEPART FROM NORMAL	LAST YEAR`S VALUE	DATE (S)
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TEMPERATURE (F)

RECORD

HIGH	82	05/27/1947				
LOW	25	05/01/1972				
		05/11/1965				
		05/02/1956				
HIGHEST	73	05/28	70	3	59	05/24
LOWEST	30	05/20	32	-2	35	05/15
		05/07				
AVG. MAXIMUM	56.1		56.6	-0.5	48.9	
AVG. MINIMUM	39.8		40.6	-0.8	40.5	
MEAN	48.0		48.6	-0.6	44.7	
DAYS MAX >= 90	0		0.0	0.0	0	
DAYS MAX <= 32	0		0.0	0.0	0	
DAYS MIN <= 32	4		1.6	2.4	0	
DAYS MIN <= 0	0		0.0	0.0	0	

PRECIPITATION (INCHES)

RECORD

MAXIMUM	9.20	1992				
MINIMUM	0.84	2004				
TOTALS	5.33		3.40	1.93	5.73	
DAILY AVG.	0.17		0.11	0.06	0.18	
DAYS >= .01	18		16.3	1.7	26	
DAYS >= .10	12		9.3	2.7	16	

DAYS >= .50	4	1.6	2.4	3
DAYS >= 1.00	1	0.3	0.7	0
GREATEST				
24 HR. TOTAL	1.10	05/31 TO 05/31		05/07 TO 05/08

SNOWFALL (INCHES)

RECORDS

TOTAL	1.2	1964		
24 HR TOTAL	0.7	05/02/1945 TO 05/03/1945		
SNOW DEPTH	0	05/31/2002		
TOTALS	T		0.0	0.0
SINCE 7/1	83.8		86.7	-2.9
SNOWDEPTH AVG.	0		MM	MM
DAYS >= TRACE	1		0.0	1.0
DAYS >= 1.0	0		0.0	0.0
GREATEST				
SNOW DEPTH	0	MM		0
24 HR TOTAL	T	05/19 TO 05/19		05/15 TO 05/15

/DEGREE_DAYS

HEATING TOTAL	519	508	11	619
SINCE 7/1	8536	8036	500	8184
COOLING TOTAL	0	0	0	0
SINCE 1/1	0	0	0	0

FREEZE DATES

RECORD

EARLIEST	08/24/1969	
LATEST	06/13/1965	
EARLIEST		09/30
LATEST		05/12

WIND (MPH)

AVERAGE WIND SPEED	8.2	
RESULTANT WIND SPEED/DIRECTION	3/135	
HIGHEST WIND SPEED/DIRECTION	39/120	DATE 05/01
HIGHEST GUST SPEED/DIRECTION	50/120	DATE 05/01

SKY COVER

POSSIBLE SUNSHINE (PERCENT)	MM
AVERAGE SKY COVER	0.70
NUMBER OF DAYS FAIR	6
NUMBER OF DAYS PC	6
NUMBER OF DAYS CLOUDY	19

AVERAGE RH (PERCENT)	76
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WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	0	MIXED PRECIP	1
HEAVY RAIN	0	RAIN	6

LIGHT RAIN	20	FREEZING RAIN	0
LT FREEZING RAIN	0	HAIL	1
HEAVY SNOW	0	SNOW	1
LIGHT SNOW	1	SLEET	1
FOG	17	FOG W/VIS <= 1/4 MILE	2
HAZE	0		

- INDICATES NEGATIVE NUMBERS.
 R INDICATES RECORD WAS SET OR TIED.
 MM INDICATES DATA IS MISSING.
 T INDICATES TRACE AMOUNT.

&&

...WET AND COOL START TO MAY GIVES WAY TO SUMMERLIKE WEATHER LATER IN THE MONTH...

THE MONTH OF MAY FEATURED A WIDE RANGE OF WEATHER CONDITIONS IN JUNEAU. WARM AND SUNNY CONDITIONS OCCURRED BETWEEN THE 5TH AND 9TH AND DURING THE LAST 10 DAYS OF THE MONTH. CONDITIONS WERE COOLER AND WETTER THAN NORMAL IN BETWEEN THESE DRY SPELLS. THIS RESULTED IN WHAT TURNED OUT TO BE A GENERALLY NEAR NORMAL MAY IN TERMS OF TEMPERATURE. MOST OF THE PRECIPITATION FELL DURING THE FIRST FEW DAYS OF THE MONTH...THE MIDDLE OF THE MONTH...AND THE LAST COUPLE DAYS OF MAY. EASTERLY OFFSHORE FLOW WAS THE PREDOMINANT WEATHER PATTERN IN THE LATTER HALF OF THE MONTH. HOWEVER...THE HEAVIEST 24 HOUR RAINFALL EVENT OCCURRED ON THE LAST DAY OF THE MONTH AS A WEATHER SYSTEM MOVED EAST INTO THE AREA FROM CANADA. THE SYSTEM DROPPED 1.10 INCHES OF RAIN AT THE AIRPORT. THIS BROKE THE DAILY RAINFALL RECORD OF 0.91 INCHES SET IN 1948. THE TOTAL PRECIPITATION FOR THE MONTH ENDED AT 5.33 INCHES...WHICH WAS 1.93 INCHES ABOVE NORMAL. THIS WAS ALL IN THE FORM OF RAIN EXCEPT FOR ICE PELLETS THAT MIXED IN WITH RAIN SHOWERS ON THE 19TH.

THE STRONGEST WIND REPORTED AT THE AIRPORT WAS 50 MPH ON THE 1ST OF THE MONTH. THE JUNEAU FEDERAL BUILDING ALSO RECEIVED ITS STRONGEST WIND OF THE MONTH ON THIS DAY AS A 48 MPH GUST WAS REPORTED AROUND MIDDAY. A STRONG FRONT MOVING ACROSS SOUTHEAST ALASKA CREATED THESE STRONG WINDS.

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Climatological Report (Monthly)

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CXAK57 PAJK 011241
CLMAJK

CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
302 AM AKDT MON JUL 1 2013

.....

...THE JUNEAU CLIMATE SUMMARY FOR THE MONTH OF JUNE 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER	OBSERVED VALUE	DATE (S)	NORMAL VALUE	DEPART FROM NORMAL	LAST YEAR`S VALUE	DATE (S)
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TEMPERATURE (F)

RECORD

HIGH	86	06/13/1969				
LOW	31	06/03/1971				
		06/13/1965				
		06/07/1955				

HIGHEST	85	06/16	77	8	82	06/23
LOWEST	37	06/03	38	-1	41	06/10
						06/05
						06/03

AVG. MAXIMUM	67.4		62.2	5.2	57.5	
AVG. MINIMUM	47.9		46.9	1.0	45.8	
MEAN	57.7		54.6	3.1	51.7	
DAYS MAX >= 90	0		0.0	0.0	0	
DAYS MAX <= 32	0		0.0	0.0	0	
DAYS MIN <= 32	0		0.0	0.0	0	
DAYS MIN <= 0	0		0.0	0.0	0	

PRECIPITATION (INCHES)

RECORD

MAXIMUM	6.69	2012				
MINIMUM	1.08	1946				
TOTALS	3.19		3.24	-0.05	6.69	
DAILY AVG.	0.11		0.11	0.00	0.22	

DAYS >= .01	17	15.8	1.2	24
DAYS >= .10	6	8.0	-2.0	15
DAYS >= .50	2	2.0	0.0	5
DAYS >= 1.00	0	0.2	-0.2	1
GREATEST				
24 HR. TOTAL	0.85	06/05 TO 06/05	1.85	06/29 TO 06/30

SNOWFALL (INCHES)

RECORDS

TOTAL	0.0	MM		
24 HR TOTAL	0.0	MM		
SNOW DEPTH	0	MM		
TOTALS	0.0		0.0	0.0
SINCE 7/1	83.8		86.7	-2.9
SNOWDEPTH AVG.	0		MM	MM
DAYS >= TRACE	0		0.0	0.0
DAYS >= 1.0	0		0.0	0.0
GREATEST				
SNOW DEPTH	0	MM		0
24 HR TOTAL	0.0	MM		0.0

DEGREE DAYS

HEATING TOTAL	214	315	-101	394
SINCE 7/1	8750	8351	399	8578
COOLING TOTAL	7	1	6	1
SINCE 1/1	7	1	6	1

FREEZE DATES

RECORD

EARLIEST	08/24/1969	
LATEST	06/13/1965	
EARLIEST	10/01	09/30
LATEST	05/21	05/12

WIND (MPH)

AVERAGE WIND SPEED	6.1	
RESULTANT WIND SPEED/DIRECTION	2/210	
HIGHEST WIND SPEED/DIRECTION	25/130	DATE 06/26
HIGHEST GUST SPEED/DIRECTION	36/320	DATE 06/17

SKY COVER

POSSIBLE SUNSHINE (PERCENT)	MM
AVERAGE SKY COVER	0.80
NUMBER OF DAYS FAIR	0
NUMBER OF DAYS PC	13
NUMBER OF DAYS CLOUDY	16

AVERAGE RH (PERCENT) 73

WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	0	MIXED PRECIP	0
HEAVY RAIN	1	RAIN	6
LIGHT RAIN	19	FREEZING RAIN	0
LT FREEZING RAIN	0	HAIL	0
HEAVY SNOW	0	SNOW	0
LIGHT SNOW	0	SLEET	0
FOG	12	FOG W/VIS <= 1/4 MILE	2
HAZE	0		

- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

...NEAR RECORD WARMTH AND THREE THUNDERSTORM DAYS IN JUNE...

JUNE 2013 WAS THE SECOND WARMEST JUNE SINCE 1943. THE MONTHLY AVERAGE TEMPERATURE WAS 57.9 DEGREES...WHICH WAS JUST 0.1 DEGREE SHY OF THE ALL-TIME RECORD HIGH MONTHLY AVERAGE TEMPERATURE OF 58.0 DEGREES SET BACK IN 2004. NONETHELESS...THE MONTHLY AVERAGE TEMPERATURE THIS JUNE WAS ABOUT 3.3 DEGREES WARMER THAN NORMAL. THE DAILY HIGH TEMPERATURE RECORDS WERE BROKEN ON THE 15TH AND THE 16TH...WHEN TEMPERATURE ROSE TO 83 AND 85 DEGREES ON THOSE DAYS...RESPECTIVELY. THERE WERE 2 DAYS THIS MONTH WHEN HIGH TEMPERATURES SOARED ABOVE 80 DEGREES. THERE WERE 9 DAYS WHEN HIGH TEMPERATURES ROSE TO THE 70S. THE WARMEST DAY OF THE MONTH WAS ON THE 16TH...WITH A HIGH TEMPERATURE OF 85 DEGREES. THE COLDEST DAY OF THE MONTH WAS ON THE 3RD...WITH A LOW TEMPERATURE OF 37 DEGREES.

THERE WERE THREE THUNDERSTORM DAYS...AND THEY OCCURRED ON THE 17TH...24TH...AND 25TH...RESPECTIVELY. THE PRECIPITATION FOR THE MONTH ENDED AT 3.19 INCHES...WHICH WAS NEAR NORMAL.

THE THUNDERSTORM ON THE 17TH ALSO BROUGHT STRONG WIND GUSTS TO THE JUNEAU AREA. THE STRONGEST WIND GUST AT THE AIRPORT WAS 36 MPH FROM THE NORTHWEST...AND THIS OCCURRED ON THE 17TH. THE STRONGEST WIND GUST AT THE DOUGLAS BOAT HARBOR WAS 36 MPH FROM THE NORTHEAST...AND THIS ALSO OCCURRED ON THE 17TH.

RCL

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Climatological Report (Monthly)

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CXAK57 PAJK 011206
CLMAJK

CLIMATE REPORT
NATIONAL WEATHER SERVICE JUNEAU, AK
354 AM AKDT THU AUG 1 2013

.....
...THE JUNEAU CLIMATE SUMMARY FOR THE MONTH OF JULY 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010
CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER	OBSERVED		NORMAL VALUE	DEPART FROM NORMAL	LAST YEAR`S	
	VALUE	DATE (S)			VALUE	DATE (S)

.....
TEMPERATURE (F)

RECORD

HIGH	90	07/07/1975				
LOW	36	07/08/1950				
HIGHEST	81	07/29	78	3	76	07/26
LOWEST	41	07/14	43	-2	38	07/12
AVG. MAXIMUM	64.9		63.9	1.0	61.3	
AVG. MINIMUM	50.4		50.0	0.4	48.5	
MEAN	57.7		56.9	0.8	54.9	
DAYS MAX >= 90	0		0.0	0.0	0	
DAYS MAX <= 32	0		0.0	0.0	0	
DAYS MIN <= 32	0		0.0	0.0	0	
DAYS MIN <= 0	0		0.0	0.0	0	

PRECIPITATION (INCHES)

RECORD

MAXIMUM	10.36	1997				
MINIMUM	1.15	1972				
TOTALS	4.45		4.60	-0.15	5.37	
DAILY AVG.	0.14		0.15	-0.01	0.17	
DAYS >= .01	16		17.7	-1.7	18	
DAYS >= .10	10		10.9	-0.9	10	
DAYS >= .50	3		2.9	0.1	3	
DAYS >= 1.00	1		0.6	0.4	1	
GREATEST						
24 HR. TOTAL	1.36	07/08 TO 07/08			07/09 TO 07/10	

SNOWFALL (INCHES)

RECORDS

TOTAL	0.0	2002			
24 HR TOTAL	0.0	MM			
SNOW DEPTH	0	MM			
TOTALS	0.0		0.0	0.0	0.0
SINCE 7/1	0.0		0.0	0.0	0.0
SNOWDEPTH AVG.	0		MM	MM	0
DAYS >= TRACE	0		0.0	0.0	0
DAYS >= 1.0	0		0.0	0.0	0
GREATEST					
SNOW DEPTH	0	MM			0 MM
24 HR TOTAL	0.0		07/31 TO 07/31		07/31 TO 07/31

DEGREE_DAYS

HEATING TOTAL	222		251	-29	306
SINCE 7/1	222		251	-29	306
COOLING TOTAL	2		1	1	0
SINCE 1/1	9		2	7	1

FREEZE DATES

RECORD

EARLIEST	08/24/1969	
LATEST	06/13/1965	
EARLIEST		09/30
LATEST		05/12

WIND (MPH)

AVERAGE WIND SPEED	6.1		
RESULTANT WIND SPEED/DIRECTION	2/118		
HIGHEST WIND SPEED/DIRECTION	24/130	DATE	07/08
HIGHEST GUST SPEED/DIRECTION	32/110	DATE	07/07

SKY COVER

POSSIBLE SUNSHINE (PERCENT)	MM
AVERAGE SKY COVER	0.80
NUMBER OF DAYS FAIR	2
NUMBER OF DAYS PC	6
NUMBER OF DAYS CLOUDY	23

AVERAGE RH (PERCENT) 81

WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	0	MIXED PRECIP	0
HEAVY RAIN	3	RAIN	6
LIGHT RAIN	18	FREEZING RAIN	0
LT FREEZING RAIN	0	HAIL	0
HEAVY SNOW	0	SNOW	0
LIGHT SNOW	0	SLEET	0
FOG	13	FOG W/VIS <= 1/4 MILE	0

HAZE 0

- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

&&

...JULY WAS PRETTY NORMAL FOR TEMPERATURES AND PRECIPITATION...

THE MONTH OF JULY HELD VERY FEW SURPRISES IN CLIMATE DATA. EVEN WITH 7 DAYS OF TEMPERATURES OVER 70 DEGREES AND ONLY 7 DAYS OF HIGH TEMPERATURES LESS THAN 60 DEGREES THE AVERAGE TEMPERATURE FOR THE MONTH WAS STILL ONLY 57.7 DEGREES. THIS IS ONLY 0.8 DEGREES ABOVE NORMAL FOR THE MONTH. HIGH TEMPERATURES AVERAGED 63.9 DEGREES WITH LOWS AVERAGING 49.9 DEGREES. BOTH OF THESE AVERAGES ARE JUST SLIGHTLY ABOVE NORMAL AT PLUS 1 DEGREE AND PLUS 0.5 DEGREES RESPECTIVELY. THE MAXIMUM TEMPERATURE FOR THE MONTH WAS 81 DEGREES OCCURRING ON THE 29TH WITH A MINIMUM OF 41 DEGREES OCCURRING ON THE 14TH. LOW TEMPERATURES WERE AT OR ABOVE 50 DEGREES ON ALL BUT 8 DAYS. THERE WAS ONLY ONE TEMPERATURE RECORD BROKEN DURING JULY WITH A NEW HIGH MINIMUM TEMPERATURE OF 51 DEGREES ON THE 19TH.

THE PRECIPITATION TOTAL FOR JULY WAS 4.45 INCHES WHICH IS 0.15 INCHES BELOW AVERAGE FOR THE MONTH. THERE WERE 12 DAYS IN JULY WITH NO PRECIPITATION RECORDED. THERE WERE THUNDERSTORMS REPORTED ON THE 13TH WHICH IS FAIRLY RARE FOR JUNEAU. THE GREATEST 24 HOUR RAINFALL HAPPENED ON THE 8TH WITH 1.36 INCHES RECORDED.

THE WINDS AVERAGED 6.1 MPH IN JULY WITH A PREDOMINATE EAST TO SOUTHEAST DIRECTION OCCURRING ON 19 DAYS. SOUTHWEST WINDS OCCURRED ON 9 DAYS. THE MAXIMUM WIND SPEED OCCURRED ON JULY 7TH WITH A SOUTHEAST WIND OF 32 MPH. THE MAXIMUM WIND SPEED REPORTED AT THE FEDERAL BUILDING IN DOWNTOWN JUNEAU WAS ON THE 9TH WITH A SOUTHEAST WIND OF 36 MPH.

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

Climatological Report (Monthly)

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CXAK57 PAJK 011515

CLMAJK

CLIMATE REPORT

NATIONAL WEATHER SERVICE JUNEAU, AK

715 AM AKDT SUN SEP 1 2013

.....

...THE JUNEAU CLIMATE SUMMARY FOR THE MONTH OF AUGUST 2013...

CLIMATE NORMAL PERIOD 1981 TO 2010

CLIMATE RECORD PERIOD 1943 TO 2013

WEATHER	OBSERVED VALUE	DATE (S)	NORMAL VALUE	DEPART FROM NORMAL	LAST YEAR`S VALUE	DATE (S)
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.....

TEMPERATURE (F)

RECORD

HIGH	84	08/16/2004				
		08/10/2004				
LOW	27	08/25/1948				
HIGHEST	78	08/12	76	2	72	08/14
LOWEST	43	08/29	40	3	38	08/30
AVG. MAXIMUM	65.4		62.7	2.7	61.1	
AVG. MINIMUM	50.4		49.0	1.4	48.1	
MEAN	57.9		55.9	2.0	54.6	
DAYS MAX >= 90	0		0.0	0.0	0	
DAYS MAX <= 32	0		0.0	0.0	0	
DAYS MIN <= 32	0		0.0	0.0	0	
DAYS MIN <= 0	0		0.0	0.0	0	

PRECIPITATION (INCHES)

RECORD

MAXIMUM	11.02	2006				
MINIMUM	0.56	1979				
TOTALS	4.90		5.73	-0.83	7.59	
DAILY AVG.	0.16		0.18	-0.02	0.24	
DAYS >= .01	15		19.1	-4.1	16	
DAYS >= .10	12		12.5	-0.5	14	
DAYS >= .50	3		3.8	-0.8	6	
DAYS >= 1.00	2		1.0	1.0	2	
GREATEST						
24 HR. TOTAL	1.26	08/17 TO 08/18			08/27 TO 08/28	

SNOWFALL (INCHES)

RECORDS

TOTAL	0.0			
24 HR TOTAL	0.0			
SNOW DEPTH	0			
TOTALS	0.0	0.0	0.0	0.0
SINCE 7/1	0.0	0.0	0.0	0.0
SNOWDEPTH AVG.	0	0.0	0.0	0
DAYS >= TRACE	0	0.0	0.0	0
DAYS >= 1.0	0	0.0	0.0	0
GREATEST				
SNOW DEPTH	0			0
24 HR TOTAL	0.0	08/31 TO 08/31		08/31 TO 08/31

DEGREE_DAYS

HEATING TOTAL	213	284	-71	317
SINCE 7/1	435	535	-100	623
COOLING TOTAL	0	0	0	0
SINCE 1/1	9	2	7	1

FREEZE DATES

RECORD

EARLIEST	08/24/1969	
LATEST	06/13/1965	
EARLIEST		09/30
LATEST		05/12

.....

WIND (MPH)

AVERAGE WIND SPEED	6.4		
RESULTANT WIND SPEED/DIRECTION	2/106		
HIGHEST WIND SPEED/DIRECTION	21/120	DATE	08/18
HIGHEST GUST SPEED/DIRECTION	28/070	DATE	08/31

SKY COVER

POSSIBLE SUNSHINE (PERCENT)	MM
AVERAGE SKY COVER	0.80
NUMBER OF DAYS FAIR	5
NUMBER OF DAYS PC	7
NUMBER OF DAYS CLOUDY	19

AVERAGE RH (PERCENT) 82

WEATHER CONDITIONS. NUMBER OF DAYS WITH

THUNDERSTORM	0	MIXED PRECIP	0
HEAVY RAIN	1	RAIN	8
LIGHT RAIN	17	FREEZING RAIN	0
LT FREEZING RAIN	0	HAIL	0
HEAVY SNOW	0	SNOW	0
LIGHT SNOW	0	SLEET	0
FOG	22	FOG W/VIS <= 1/4 MILE	0
HAZE	0		

- INDICATES NEGATIVE NUMBERS.
R INDICATES RECORD WAS SET OR TIED.
MM INDICATES DATA IS MISSING.
T INDICATES TRACE AMOUNT.

&&

...AUGUST WAS WARMER AND DRIER THAN NORMAL...

TEMPERATURES WERE MILD DURING THE MONTH OF AUGUST WITH 17 DAYS REACHING ABOVE NORMAL VALUES OF 64 DEGREES OR WARMER...TEN OF THOSE DAYS REACHED 70 DEGREES OR MORE. RANKING THIS AUGUST THE 8TH WARMEST AVERAGE TEMPERATURE ON RECORD. WARMEST DAY WAS ON THE 12TH WITH THE MERCURY TOPPING OUT AT 78 DEGREES.

RAIN FELL 17 OF THE 31 DAYS OF THE MONTH...15 DAYS BEING MEASURABLE. THE 18TH AND 31ST MEASURED OVER AN INCH OF RAINFALL. THE HIGHEST AMOUNT WAS ON THE 18TH WITH 1.18 INCHES...WHICH BROKE THE RECORD OF 0.94 INCHES PREVIOUS SET IN 1970. RECORD BREAKING RAIN WAS ALSO MEASURED AT THE FORECAST OFFICE ON THE 18TH WITH 2.73 INCHES FALLING INTO THE BUCKET. DESPITE RAINING OVER HALF THE MONTH AND HAVING RECORD RAINFALL...THE MONTHLY TOTAL WAS .83 INCHES BELOW NORMAL. RANKING THIS AUGUST THE 42ND DRIEST ON RECORD.

WINDS AVERAGED 6 MPH FOR THE MONTH. ONLY THREE DAYS AVERAGED OVER 10 MPH THESE OCCURRED ON THE 17TH...18TH AND 31ST. WINDS WERE PREDOMINATELY OUT OF THE EAST TO SOUTHEAST. THE LIGHTER WIND DAYS WERE MOSTLY OUT OF THE SOUTHWEST AT 5 MPH OR LESS. THE PEAK WIND RECORDED AT THE JUNEAU AIRPORT WAS ON THE 31ST WITH 28 MPH OUT OF THE EAST.

KV

[Explanation of the Preliminary Monthly Climate Data \(F6\) Product](#)

These data are preliminary and have not undergone final quality control by the National Climatic Data Center (NCDC). Therefore, these data are subject to revision. Final and certified climate data can be accessed at the NCDC - <http://www.ncdc.noaa.gov>.

WFO Monthly/Daily Climate Data

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CXAK56 PAJK 251245

CF6AJN

PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6)

STATION: JUNEAU
 MONTH: SEPTEMBER
 YEAR: 2013
 LATITUDE: 58 22 N
 LONGITUDE: 134 35 W

TEMPERATURE IN F:					:PCPN:			SNOW:	WIND		:SUNSHINE:			SKY	:PK WND				
1	2	3	4	5	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	
DY	MAX	MIN	AVG	DEP	HDD	CDD	WTR	SNW	DPTH	SPD	SPD	DIR	MIN	PSBL	S-S	WX	SPD	DR	
1	57	54	56	3	9	0	1.30	0.0	0	9.1	15	80	M	M	10	1	19	80	
2	69	51	60	7	5	0	0.00	0.0	0	3.1	10	270	M	M	8	1	13	270	
3	67	49	58	6	7	0	0.04	0.0	0	4.1	14	70	M	M	9	12	17	100	
4	56	53	55	3	10	0	0.74	0.0	0	17.3	28	120	M	M	10	1	37	120	
5	60	53	57	5	8	0	0.04	0.0	0	7.8	13	100	M	M	10	1	18	60	
6	60	52	56	4	9	0	0.10	0.0	0	10.1	21	90	M	M	10	1	23	90	
7	63	56	60	8	5	0	0.74	0.0	0	16.4	31	100	M	M	10	1	40	100	
8	61	49	55	3	10	0	0.33	M	0	7.6	32	120	M	M	10	1	39	120	
9	62	46	54	3	11	0	0.00	0.0	0	3.6	10	70	M	M	8	1	13	70	
10	56	43	50	-1	15	0	0.30	0.0	0	3.8	15	100	M	M	9	12	19	90	
11	64	51	58	7	7	0	T	0.0	0	8.9	21	100	M	M	9		26	90	
12	62	50	56	5	9	0	0.06	0.0	0	3.9	10	240	M	M	8	12	14	270	
13	61	42	52	2	13	0	T	0.0	0	4.1	12	230	M	M	8	1	14	240	
14	61	44	53	3	12	0	0.00	0.0	0	2.4	10	240	M	M	7	1	12	240	
15	64	39	52	2	13	0	0.10	0.0	0	4.3	16	70	M	M	8	12	21	80	
16	58	50	54	4	11	0	0.17	0.0	0	13.2	23	120	M	M	9	1	28	120	
17	53	49	51	1	14	0	0.35	0.0	0	13.5	21	110	M	M	8	1	25	110	
18	53	48	51	1	14	0	0.17	0.0	0	10.2	18	130	M	M	10		24	130	
19	50	46	48	-1	17	0	0.91	0.0	0	1.9	9	250	M	M	10	1	10	260	
20	56	48	52	3	13	0	1.05	0.0	0	13.9	31	120	M	M	10	1	39	120	
21	51	47	49	0	16	0	0.42	0.0	0	15.7	29	110	M	M	10	1	34	110	
22	53	45	49	0	16	0	0.10	0.0	0	10.2	21	130	M	M	10	1	27	130	
23	56	46	51	2	14	0	T	0.0	0	14.6	26	130	M	M	9		34	120	
24	55	37	46	-2	19	0	0.00	0.0	0	3.6	12	100	M	M	5	1	13	100	
SM	1408	1148			277	0	6.92		0.0	203.3			M		215				
AV	58.7	47.8								8.5	FASTST		M	M	9		MAX (MPH)		
								MISC	---->	#	32	120					#	40	100

NOTES:

LAST OF SEVERAL OCCURRENCES

COLUMN 17 PEAK WIND IN M.P.H.

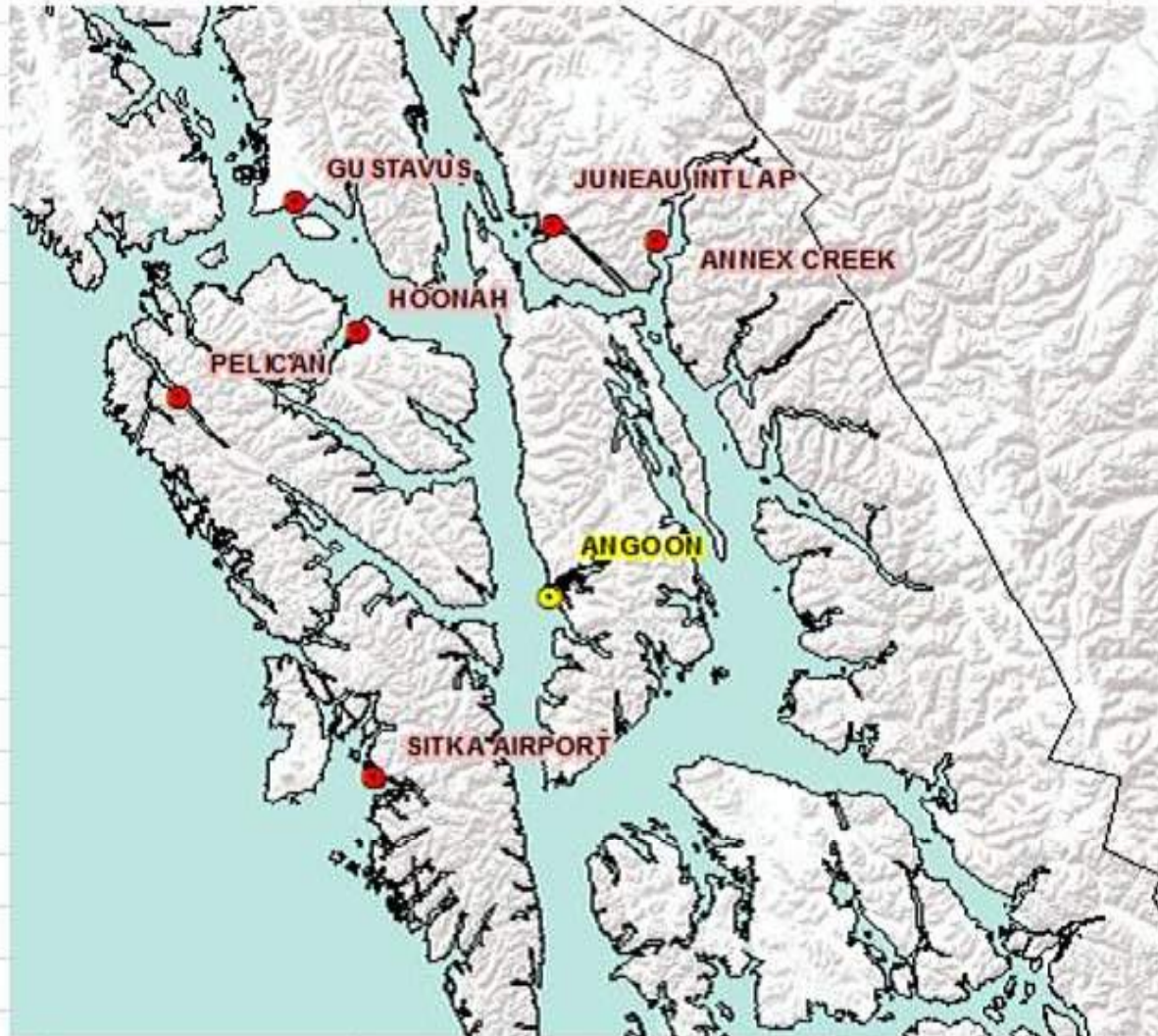
PRELIMINARY LOCAL CLIMATOLOGICAL DATA (WS FORM: F-6) , PAGE 2

STATION: JUNEAU
 MONTH: SEPTEMBER
 YEAR: 2013
 LATITUDE: 58 22 N
 LONGITUDE: 134 35 W

[TEMPERATURE DATA]	[PRECIPITATION DATA]	SYMBOLS USED IN COLUMN 16
AVERAGE MONTHLY: 53.2	TOTAL FOR MONTH: 6.92	1 = FOG OR MIST
DPTR FM NORMAL: 2.6	DPTR FM NORMAL: 0.11	2 = FOG REDUCING VISIBILITY TO 1/4 MILE OR LESS
HIGHEST: 69 ON 2	GRTST 24HR 1.74 ON 31- 1	3 = THUNDER
LOWEST: 37 ON 24		4 = ICE PELLETS
	SNOW, ICE PELLETS, HAIL	5 = HAIL
	TOTAL MONTH: 0.0 INCH	6 = FREEZING RAIN OR DRIZZLE
	GRTST 24HR 0.0	7 = DUSTSTORM OR SANDSTORM: VSBY 1/2 MILE OR LESS
	GRTST DEPTH: 0	8 = SMOKE OR HAZE
		9 = BLOWING SNOW
		X = TORNADO
[NO. OF DAYS WITH]	[WEATHER - DAYS WITH]	
MAX 32 OR BELOW: 0	0.01 INCH OR MORE: 17	
MAX 90 OR ABOVE: 0	0.10 INCH OR MORE: 14	
MIN 32 OR BELOW: 0	0.50 INCH OR MORE: 5	
MIN 0 OR BELOW: 0	1.00 INCH OR MORE: 2	
[HDD (BASE 65)]		
TOTAL THIS MO. 277	CLEAR (SCALE 0-3) 0	
DPTR FM NORMAL -67	PTCLDY (SCALE 4-7) 6	
TOTAL FM JUL 1 712	CLOUDY (SCALE 8-10) 18	
DPTR FM NORMAL -167		
[CDD (BASE 65)]		
TOTAL THIS MO. 0		
DPTR FM NORMAL 0	[PRESSURE DATA]	
TOTAL FM JAN 1 9	HIGHEST SLP M ON M	
DPTR FM NORMAL 7	LOWEST SLP 28.95 ON 22	

[REMARKS]

90-Days Prior to Fieldwork			14-Days Prior to Fieldwork			Week of	
Measured Rain	Normal Rain	Surplus/Defecit	Measured Rain	Normal Rain	Surplus/Defecit	Measured Rain	Normal
17.82	17.81	1.18	3.32	5.57	-1.97	0.84	
9.23	11.87	-2.50	2.25	3.01	-0.76	0.13	
8.00	10.05	-2.05	1.70	2.29	-0.59	0.63	
12.35	12.42	-0.07	3.24	3.30	-0.06	0.29	
14.09	19.63	-5.23	2.37	5.76	-3.39	0.62	
10.17	12.24	-2.07	2.33	3.86	-1.53	0.00	



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APPENDIX C. WETLAND DETERMINATION DATA FORMS

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C-2

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P1
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): depression w/ hummocks
 Local relief (concave, convex, none): concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.479153 Long: -134.548296 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: (on-site) PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>11</u> (A) Total Number of Dominant Species Across All Strata: <u>11</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>Pinus contorta</u>	<u>4%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tsuga mertensiana</u>	<u>2%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>6%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>63</u> x 1 = <u>63</u> FACW species <u>31</u> x 2 = <u>62</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>114</u> (A) <u>185</u> (B) Prevalence Index = B/A = <u>1.62</u>
50% of total cover:	<u>3%</u>	20% of total cover:	<u>1%</u>	
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Vaccinium oxycoccos</u>	<u>5%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Rhododendron groenlandicum</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Pinus contorta</u>	<u>3%</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Tsuga heterophylla</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover:	<u>14%</u>			Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover:	<u>7%</u>	20% of total cover:	<u>3%</u>	
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Total Cover: <u>94%</u> 50% of total cover: <u>47%</u> 20% of total cover: <u>19%</u> Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>1%</u> % Cover of Wetland Bryophytes <u>5</u> Total Cover of Bryophytes <u>5%</u> (Where applicable)
1. <u>Carex aquatilis</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Piperia dilatata</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Triantha glutinosa</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Menyanthes trifoliata</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
5. <u>Carex flava</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
6. <u>Trichophorum caespitosum</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
7. <u>Eriophorum angustifolium</u>	<u>8%</u>	<u>No</u>	<u>OBL</u>	
8. <u>Coptis trifolia</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
9. <u>Calamagrostis canadensis</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
10. <u>Equisetum variegatum</u>	<u>1%</u>	<u>No</u>	<u>FACW</u>	

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-29+	10YR 2/1	100					peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Scattered shallow ponding to surface in depressionas around hummocks. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P2
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Bottomlands w/hummocks
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.477963 Long: -134.548037 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
1. <u>Tsuga heterophylla</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>		
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>52</u> x 1 = <u>52</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>57</u> x 3 = <u>171</u> FACU species <u>62</u> x 4 = <u>248</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>176</u> (A) <u>481</u> (B) Prevalence Index = B/A = <u>2.73</u>	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover: <u>30%</u>					
50% of total cover: <u>15%</u>		20% of total cover: <u>6%</u>			
Sapling/Shrub Stratum					
1. <u>Malus fusca</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>		
3. <u>Oplopanax horridus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
4. <u>Vaccinium alaskaense</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
5. <u>Vaccinium oxycoccos</u>	<u>3%</u>	<u>No</u>	<u>OBL</u>		
6. <u>Viburnum edule</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
Total Cover: <u>50%</u>					
50% of total cover: <u>25%</u>		20% of total cover: <u>10%</u>			
Herb Stratum					
1. <u>Lysichiton americanus</u>	<u>25%</u>	<u>Yes</u>	<u>OBL</u>		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Carex aquatilis</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>		
3. <u>Cornus canadensis</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>		
4. <u>Coptis asplenifolia</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>		
5. <u>Heracleum maximum</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
6. <u>Sanguisorba canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>		
7. <u>Symphotrichum subspicatum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
8. <u>Podagrostis aequivalvis</u>	<u>3%</u>	<u>No</u>	<u>OBL</u>		
9. <u>Equisetum arvense</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
10. <u>Comarum palustre</u>	<u>1%</u>	<u>No</u>	<u>OBL</u>		
Total Cover: <u>96%</u>					
50% of total cover: <u>48%</u>		20% of total cover: <u>19%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>4%</u>			
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P3
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.477043 Long: -134.553700 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>53</u> x 3 = <u>159</u> FACU species <u>53</u> x 4 = <u>212</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>106</u> (A) <u>371</u> (B) Prevalence Index = B/A = <u>3.50</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
5. _____	_____	_____	_____	
Total Cover: <u>15%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover: <u>8%</u>	20% of total cover: <u>3%</u>			
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Vaccinium alaskaense</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>35%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vaccinium parvifolium</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>75%</u>				
50% of total cover: <u>38%</u>	20% of total cover: <u>15%</u>			
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus canadensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>3%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Streptopus amplexifolius</u>	<u>3%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>16%</u>				
50% of total cover: <u>8%</u>	20% of total cover: <u>3%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>	% Bare Ground <u>84%</u>			
% Cover of Wetland Bryophytes _____	Total Cover of Bryophytes _____			
(Where applicable)				

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P3**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			Loc ²
0-14		100					organics	
14-15	2.5Y 3/1	100					muck	
15-17	2.5Y 4/1	100					si	
17-18	2.5Y 3/1	100					muck	
18-24	7.5YR 4/6	100					l	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No X _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Non-hydric spodosol

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No X _____ Depth (inches): _____ Water Table Present? Yes _____ No X _____ Depth (inches): <u>>24</u> Saturation Present? Yes _____ No X _____ Depth (inches): <u>>24</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No X _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P4
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion: Southeast Alaska Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>71</u> x 3 = <u>213</u> FACU species <u>53</u> x 4 = <u>212</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>129</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>3.49</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>15%</u>				
50% of total cover: <u>8%</u>		20% of total cover: <u>3%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Oplopanax horridus</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium alaskaense</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
3. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Rubus parviflorus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
Total Cover: <u>55%</u>				
50% of total cover: <u>28%</u>		20% of total cover: <u>11%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Gymnocarpium dryopteris</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>0%</u> % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>42%</u> (Where applicable)
3. <u>Streptopus amplexifolius</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Prenanthes alata</u>	<u>5%</u>	<u>No</u>	<u>NOL</u>	
5. <u>Cornus canadensis</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Coptis asplenifolia</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>59%</u>				
50% of total cover: <u>30%</u>		20% of total cover: <u>12%</u>		

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P4**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-26	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	
Type: <u>bedrock</u>	
Depth (inches): <u>26</u>	
	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Poorly decomposed organics (folist).

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>26</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>26</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slightly moist at 26 inches, but no saturation or water table. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P5
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.476522 Long: -134.554067 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>20%</u> 50% of total cover: <u>10%</u> 20% of total cover: <u>4%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) X Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Malus fusca</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Oplopanax horridus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Viburnum edule</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>37%</u> 50% of total cover: <u>19%</u> 20% of total cover: <u>7%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Cornus canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Coptis asplenifolia</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Tiarella trifoliata</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
8. <u>Galium triflorum</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>61%</u> 50% of total cover: <u>31%</u> 20% of total cover: <u>12%</u> Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>39%</u> % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

Menziesia ferruginea and other shrub species appear to be growing on slightly elevated hummocks. Direct hydrology observed during the dry season.

SOIL

Sampling Point: **P5**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	
Type: _____	
Depth (inches): _____	
	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 No bedrock.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>7</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P6
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.478430 Long: -134.556114 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>170</u> (A) <u>575</u> (B) Prevalence Index = B/A = <u>3.38</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ² (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: <u>35%</u>	_____	_____	_____	
50% of total cover: <u>18%</u>	_____	20% of total cover: <u>7%</u>	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Sapling/Shrub Stratum				
1. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
4. <u>Rubus spectabilis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
6. _____	_____	_____	_____	
Total Cover: <u>80%</u>	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>40%</u>	_____	20% of total cover: <u>16%</u>	_____	
Herb Stratum				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Maianthemum dilatatum</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Gymnocarpium dryopteris</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
3. <u>Cornus canadensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
5. <u>Tiarella trifoliata</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Equisetum fluviatile</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Total Cover: <u>55%</u>	_____	_____	_____	
50% of total cover: <u>28%</u>	_____	20% of total cover: <u>11%</u>	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Plot size (radius, or length x width) <u>5 ft radius</u>	_____	% Bare Ground <u>45%</u>	_____	
% Cover of Wetland Bryophytes _____	_____	Total Cover of Bryophytes _____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
(Where applicable)	_____	_____	_____	

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

Menziesia ferruginea and other shrub species appear to be growing on slightly elevated hummocks. Direct hydrology observed during the dry season.

SOIL

Sampling Point: **P6**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-24+	10YR 2/1	100					muck

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4 ⁴)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>15</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access 12 Borough/City: Hoonah Angoon Sampling Date: 8/19/2013
 Applicant/Owner: ADOT&PF Sampling Point: P7
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.478497 Long: -134.555820 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>40%</u>				
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>140</u> (A) <u>460</u> (B) Prevalence Index = B/A = <u>3.29</u>
1. <u>Vaccinium ovalifolium</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Oplopanax horridus</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>55%</u>				
50% of total cover: <u>28%</u>		20% of total cover: <u>11%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Coptis asplenifolia</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Rubus pedatus</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Cornus canadensis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>45%</u>				
50% of total cover: <u>23%</u>		20% of total cover: <u>9%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>55%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P7**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-27+	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	
Type: _____	
Depth (inches): _____	
	Hydric Soil Present? Yes _____ No <u>X</u>

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Poorly decomposed throughout. Folist.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>27</u>	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): <u>>27</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry throughout. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P8
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Convex Slope (%): 15-20
 Subregion: Southeast Alaska Lat: 57.475742 Long: -134.550786 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u>Tsuga heterophylla</u>	55%	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover:	55%			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>80</u> x 3 = <u>240</u> FACU species <u>65</u> x 4 = <u>260</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>145</u> (A) <u>500</u> (B) Prevalence Index = B/A = <u>3.45</u>
50% of total cover:	28%	20% of total cover:	11%	
Sapling/Shrub Stratum				
1. <u>Vaccinium parvifolium</u>	30%	Yes	FACU	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Menziesia ferruginea</u>	25%	Yes	FACU	
3. <u>Vaccinium alaskaense</u>	25%	Yes	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	80%			Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
50% of total cover:	40%	20% of total cover:	16%	
Herb Stratum				
1. <u>Cornus canadensis</u>	10%	Yes	FACU	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	10%			_____
50% of total cover:	5%	20% of total cover:	2%	
Plot size (radius, or length x width)	5 ft radius	% Bare Ground	15%	
% Cover of Wetland Bryophytes (Where applicable)	_____	Total Cover of Bryophytes	75%	

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P8**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 3/1	100					organics	
20-25	7.5YR 3/4	100					organics-wood	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Thick Dark Surface (A12)

Alaska Gleyed (A13)

Alaska Redox (A14)

Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4⁴)

Alaska Alpine Swales (TA5)

Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer

Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Surface Soil Cracks (B6)

Secondary Indicators (2 or more required)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Marl Deposits (B15)

Hydrogen Sulfide Odor (C1)

Dry-Season Water Table (C2)

Other (Explain in Remarks)

Water-Stained Leaves (B9)

Drainage Patterns (B10)

Oxidized Rhizospheres along Living Roots (C3)

Presence of Reduced Iron (C4)

Salt Deposits (C5)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

Shallow Aquitard (D3)

Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No **X** _____ Depth (inches): _____

Water Table Present? Yes _____ No **X** _____ Depth (inches): >25

Saturation Present? Yes _____ No **X** _____ Depth (inches): >25

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No **X** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry throughout

Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P9
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.475716 Long: -134.551213 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>25%</u>		50% of total cover: <u>13%</u> 20% of total cover: <u>5%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Vaccinium alaskaense</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Menziesia ferruginea</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Vaccinium parvifolium</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>85%</u>		50% of total cover: <u>43%</u> 20% of total cover: <u>17%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Lysichiton americanus</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Streptopus amplexifolius</u>	<u>8%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Cornus canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Athyrium cyclosorum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Equisetum fluviatile</u>	<u>3%</u>	<u>No</u>	<u>OBL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>46%</u>		50% of total cover: <u>23%</u> 20% of total cover: <u>9%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>9%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>45%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P9**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4 ⁴)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 10	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Surface (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P10
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Old stream terrace
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.474742 Long: -134.550029 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. <u>Tsuga heterophylla</u>	<u>65%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>65%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>33%</u>		20% of total cover: <u>13%</u>		
Sapling/Shrub Stratum				OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>102</u> x 3 = <u>306</u> FACU species <u>71</u> x 4 = <u>284</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>183</u> (A) <u>600</u> (B) Prevalence Index = B/A = <u>3.28</u>
1. <u>Menziesia ferruginea</u>	<u>35%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Rubus spectabilis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Vaccinium parvifolium</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Oplopanax horridus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
Total Cover: <u>80%</u>				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>40%</u>		20% of total cover: <u>16%</u>		
Herb Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Lysichiton americanus</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Athyrium cyclosorum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Cornus canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Coptis aspleniifolia</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Streptopus amplexifolius</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Gymnocarpium dryopteris</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
7. <u>Tiarella trifoliata</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
8. <u>Rubus pedatus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>38%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
50% of total cover: <u>19%</u>		20% of total cover: <u>8%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>62%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P10**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 2/1	100					muck	
14-18	10YR 3/2	100					co sa	cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4 ⁴)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>18</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Shovel refusal at 18" bgs (bedrock or old stream bed?).

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> <small>(includes capillary fringe)</small>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P11
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Depression
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.473058 Long: -134.551087 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
1. <u>Tsuga heterophylla</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>50%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>25%</u> 20% of total cover: <u>10%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>110</u> x 3 = <u>330</u> FACU species <u>11</u> x 4 = <u>44</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>121</u> (A) <u>374</u> (B) Prevalence Index = B/A = <u>3.09</u>
1. <u>Vaccinium ovalifolium</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
6. _____	_____	_____	_____	
Total Cover: <u>65%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>33%</u> 20% of total cover: <u>13%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Remarks: _____ Entered by: <u>sar</u> QC by: <u>cmw</u>
1. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Neottia cordata</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>6%</u>				
50% of total cover: <u>3%</u> 20% of total cover: <u>1%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>0%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>94%</u>				
(Where applicable)				

SOIL

Sampling Point: **P11**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	7.5YR 2.5/2	100					peat	
20-22+	10G 3/1	100					sacl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
Slight sulfur odor

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 21	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Surface <i>(includes capillary fringe)</i>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P12
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.472506 Long: -134.548761 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>20%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>10%</u> 20% of total cover: <u>4%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>48</u> x 4 = <u>192</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>178</u> (A) <u>522</u> (B) Prevalence Index = B/A = <u>2.93</u>
1. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>35%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Oplopanax horridus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
Total Cover: <u>90%</u>				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤ 3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>45%</u> 20% of total cover: <u>18%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Athyrium cyclosorum</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Tiarella trifoliata</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Gymnocarpium dryopteris</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Coptis aspleniifolia</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Streptopus amplexifolius</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>68%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>34%</u> 20% of total cover: <u>14%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>32%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P12**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24+	10YR 2/1	100					peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P13
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Slightly convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.473314 Long: -134.548071 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>38%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>15%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>8%</u> 20% of total cover: <u>3%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>53</u> x 3 = <u>159</u> FACU species <u>52</u> x 4 = <u>208</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>367</u> (B) Prevalence Index = B/A = <u>3.50</u>
1. <u>Vaccinium alaskaense</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Rubus spectabilis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Oplopanax horridus</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>80%</u>				Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>40%</u> 20% of total cover: <u>16%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>3%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>10%</u>				
50% of total cover: <u>5%</u> 20% of total cover: <u>2%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>0%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>90%</u> (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw
 Shrubs appear to be growing on slightly elevated hummocks. Direct hydrology observed during dry season.

SOIL

Sampling Point: **P13**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24	10YR 2/1	100					mucky peat	
24-26	10YR 3/3						cosa	cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Shovel refusal at 26" bgs due to parent material.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> <small>(includes capillary fringe)</small>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P14
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Slightly convex Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.472568 Long: -134.546962 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)
1. <u>Tsuga heterophylla</u>	<u>65%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>65%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>33%</u>		20% of total cover: <u>13%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>116</u> x 3 = <u>348</u> FACU species <u>70</u> x 4 = <u>280</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>196</u> (A) <u>638</u> (B) Prevalence Index = B/A = <u>3.26</u>
1. <u>Oplopanax horridus</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium alaskaense</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
Total Cover: <u>80%</u>				
50% of total cover: <u>40%</u>		20% of total cover: <u>16%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lysichiton americanus</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Athyrium cyclosorum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Coptis aspleniifolia</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Cornus canadensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
5. <u>Streptopus amplexifolius</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Tiarella trifoliata</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>51%</u>				
50% of total cover: <u>26%</u>		20% of total cover: <u>10%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground _____		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P14**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 14	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): Surface (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P15
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.472384 Long: -134.544529 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>10%</u>		50% of total cover: <u>5%</u> 20% of total cover: <u>2%</u>		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>5%</u>		20% of total cover: <u>2%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>73</u> x 3 = <u>219</u> FACU species <u>21</u> x 4 = <u>84</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>94</u> (A) <u>303</u> (B) Prevalence Index = B/A = <u>3.22</u>
1. <u>Vaccinium ovalifolium</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Vaccinium parvifolium</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Vaccinium vitis-idaea</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
Total Cover: <u>68%</u>		50% of total cover: <u>34%</u> 20% of total cover: <u>14%</u>		
50% of total cover: <u>34%</u>		20% of total cover: <u>14%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Cornus canadensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Orthilia secunda</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>16%</u>		50% of total cover: <u>8%</u> 20% of total cover: <u>3%</u>		
50% of total cover: <u>8%</u>		20% of total cover: <u>3%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>84%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P15**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 2/1	100					mucky peat	
15-17	10YR 4/2	100					grsicl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present):	
Type: <u>Bedrock</u>	
Depth (inches): <u>17</u>	
	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u> </u>		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>15</u>		
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>Surface</u>		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P16
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.471658 Long: -134.543350 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>80%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>80%</u>				
50% of total cover: <u>40%</u>		20% of total cover: <u>16%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium parvifolium</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vaccinium ovalifolium</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Tsuga heterophylla</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>37%</u>				
50% of total cover: <u>19%</u>		20% of total cover: <u>7%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Clintonia uniflora</u>	<u>20%</u>	<u>Yes</u>	<u>NOL</u>	
2. <u>Cornus canadensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Rubus pedatus</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Maianthemum dilatatum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>55%</u>				
50% of total cover: <u>28%</u>		20% of total cover: <u>11%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>40%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>5%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P16**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	7.5YR 3/4	100					organics	
12-18	10YR 2/1	100					muck	
18-30	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Thick Dark Surface (A12)

Alaska Gleyed (A13)

Alaska Redox (A14)

Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4⁴)

Alaska Alpine Swales (TA5)

Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer

Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X** _____

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Folist soil - no water table.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Surface Soil Cracks (B6)

Secondary Indicators (2 or more required)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Marl Deposits (B15)

Hydrogen Sulfide Odor (C1)

Dry-Season Water Table (C2)

Other (Explain in Remarks)

Water-Stained Leaves (B9)

Drainage Patterns (B10)

Oxidized Rhizospheres along Living Roots (C3)

Presence of Reduced Iron (C4)

Salt Deposits (C5)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

Shallow Aquitard (D3)

Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No **X** _____ Depth (inches): _____

Water Table Present? Yes _____ No **X** _____ Depth (inches): >30

Saturation Present? Yes _____ No **X** _____ Depth (inches): >30

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No **X** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar _____ QC by: cmw _____

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P17
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Slightly convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.463827 Long: -134.529413 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: NOT IN STUDY AREA

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>85%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>85%</u> 50% of total cover: <u>43%</u> 20% of total cover: <u>17%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>10%</u> 50% of total cover: <u>5%</u> 20% of total cover: <u>2%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus canadensis</u>	<u>2%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Streptopus amplexifolius</u>	<u>1%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>3%</u> 50% of total cover: <u>2%</u> 20% of total cover: <u>1%</u> Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>97%</u> % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P17**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	7.5YR 3/4	100					organics	
12-13	10YR 4/1	100					scl	gravels

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>13</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>12</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>12</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slightly moist throughout. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12A with Access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/20/2013
 Applicant/Owner: ADOT&PF Sampling Point: P18
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.464302 Long: -134.529371 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: NOT IN STUDY AREA

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>15%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>8%</u> 20% of total cover: <u>3%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>58</u> x 3 = <u>174</u> FACU species <u>22</u> x 4 = <u>88</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>80</u> (A) <u>262</u> (B) Prevalence Index = B/A = <u>3.28</u>
1. <u>Vaccinium ovalifolium</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vaccinium parvifolium</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Picea sitchensis</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>51%</u>				Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>26%</u> 20% of total cover: <u>10%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Neottia cordata</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Veratrum viride</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>14%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>7%</u> 20% of total cover: <u>3%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>86%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P18**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	7.5YR 3/4	100					organics	
10-27	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>27</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>26</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P19
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion: Southeast Alaska Lat: 57.468198 Long: -134.540279 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>70%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>35%</u>		20% of total cover: <u>14%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>92</u> x 3 = <u>276</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>167</u> (A) <u>576</u> (B) Prevalence Index = B/A = <u>3.45</u>
1. <u>Vaccinium ovalifolium</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Vaccinium parvifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Tsuga heterophylla</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>77%</u>				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>39%</u>		20% of total cover: <u>15%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Cornus canadensis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Coptis aspleniifolia</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
50% of total cover: <u>10%</u>		20% of total cover: <u>4%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>5%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>75%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P19**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>13</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>13</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>13</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P20
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Slightly convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.467970 Long: -134.540999 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>45%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>65%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>33%</u> 20% of total cover: <u>13%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>57</u> x 4 = <u>228</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>147</u> (A) <u>498</u> (B) Prevalence Index = B/A = <u>3.39</u>
1. <u>Vaccinium ovalifolium</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
3. <u>Vaccinium parvifolium</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rubus spectabilis</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>62%</u>				Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>31%</u> 20% of total cover: <u>12%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Cornus canadensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Neottia cordata</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
50% of total cover: <u>10%</u> 20% of total cover: <u>4%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>50%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>30%</u> (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P20**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-21	7.5YR 3/4	100					organics	
21-26	10YR 3/2	100					grsal	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>26</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
	<input type="checkbox"/> Presence of Reduced Iron (C4)
	<input type="checkbox"/> Salt Deposits (C5)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>26</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>26</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Mineral soils moist at bedrock. Organic layer poorly decomposed and dry. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P21
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.467892 Long: -134.541245 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. <u>Tsuga heterophylla</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>75%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>38%</u>		20% of total cover: <u>15%</u>		
Sapling/Shrub Stratum				OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>103</u> x 3 = <u>309</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>178</u> (A) <u>609</u> (B) Prevalence Index = B/A = <u>3.42</u>
1. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Rubus spectabilis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>75%</u>				Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>38%</u>		20% of total cover: <u>15%</u>		
Herb Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Coptis aspleniifolia</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Gymnocarpium dryopteris</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Maianthemum dilatatum</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Rubus pedatus</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Cornus canadensis</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Athyrium cyclosorum</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Tiarella trifoliata</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
8. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>28%</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
50% of total cover: <u>14%</u>		20% of total cover: <u>6%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground	<u>72%</u>	
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes	<u>0%</u>	
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw
 Shrubs appear to be growing on slightly elevated hummock. Direct hydrology observed during the dry season.

SOIL

Sampling Point: **P21**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	7.5YR 3/4	100					organics	
8-20	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>20</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P22
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.467710 Long: -134.542424 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>5%</u>				
50% of total cover: <u>3%</u>		20% of total cover: <u>1%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Malus fusca</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Alnus viridis</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Oplopanax horridus</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>57%</u>				
50% of total cover: <u>29%</u>		20% of total cover: <u>11%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Lysichiton americanus</u>	<u>65%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Coptis aspleniifolia</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Gymnocarpium dryopteris</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Rubus pedatus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
6. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
8. <u>Tiarella trifoliata</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>91%</u>				
50% of total cover: <u>46%</u>		20% of total cover: <u>18%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>10%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P22**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>5</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Scattered 1/4-inch deep ponding in adjacent depression near plot. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P23
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.467622 Long: -134.543682 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Picea sitchensis</u>	<u>35%</u>	<u>Yes</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)	
2. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>55%</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>28%</u>			20% of total cover: <u>11%</u>	OBL species <u>10</u> x 1 = <u>10</u>	
Sapling/Shrub Stratum				FACW species <u>0</u> x 2 = <u>0</u>	
1. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	FAC species <u>64</u> x 3 = <u>192</u>	
2. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	FACU species <u>73</u> x 4 = <u>292</u>	
3. <u>Vaccinium alaskaense</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	Column Totals: <u>147</u> (A) <u>494</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.36</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>55%</u>				<u>X</u> Dominance Test is >50%	
50% of total cover: <u>28%</u>			20% of total cover: <u>11%</u>	Prevalence Index is ≤ 3.0 ¹	
Herb Stratum				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Lysichiton americanus</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	Indicators of hydric soil and wetland hydrology must be present.	
3. <u>Maianthemum dilatatum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
4. <u>Gymnocarpium dryopteris</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
5. <u>Tiarella trifoliata</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6. <u>Rubus pedatus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>37%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
50% of total cover: <u>19%</u>			20% of total cover: <u>7%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>			% Bare Ground <u>63%</u>		
% Cover of Wetland Bryophytes _____			Total Cover of Bryophytes _____		
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P23**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	100					muck	
16-19	10YR 3/2	60					cosa	
	mixed sand	40						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)
 Histic Epipedon (A2)
 Hydrogen Sulfide (A4)
 Thick Dark Surface (A12)
 Alaska Gleyed (A13)
 Alaska Redox (A14)
 Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4)⁴
 Alaska Alpine Swales (TA5)
 Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: Bedrock
 Depth (inches): 19

Hydric Soil Present? Yes No

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)
 High Water Table (A2)
 Saturation (A3)
 Water Marks (B1)
 Sediment Deposits (B2)
 Drift Deposits (B3)
 Algal Mat or Crust (B4)
 Iron Deposits (B5)
 Surface Soil Cracks (B6)

Secondary Indicators (2 or more required)

Inundation Visible on Aerial Imagery (B7)
 Sparsely Vegetated Concave Surface (B8)
 Marl Deposits (B15)
 Hydrogen Sulfide Odor (C1)
 Dry-Season Water Table (C2)
 Other (Explain in Remarks)

Water-Stained Leaves (B9)
 Drainage Patterns (B10)
 Oxidized Rhizospheres along Living Roots (C3)
 Presence of Reduced Iron (C4)
 Salt Deposits (C5)
 Stunted or Stressed Plants (D1)
 Geomorphic Position (D2)
 Shallow Aquitard (D3)
 Microtopographic Relief (D4)
 FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 12
 Saturation Present? Yes No Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P24
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.466069 Long: -134.540629 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>70%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>15%</u>				
50% of total cover: <u>8%</u>		20% of total cover: <u>3%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Alnus viridis</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Rubus spectabilis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
4. <u>Vaccinium ovalifolium</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
5. <u>Oplopanax horridus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
Total Cover: <u>80%</u>				
50% of total cover: <u>40%</u>		20% of total cover: <u>16%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Veratrum viride</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Lysichiton americanus</u>	<u>5%</u>	<u>Yes</u>	<u>OBL</u>	
4. <u>Streptopus amplexifolius</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
5. <u>Maianthemum dilatatum</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
6. <u>Cornus canadensis</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
7. <u>Coptis aspleniifolia</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
8. <u>Rubus pedatus</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>42%</u>				
50% of total cover: <u>21%</u>		20% of total cover: <u>8%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>58%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw
 Also 5% Picea sitchensis in shrub layer.

SOIL

Sampling Point: **P24**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	7.5YR 3/4	100					organics /duff	
5-20	10YR 2/1	100					muck	
20-34	10YR 4/1	100					sacl	small cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4 ⁴)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>34</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P25
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion: Southeast Alaska Lat: 57.466171 Long: -134.538708 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)	
2. <u>Picea sitchensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>6</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>40%</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		OBL species <u>20</u> x 1 = <u>20</u>	
Sapling/Shrub Stratum				FACW species <u>0</u> x 2 = <u>0</u>	
1. <u>Vaccinium alaskaense</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>72</u> x 3 = <u>216</u>	
2. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	FACU species <u>63</u> x 4 = <u>252</u>	
3. <u>Oplopanax horridus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	Column Totals: <u>155</u> (A) <u>488</u> (B)	
5. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.15</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>70%</u>				<u>X</u> Dominance Test is >50%	
50% of total cover: <u>35%</u>		20% of total cover: <u>14%</u>		Prevalence Index is ≤ 3.0 ¹	
Herb Stratum				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Lysichiton americanus</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Athyrium cyclosorum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Indicators of hydric soil and wetland hydrology must be present.	
3. <u>Coptis aspleniifolia</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
4. <u>Tiarella trifoliata</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
5. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
7. <u>Luzula multiflora</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>45%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
50% of total cover: <u>23%</u>		20% of total cover: <u>9%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground _____			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____			
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P25**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 11	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): Surface <i>(includes capillary fringe)</i>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/21/2013

Applicant/Owner: ADOT&PF Sampling Point: P26

Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope

Local relief (concave, convex, none): Convex Slope (%): 15

Subregion: Southeast Alaska Lat: 57.467780 Long: -134.540069 Datum: NAD 1983

Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

<u>Tree Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>38%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>45%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>75%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>57</u> x 3 = <u>171</u> FACU species <u>48</u> x 4 = <u>192</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>363</u> (B) Prevalence Index = B/A = <u>3.46</u>
50% of total cover: <u>38%</u>	20% of total cover: <u>15%</u>			
<u>Sapling/Shrub Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Oplopanax horridus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>25%</u>				
50% of total cover: <u>13%</u>	20% of total cover: <u>5%</u>			
<u>Herb Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Rubus pedatus</u>	<u>2%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Cornus canadensis</u>	<u>2%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Streptopus amplexifolius</u>	<u>1%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>5%</u>				
50% of total cover: <u>3%</u>	20% of total cover: <u>1%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>	% Bare Ground <u>95%</u>			
% Cover of Wetland Bryophytes _____	Total Cover of Bryophytes _____			
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P26**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5YR 3/4	100					organic	
18-20	10YR 3/3	100					scl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>20</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>20</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P27
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillside bench
 Local relief (concave, convex, none): Concave Slope (%): 5-10
 Subregion: Southeast Alaska Lat: _____ Long: _____ Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>25%</u>				
50% of total cover: <u>13%</u>		20% of total cover: <u>5%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Rubus spectabilis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Alnus viridis</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>50%</u>				
50% of total cover: <u>25%</u>		20% of total cover: <u>10%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>5%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Cornus canadensis</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Rubus pedatus</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>25%</u>				
50% of total cover: <u>13%</u>		20% of total cover: <u>5%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>75%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P27**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-25+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 13	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Surface (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P28
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Concave Slope (%): 15-20
 Subregion: Southeast Alaska Lat: 57.469463 Long: -134.542699 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Picea sitchensis</u>	<u>50%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>70%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>35%</u> 20% of total cover: <u>14%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>100</u> x 4 = <u>400</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>170</u> (A) <u>590</u> (B) Prevalence Index = B/A = <u>3.47</u>
1. <u>Oplopanax horridus</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>60%</u>				Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>30%</u> 20% of total cover: <u>12%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Tiarella trifoliata</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Gymnocarpium dryopteris</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
7. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>40%</u>				
50% of total cover: <u>20%</u> 20% of total cover: <u>8%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>60%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P28**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-29	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>29</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P29
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 25
 Subregion: Southeast Alaska Lat: 57.469410 Long: -134.542421 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>35%</u>	<u>Yes</u>	<u>FACU</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
Total Cover: <u>70%</u>				FACW species <u>0</u> x 2 = <u>0</u>
50% of total cover: <u>35%</u> 20% of total cover: <u>14%</u>				FAC species <u>65</u> x 3 = <u>195</u>
Sapling/Shrub Stratum				FACU species <u>65</u> x 4 = <u>260</u>
1. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	UPL species <u>0</u> x 5 = <u>0</u>
2. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Column Totals: <u>130</u> (A) <u>455</u> (B)
3. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.50</u>
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
7. _____	_____	_____	_____	
Total Cover: <u>50%</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover: <u>25%</u> 20% of total cover: <u>10%</u>				
Herb Stratum				
1. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Rubus pedatus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>10%</u>				
50% of total cover: <u>5%</u> 20% of total cover: <u>2%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>90%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P29**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Thick Dark Surface (A12)

Alaska Gleyed (A13)

Alaska Redox (A14)

Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4⁴)

Alaska Alpine Swales (TA5)

Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer

Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: Bedrock

Depth (inches): 18

Hydric Soil Present? Yes No

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Surface Soil Cracks (B6)

Secondary Indicators (2 or more required)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Marl Deposits (B15)

Hydrogen Sulfide Odor (C1)

Dry-Season Water Table (C2)

Other (Explain in Remarks)

Water-Stained Leaves (B9)

Drainage Patterns (B10)

Oxidized Rhizospheres along Living Roots (C3)

Presence of Reduced Iron (C4)

Salt Deposits (C5)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

Shallow Aquitard (D3)

Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches):

Water Table Present? Yes No Depth (inches): >18

Saturation Present? Yes No Depth (inches): >18

(includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P30
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.470831 Long: -134.543127 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>45%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>55%</u>		50% of total cover: <u>28%</u> 20% of total cover: <u>11%</u>		Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>28%</u>		20% of total cover: <u>11%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>80</u> x 3 = <u>240</u> FACU species <u>42</u> x 4 = <u>168</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>122</u> (A) <u>408</u> (B) Prevalence Index = B/A = <u>3.34</u>
1. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain)
3. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Rubus spectabilis</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Remarks: _____ Entered by: <u>sar</u> QC by: <u>cmw</u>
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>57%</u>		50% of total cover: <u>29%</u> 20% of total cover: <u>11%</u>		
50% of total cover: <u>29%</u>		20% of total cover: <u>11%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Rubus pedatus</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>10%</u>		50% of total cover: <u>5%</u> 20% of total cover: <u>2%</u>		
50% of total cover: <u>5%</u>		20% of total cover: <u>2%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>90%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

SOIL

Sampling Point: **P30**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>17</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Organics were very moist throughout. Concave flark depression / bench on hillside. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P31
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.470956 Long: -134.543097 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. <u>Tsuga heterophylla</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>50%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>25%</u> 20% of total cover: <u>10%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>56</u> x 3 = <u>168</u> FACU species <u>69</u> x 4 = <u>276</u> UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>135</u> (A) <u>494</u> (B) Prevalence Index = B/A = <u>3.66</u>
1. <u>Menziesia ferruginea</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium parvifolium</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Oplopanax horridus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
Total Cover: <u>60%</u>				Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
50% of total cover: <u>30%</u> 20% of total cover: <u>12%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Clintonia uniflora</u>	<u>10%</u>	<u>Yes</u>	<u>NOL</u>	
2. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Rubus pedatus</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Coptis asplenifolia</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Neottia cordata</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
6. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>25%</u>				Remarks: _____ Entered by: <u>sar</u> QC by: <u>cmw</u>
50% of total cover: <u>13%</u> 20% of total cover: <u>5%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>75%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

SOIL

Sampling Point: **P31**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	7.5YR 3/4	100					organics	
15-21	10YR 2/1	100					muck	
21-25	10YR 3/2	100					saci	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)

Histic Epipedon (A2)

Hydrogen Sulfide (A4)

Thick Dark Surface (A12)

Alaska Gleyed (A13)

Alaska Redox (A14)

Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4⁴)

Alaska Alpine Swales (TA5)

Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer

Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: Bedrock

Depth (inches): 25

Hydric Soil Present? Yes No

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)

High Water Table (A2)

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Surface Soil Cracks (B6)

Secondary Indicators (2 or more required)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Marl Deposits (B15)

Hydrogen Sulfide Odor (C1)

Dry-Season Water Table (C2)

Other (Explain in Remarks)

Water-Stained Leaves (B9)

Drainage Patterns (B10)

Oxidized Rhizospheres along Living Roots (C3)

Presence of Reduced Iron (C4)

Salt Deposits (C5)

Stunted or Stressed Plants (D1)

Geomorphic Position (D2)

Shallow Aquitard (D3)

Microtopographic Relief (D4)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): >25

Saturation Present? Yes No Depth (inches): >25
(includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Mineral soils were moist. Organic layer dry. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P32
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion: Southeast Alaska Lat: 57.471008 Long: -134.543853 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
1. <u>Tsuga heterophylla</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>20%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>10%</u> 20% of total cover: <u>4%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>345</u> (B) Prevalence Index = B/A = <u>3.14</u>
1. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Malus fusca</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>45%</u>				Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>X</u> Problematic Hydrophytic Vegetation ¹ (Explain)
50% of total cover: <u>23%</u> 20% of total cover: <u>9%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>15%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Coptis aspleniifolia</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>45%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: <u>23%</u> 20% of total cover: <u>9%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>55%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw
 Shrubs appear to be growing on slightly elevated hummock. Direct hydrology observed during dry season.

SOIL

Sampling Point: **P32**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-29+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>29</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> X No <input type="checkbox"/>	
Saturation Present? Yes <input checked="" type="checkbox"/> X No <input type="checkbox"/>	
Depth (inches): <u>Surface</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P33
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): 15
 Subregion: Southeast Alaska Lat: 57.471008 Long: -134.543853 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. <u>Tsuga heterophylla</u>	<u>60%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: <u>75%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>38%</u> 20% of total cover: <u>15%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>36</u> x 4 = <u>144</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>136</u> (A) <u>424</u> (B) Prevalence Index = B/A = <u>3.12</u>
1. <u>Menziesia ferruginea</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤ 3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
3. <u>Oplopanax horridus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>35%</u>				
50% of total cover: <u>18%</u> 20% of total cover: <u>7%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Athyrium cyclosorum</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Lysichiton americanus</u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Rubus pedatus</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Streptopus amplexifolius</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>26%</u>				
50% of total cover: <u>13%</u> 20% of total cover: <u>5%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>74%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P33**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-23+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

Histosol or Histel (A1)
 Histic Epipedon (A2)
 Hydrogen Sulfide (A4)
 Thick Dark Surface (A12)
 Alaska Gleyed (A13)
 Alaska Redox (A14)
 Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

Alaska Color Change (TA4)⁴
 Alaska Alpine Swales (TA5)
 Alaska Redox With 2.5Y Hue

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

Surface Water (A1)
 High Water Table (A2)
 Saturation (A3)
 Water Marks (B1)
 Sediment Deposits (B2)
 Drift Deposits (B3)
 Algal Mat or Crust (B4)
 Iron Deposits (B5)
 Surface Soil Cracks (B6)

Inundation Visible on Aerial Imagery (B7)
 Sparsely Vegetated Concave Surface (B8)
 Marl Deposits (B15)
 Hydrogen Sulfide Odor (C1)
 Dry-Season Water Table (C2)
 Other (Explain in Remarks)

Secondary Indicators (2 or more required)

Water-Stained Leaves (B9)
 Drainage Patterns (B10)
 Oxidized Rhizospheres along Living Roots (C3)
 Presence of Reduced Iron (C4)
 Salt Deposits (C5)
 Stunted or Stressed Plants (D1)
 Geomorphic Position (D2)
 Shallow Aquitard (D3)
 Microtopographic Relief (D4)
 FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes No _____ Depth (inches): 13
 Saturation Present? Yes No _____ Depth (inches): Surface
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Mineral soils were moist. Organic layer dry. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/21/2013
 Applicant/Owner: ADOT&PF Sampling Point: P34
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope bench
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.471392 Long: -134.543547 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>75%</u> 50% of total cover: <u>38%</u> 20% of total cover: <u>15%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤ 3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Oplopanax horridus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>25%</u> 50% of total cover: <u>13%</u> 20% of total cover: <u>5%</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tiarella trifoliata</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Maianthemum dilatatum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. <u>Streptopus amplexifolius</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Gymnocarpium dryopteris</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>29%</u> 50% of total cover: <u>15%</u> 20% of total cover: <u>6%</u> Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>71%</u> % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P34**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-22	10YR 2/1	100					muck	
22-27	10YR 3/3	100					sal	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>27</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P35
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.476416 Long: -134.554927 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																											
1. <u><i>Tsuga heterophylla</i></u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)																											
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)																											
3. _____	_____	_____	_____																												
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)																											
Total Cover: <u>15%</u>	_____	_____	_____																												
50% of total cover: <u>8%</u>	_____	20% of total cover: <u>3%</u>	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____																											
<table border="0" style="width:100%;"> <tr> <td>OBL species</td> <td align="center"><u>20</u></td> <td align="center">x 1 =</td> <td align="center"><u>20</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>0</u></td> <td align="center">x 2 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>78</u></td> <td align="center">x 3 =</td> <td align="center"><u>234</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>30</u></td> <td align="center">x 4 =</td> <td align="center"><u>120</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>0</u></td> <td align="center">x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>128</u> (A)</td> <td></td> <td align="center"><u>374</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.92</u></td> </tr> </table>					OBL species	<u>20</u>	x 1 =	<u>20</u>	FACW species	<u>0</u>	x 2 =	<u>0</u>	FAC species	<u>78</u>	x 3 =	<u>234</u>	FACU species	<u>30</u>	x 4 =	<u>120</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>128</u> (A)		<u>374</u> (B)	Prevalence Index = B/A = <u>2.92</u>		
OBL species	<u>20</u>	x 1 =	<u>20</u>																												
FACW species	<u>0</u>	x 2 =	<u>0</u>																												
FAC species	<u>78</u>	x 3 =	<u>234</u>																												
FACU species	<u>30</u>	x 4 =	<u>120</u>																												
UPL species	<u>0</u>	x 5 =	<u>0</u>																												
Column Totals:	<u>128</u> (A)		<u>374</u> (B)																												
Prevalence Index = B/A = <u>2.92</u>																															
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)																											
1. <u><i>Malus fusca</i></u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>																												
2. <u><i>Menziesia ferruginea</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present.																											
3. <u><i>Tsuga heterophylla</i></u>	<u>5%</u>	<u>No</u>	<u>FAC</u>																												
4. <u><i>Rubus parviflorus</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____																											
5. <u><i>Oplopanax horridus</i></u>	<u>3%</u>	<u>No</u>	<u>FACU</u>																												
6. _____	_____	_____	_____	Total Cover: <u>80%</u> 50% of total cover: <u>40%</u> 20% of total cover: <u>16%</u> Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>20%</u> % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)																											
Total Cover: <u>33%</u>	_____	_____	_____																												
50% of total cover: <u>17%</u>	_____	20% of total cover: <u>7%</u>	_____																												
Herb Stratum																															
1. <u><i>Athyrium cyclosorum</i></u>	<u>55%</u>	<u>Yes</u>	<u>FAC</u>																												
2. <u><i>Lysichiton americanus</i></u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>																												
3. <u><i>Tiarella trifoliata</i></u>	<u>3%</u>	<u>No</u>	<u>FAC</u>																												
4. <u><i>Streptopus amplexifolius</i></u>	<u>2%</u>	<u>No</u>	<u>FACU</u>																												
5. _____	_____	_____	_____																												
6. _____	_____	_____	_____																												
7. _____	_____	_____	_____																												
8. _____	_____	_____	_____																												
9. _____	_____	_____	_____																												
10. _____	_____	_____	_____																												

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P35**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-29	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
 Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P36
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion: Southeast Alaska Lat: 57.476313 Long: -134.555260 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	
Hydric Soil Present?	Yes _____	No <u>X</u>		Yes _____
Wetland Hydrology Present?	Yes _____	No <u>X</u>		No <u>X</u>
Remarks: _____				

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u><i>Tsuga heterophylla</i></u>	<u>50%</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29%</u> (A/B)	
2. <u><i>Picea sitchensis</i></u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover: <u>75%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>56</u> x 3 = <u>168</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>111</u> (A) <u>388</u> (B) Prevalence Index = B/A = <u>3.50</u>	
50% of total cover: <u>38%</u>		20% of total cover: <u>15%</u>			
Sapling/Shrub Stratum					
1. <u><i>Menziesia ferruginea</i></u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>		
2. <u><i>Vaccinium parvifolium</i></u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>		
3. <u><i>Vaccinium ovalifolium</i></u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover: <u>25%</u>					
50% of total cover: <u>13%</u>		20% of total cover: <u>5%</u>			
Herb Stratum					
1. <u><i>Cornus canadensis</i></u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u><i>Neottia cordata</i></u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		
3. <u><i>Maianthemum dilatatum</i></u>	<u>1%</u>	<u>No</u>	<u>FAC</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>11%</u>					
50% of total cover: <u>6%</u>		20% of total cover: <u>2%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>89%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____			
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P36**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	7.5YR 3/4	100					organics	
20-30+	10YR 2/1						muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No X _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Soils were dry- no water table.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes _____ No X _____ Depth (inches): _____ Water Table Present? Yes _____ No X _____ Depth (inches): >30 _____ Saturation Present? Yes _____ No X _____ Depth (inches): >30 _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No X _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P37
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 10
 Subregion: Southeast Alaska Lat: 57.474302 Long: -134.552812 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>65%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>80%</u>				
50% of total cover: <u>40%</u>		20% of total cover: <u>16%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Vaccinium ovalifolium</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>15%</u>				
50% of total cover: <u>8%</u>		20% of total cover: <u>3%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Moneses uniflora</u>	<u>3%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Cornus canadensis</u>	<u>2%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>5%</u>				
50% of total cover: <u>3%</u>		20% of total cover: <u>1%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground _____	<u>5%</u>	
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____	<u>90%</u>	
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P37**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	7.5YR 3/4	100					organics	
10-11	10YR 5/2						si	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
Underlying Layer
Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: <u>Dense silt</u> Depth (inches): <u>11</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>11</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>11</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P38
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion: Southeast Alaska Lat: 57.474672 Long: -134.550964 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?		
Hydric Soil Present?	Yes _____	No <u>X</u>		Yes _____	No <u>X</u>
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u><i>Tsuga heterophylla</i></u>	65%	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
2. <u><i>Picea sitchensis</i></u>	15%	No	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>80%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>95</u> x 3 = <u>285</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>140</u> (A) <u>465</u> (B) Prevalence Index = B/A = <u>3.32</u>
50% of total cover:	<u>40%</u>	20% of total cover:	<u>16%</u>	
Sapling/Shrub Stratum				
1. <u><i>Menziesia ferruginea</i></u>	25%	Yes	FACU	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u><i>Vaccinium ovalifolium</i></u>	20%	Yes	FAC	
3. <u><i>Vaccinium alaskaense</i></u>	10%	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	<u>55%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover:	<u>28%</u>	20% of total cover:	<u>11%</u>	
Herb Stratum				
1. <u><i>Cornus canadensis</i></u>	3%	Yes	FACU	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u><i>Neottia cordata</i></u>	2%	Yes	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	<u>5%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover:	<u>3%</u>	20% of total cover:	<u>1%</u>	
Plot size (radius, or length x width)	<u>5 ft radius</u>	% Bare Ground	<u>95%</u>	
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	_____	
(Where applicable)				

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P38**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Gleyed Pores (A15)	<input type="checkbox"/> Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>24</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Organic soils were dry and poorly decomposed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
	<input type="checkbox"/> Presence of Reduced Iron (C4)
	<input type="checkbox"/> Salt Deposits (C5)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>24</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>24</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P39
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toe slope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.474595 Long: -134.550763 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>40%</u>				
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>130</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>2.77</u>
1. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Menziesia ferruginea</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>50%</u>				
50% of total cover: <u>25%</u>		20% of total cover: <u>10%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Lysichiton americanus</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Cornus canadensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
3. <u>Rubus pedatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>40%</u>				
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>60%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes _____		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P39**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	100					muck	
16-18	10YR 3/2						sal	cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
Underlying Layer
Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: <u>Bedrock</u> Depth (inches): <u>18</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P40
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Terrace
 Local relief (concave, convex, none): Concave Slope (%): _____
 Subregion: Southeast Alaska Lat: 57.475941 Long: -134.547345 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u>Pinus contorta</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>10%</u>	_____	_____	_____	
50% of total cover: <u>5%</u>	_____	20% of total cover: <u>2%</u>	_____	
Sapling/Shrub Stratum				
1. <u>Malus fusca</u>	<u>3%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>93</u> x 1 = <u>93</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>13</u> x 3 = <u>39</u> FACU species <u>6</u> x 4 = <u>24</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>117</u> (A) <u>166</u> (B) Prevalence Index = B/A = <u>1.42</u>
2. <u>Menziesia ferruginea</u>	<u>3%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>6%</u>	_____	_____	_____	
50% of total cover: <u>3%</u>	_____	20% of total cover: <u>1%</u>	_____	
Herb Stratum				
1. <u>Trichophorum caespitosum</u>	<u>40%</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Carex flava</u>	<u>35%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Menyanthes trifoliata</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
4. <u>Eriophorum angustifolium</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
5. <u>Triantha glutinosa</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
6. <u>Equisetum fluviatile</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
7. <u>Carex livida</u>	<u>3%</u>	<u>No</u>	<u>OBL</u>	
8. <u>Vaccinium vitis-idaea</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
9. <u>Coptis trifolia</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
10. _____	_____	_____	_____	
Total Cover: <u>101%</u>	_____	_____	_____	
50% of total cover: <u>51%</u>	_____	20% of total cover: <u>20%</u>	_____	
Plot size (radius, or length x width) <u>5 ft radius</u>	_____	% Bare Ground <u>0%</u>	_____	
% Cover of Wetland Bryophytes _____	_____	Total Cover of Bryophytes _____	_____	
(Where applicable)	_____	_____	_____	

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P40**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-34+		100					peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 8/22/2013
 Applicant/Owner: ADOT&PF Sampling Point: P41
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 20
 Subregion: Southeast Alaska Lat: 57.462603 Long: -134.527551 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: NOT IN STUDY AREA					

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>70%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>80%</u>				
50% of total cover: <u>40%</u>			20% of total cover: <u>16%</u>	
Sapling/Shrub Stratum				
1. <u>Menziesia ferruginea</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Vaccinium ovalifolium</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
50% of total cover: <u>10%</u>			20% of total cover: <u>4%</u>	
Herb Stratum				
1. <u>Cornus canadensis</u>	<u>3%</u>	<u>Yes</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>Clintonia uniflora</u>	<u>2%</u>	<u>Yes</u>	<u>NOL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>5%</u>				
50% of total cover: <u>3%</u>			20% of total cover: <u>1%</u>	
Plot size (radius, or length x width) <u>5 ft radius</u>			% Bare Ground <u>95%</u>	
% Cover of Wetland Bryophytes _____			Total Cover of Bryophytes _____	
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P41**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	7.5YR 3/4	100					organics	
16-18	10YR 4/1	100					grsal	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>18</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
	<input type="checkbox"/> Presence of Reduced Iron (C4)
	<input type="checkbox"/> Salt Deposits (C5)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>18</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>18</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/14/2013
 Applicant/Owner: ADOT&PF Sampling Point: P42
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Depression between hummock
 Local relief (concave, convex, none): Slightly convex Slope (%): 3
 Subregion: Southeast Alaska Lat: 57.474153 Long: -134.549251 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Tsuga heterophylla</u>	<u>55%</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. <u>Picea sitchensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>65%</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>33%</u>		20% of total cover: <u>13%</u>		OBL species <u>5</u> x 1 = <u>5</u>	
Sapling/Shrub Stratum				FACW species <u>0</u> x 2 = <u>0</u>	
1. <u>Menziesia ferruginea</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	FAC species <u>80</u> x 3 = <u>240</u>	
2. <u>Vaccinium alaskaense</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	FACU species <u>50</u> x 4 = <u>200</u>	
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	_____	_____	_____	Column Totals: <u>135</u> (A) <u>445</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.30</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>35%</u>				X Dominance Test is >50%	
50% of total cover: <u>18%</u>		20% of total cover: <u>7%</u>		Prevalence Index is ≤3.0 ¹	
Herb Stratum				Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Cornus canadensis</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Rubus pedatus</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>		
3. <u>Lysichiton americanus</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>35%</u>					
50% of total cover: <u>18%</u>		20% of total cover: <u>7%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>55%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>10%</u>			
(Where applicable)					

Remarks: _____ Entered by: sar QC by: cmw

Menziesia ferruginea growing on slightly elevated hummock.

SOIL

Sampling Point: **P42**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: <u>Bedrock</u> Depth (inches): <u>17</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/14/2013
 Applicant/Owner: ADOT&PF Sampling Point: P43
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Slightly convex Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.475045 Long: -134.553488 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	
Hydric Soil Present?	Yes _____	No <u>X</u>		Yes _____
Wetland Hydrology Present?	Yes _____	No <u>X</u>		No <u>X</u>
Remarks: _____				

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u>Tsuga heterophylla</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
2. <u>Picea sitchensis</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover:	<u>50%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>62</u> x 3 = <u>186</u> FACU species <u>35</u> x 4 = <u>140</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>97</u> (A) <u>326</u> (B) Prevalence Index = B/A = <u>3.36</u>	
50% of total cover:	<u>25%</u>	20% of total cover:	<u>10%</u>		
Sapling/Shrub Stratum					
1. <u>Vaccinium alaskaense</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u>Vaccinium parvifolium</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>		
3. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover:	<u>40%</u>				
50% of total cover:	<u>20%</u>	20% of total cover:	<u>8%</u>		
Herb Stratum					
1. <u>Cornus canadensis</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>		
2. <u>Rubus pedatus</u>	<u>2%</u>	<u>Yes</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover:	<u>7%</u>				
50% of total cover:	<u>4%</u>	20% of total cover:	<u>1%</u>		
Plot size (radius, or length x width)	<u>5 ft radius</u>	% Bare Ground	<u>93%</u>		
% Cover of Wetland Bryophytes (Where applicable)	_____	Total Cover of Bryophytes	<u>0%</u>		
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P43**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	7.5YR 3/4	100					organics	
11-14	10YR4/1	100					grsil	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Depth (inches): <u>14</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>14</u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>14</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Very moist below 8 inches. Soils were dry above 8 inches. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/14/2013
 Applicant/Owner: ADOT&PF Sampling Point: P44
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toeslope
 Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion: Southeast Alaska Lat: 57.475641 Long: -134.553644 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)	
2. <u>Picea sitchensis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>40%</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		OBL species <u>2</u> x 1 = <u>2</u>	
Sapling/Shrub Stratum				FACW species <u>0</u> x 2 = <u>0</u>	
1. <u>Vaccinium ovalifolium</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>85</u> x 3 = <u>255</u>	
2. <u>Menziesia ferruginea</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	FACU species <u>12</u> x 4 = <u>48</u>	
3. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	_____	_____	_____	Column Totals: <u>99</u> (A) <u>305</u> (B)	
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.08</u>	
6. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>40%</u>				<u>X</u> Dominance Test is >50%	
50% of total cover: <u>20%</u>		20% of total cover: <u>8%</u>		<u>_____</u> Prevalence Index is ≤3.0 ¹	
Herb Stratum				<u>_____</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Rubus pedatus</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	<u>_____</u> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Cornus canadensis</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present.	
3. <u>Lysichiton americanus</u>	<u>2%</u>	<u>No</u>	<u>OBL</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>19%</u>					
50% of total cover: <u>10%</u>		20% of total cover: <u>4%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>81%</u>		Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P44**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-19	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input checked="" type="checkbox"/> Histosol or Histel (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Alaska Gleyed (A13)</p> <p><input type="checkbox"/> Alaska Redox (A14)</p> <p><input type="checkbox"/> Alaska Gleyed Pores (A15)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Alaska Color Change (TA4)⁴</p> <p><input type="checkbox"/> Alaska Alpine Swales (TA5)</p> <p><input type="checkbox"/> Alaska Redox With 2.5Y Hue</p> <p><input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p>³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.</p> <p>⁴Give details of color change in Remarks</p>
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<p>Restrictive Layer (if present):</p> <p>Type: <u>Bedrock</u></p> <p>Depth (inches): <u>19</u></p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one indicator is sufficient)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input checked="" type="checkbox"/> High Water Table (A2)</p> <p><input checked="" type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)</p> <p><input type="checkbox"/> Drift Deposits (B3)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)</p> <p><input type="checkbox"/> Iron Deposits (B5)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p>	<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p> <p><input type="checkbox"/> Marl Deposits (B15)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Salt Deposits (C5)</p> <p><input type="checkbox"/> Stunted or Stressed Plants (D1)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> Microtopographic Relief (D4)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>
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<p>Field Observations:</p> <p>Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u></p> <p>Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u></p> <p>Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> (includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Approximately 4 inch deep ponding in wetland near plot. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/14/2013
 Applicant/Owner: ADOT&PF Sampling Point: P45
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.476781 Long: -134.550592 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
1. <u>Pinus contorta</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tsuga heterophylla</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
50% of total cover: <u>10%</u>		20% of total cover: <u>4%</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>15</u> x 2 = <u>30</u> FAC species <u>35</u> x 3 = <u>105</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>95</u> (A) <u>240</u> (B) Prevalence Index = B/A = <u>2.53</u>
1. <u>Malus fusca</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Oplopanax horridus</u>	<u>5%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
50% of total cover: <u>10%</u>		20% of total cover: <u>4%</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Lysichiton americanus</u>	<u>15%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Athyrium cyclosorum</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Carex mertensii</u>	<u>15%</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>Menyanthes trifoliata</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
5. <u>Carex livida</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover: <u>55%</u>				
50% of total cover: <u>28%</u>		20% of total cover: <u>11%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>45%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P45**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	7.5YR 3/4	100					peat	
17-25+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
Underlying Layer
Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw
 Approximately 2 inch deep scattered ponding in wetland near plot.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P46
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope (ridge)
 Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion: Southeast Alaska Lat: 57.468140 Long: -134.544364 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present?
 Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?		
Hydric Soil Present?	Yes _____	No <u>X</u>		Yes _____	No <u>X</u>
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Picea sitchensis</u>	45%	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Tsuga heterophylla</u>	15%	Yes	FAC	Total Number of Dominant Species Across All Strata: <u>7</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
4. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____
Total Cover: <u>60%</u>				
50% of total cover: <u>30%</u> 20% of total cover: <u>12%</u>				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Oplopanax horridus</u>	20%	Yes	FACU	OBL species <u>0</u> x 1 = <u>0</u>
2. <u>Vaccinium ovalifolium</u>	10%	Yes	FAC	FACW species <u>0</u> x 2 = <u>0</u>
3. <u>Rubus spectabilis</u>	5%	No	FACU	FAC species <u>50</u> x 3 = <u>150</u>
4. <u>Menziesia ferruginea</u>	5%	No	FACU	FACU species <u>115</u> x 4 = <u>460</u>
5. _____				UPL species <u>0</u> x 5 = <u>0</u>
6. _____				Column Totals: <u>165</u> (A) <u>610</u> (B)
Total Cover: <u>40%</u>				Prevalence Index = B/A = <u>3.70</u>
50% of total cover: <u>20%</u> 20% of total cover: <u>8%</u>				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cornus canadensis</u>	20%	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Maianthemum dilatatum</u>	20%	Yes	FAC	
3. <u>Gymnocarpium dryopteris</u>	15%	Yes	FACU	
4. <u>Streptopus amplexifolius</u>	5%	No	FACU	
5. <u>Rubus pedatus</u>	5%	No	FAC	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
Total Cover: <u>65%</u>				
50% of total cover: <u>33%</u> 20% of total cover: <u>13%</u>				
Plot size (radius, or length x width) <u>5 ft radius</u> % Bare Ground <u>35%</u>				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>0%</u>				
(Where applicable)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P46**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5YR3/4	100					organics	
18-28	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
 Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No X
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Slightly moist 18-28 inches, but no water table. Surface organics were poorly decomposed folist (wood, roots).

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes _____ No X Depth (inches): _____ Water Table Present? Yes _____ No X Depth (inches): <u>>28</u> Saturation Present? Yes _____ No X Depth (inches): <u>>28</u> (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No X
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P47
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.468462 Long: -134.543430 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u>Picea sitchensis</u>	20%	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
2. <u>Tsuga heterophylla</u>	15%	Yes	FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover:	35%			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>49</u> x 3 = <u>147</u> FACU species <u>45</u> x 4 = <u>180</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>119</u> (A) <u>352</u> (B) Prevalence Index = B/A = <u>2.96</u>	
50% of total cover:	18%	20% of total cover:	7%		
Sapling/Shrub Stratum					
1. <u>Oplopanax horridus</u>	20%	Yes	FACU	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u>Rubus spectabilis</u>	5%	No	FACU		
3. <u>Cornus alba</u>	5%	No	FAC		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover:	30%				
50% of total cover:	15%	20% of total cover:	6%		
Herb Stratum					
1. <u>Lysichiton americanus</u>	25%	Yes	OBL		
2. <u>Athyrium cyclosorum</u>	15%	Yes	FAC		
3. <u>Rubus pedatus</u>	5%	No	FAC		
4. <u>Coptis asplenifolia</u>	5%	No	FAC		
5. <u>Tiarella trifoliata</u>	2%	No	FAC		
6. <u>Maianthemum dilatatum</u>	2%	No	FAC		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover:	54%				
50% of total cover:	27%	20% of total cover:	11%		
Plot size (radius, or length x width)	5 ft radius	% Bare Ground	15%		
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	31%		
(Where applicable)					

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P47**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-25+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Alaska Gleyed (A13)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw
 Approx. 1/4-1/2" deep ponding in wetland near plot.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P48
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.468707 Long: -134.543164 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>Tsuga heterophylla</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Picea sitchensis</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>55%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>64</u> x 4 = <u>256</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>139</u> (A) <u>481</u> (B) Prevalence Index = B/A = <u>3.46</u>
50% of total cover:	<u>28%</u>	20% of total cover:	<u>11%</u>	
Sapling/Shrub Stratum				
1. <u>Vaccinium ovalifolium</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Menziesia ferruginea</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Oplopanax horridus</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Rubus spectabilis</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	<u>60%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover:	<u>30%</u>	20% of total cover:	<u>12%</u>	
Plot size (radius, or length x width)	<u>5 ft radius</u>	% Bare Ground	<u>1%</u>	
% Cover of Wetland Bryophytes (Where applicable)	_____	Total Cover of Bryophytes	<u>75%</u>	

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw
 No *Lysichiton americanus* or other FACW or OBL vegetation species near plot.

SOIL

Sampling Point: **P48**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	7.5YR 3/4	100					organics	
17-29	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No X _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)
 Surface organics were not saturated; therefore does not meet A1.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No X _____ Depth (inches): _____ Water Table Present? Yes X _____ No _____ Depth (inches): <u>28</u> Saturation Present? Yes X _____ No _____ Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes X _____ No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P49
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): 3-5
 Subregion: Southeast Alaska Lat: 57.469866 Long: -134.541300 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u>Picea sitchensis</u>	20%	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)	
2. <u>Tsuga heterophylla</u>	20%	Yes	FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover:	40%				
50% of total cover:	20%	20% of total cover:	8%		
Sapling/Shrub Stratum					
1. <u>Vaccinium alaskaense</u>	35%	Yes	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>55</u> x 1 = <u>55</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>73</u> x 3 = <u>219</u> FACU species <u>47</u> x 4 = <u>188</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>175</u> (A) <u>462</u> (B) Prevalence Index = B/A = <u>2.64</u>	
2. <u>Menziesia ferruginea</u>	10%	No	FACU		
3. <u>Vaccinium parvifolium</u>	10%	No	FACU		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover:	55%				
50% of total cover:	28%	20% of total cover:	11%		
Herb Stratum					
1. <u>Lysichiton americanus</u>	55%	Yes	OBL		
2. <u>Rubus pedatus</u>	15%	No	FAC		
3. <u>Cornus canadensis</u>	5%	No	FACU		
4. <u>Coptis asplenifolia</u>	3%	No	FAC		
5. <u>Streptopus amplexifolius</u>	2%	No	FACU		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover:	80%				
50% of total cover:	40%	20% of total cover:	16%		
Plot size (radius, or length x width)	5 ft radius	% Bare Ground	0%		
% Cover of Wetland Bryophytes (Where applicable)	_____	Total Cover of Bryophytes	20%		

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw
 FACU shrubs on slightly elevated hummocks.

SOIL

Sampling Point: **P49**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-22+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P50
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): 5-7
 Subregion: Southeast Alaska Lat: 57.469960 Long: -134.543405 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u><i>Tsuga heterophylla</i></u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)	
2. <u><i>Picea sitchensis</i></u>	<u>30%</u>	<u>Yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover:	<u>60%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>61</u> x 3 = <u>183</u> FACU species <u>62</u> x 4 = <u>248</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>128</u> (A) <u>436</u> (B) Prevalence Index = B/A = <u>3.41</u>	
50% of total cover:	<u>30%</u>	20% of total cover:	<u>12%</u>		
Sapling/Shrub Stratum					
1. <u><i>Oplopanax horridus</i></u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>		
2. <u><i>Vaccinium alaskaense</i></u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>		
3. <u><i>Menziesia ferruginea</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
4. <u><i>Rubus spectabilis</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover:	<u>45%</u>				
50% of total cover:	<u>23%</u>	20% of total cover:	<u>9%</u>		
Herb Stratum					
1. <u><i>Rubus pedatus</i></u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u><i>Lysichiton americanus</i></u>	<u>5%</u>	<u>Yes</u>	<u>OBL</u>		
3. <u><i>Athyrium cyclosorum</i></u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>		
4. <u><i>Coptis asplenifolia</i></u>	<u>4%</u>	<u>No</u>	<u>FAC</u>		
5. <u><i>Maianthemum dilatatum</i></u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6. <u><i>Cornus canadensis</i></u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover:	<u>23%</u>				
50% of total cover:	<u>12%</u>	20% of total cover:	<u>5%</u>		
Plot size (radius, or length x width)	<u>5 ft radius</u>	% Bare Ground	<u>0%</u>		
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	<u>77%</u>		
(Where applicable)					

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P50**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	7.5YR 3/4	100					organics	
7-25+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
Underlying Layer
Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 16 Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 7 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P51
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion: Southeast Alaska Lat: 57.469403 Long: -134.544367 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u>Picea sitchensis</u>	15%	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)
2. <u>Tsuga heterophylla</u>	15%	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	30%			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>72</u> x 3 = <u>216</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>152</u> (A) <u>461</u> (B) Prevalence Index = B/A = <u>3.03</u>
50% of total cover:	15%	20% of total cover:	6%	
Sapling/Shrub Stratum				
1. <u>Oplopanax horridus</u>	20%	Yes	FACU	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Vaccinium alaskaense</u>	15%	Yes	FAC	
3. <u>Rubus spectabilis</u>	10%	Yes	FACU	
4. <u>Vaccinium parvifolium</u>	5%	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover:	50%			Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover:	25%	20% of total cover:	10%	
Herb Stratum				
1. <u>Lysichiton americanus</u>	25%	Yes	OBL	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Athyrium cyclosorum</u>	25%	Yes	FAC	
3. <u>Coptis asplenifolia</u>	8%	No	FAC	
4. <u>Rubus pedatus</u>	5%	No	FAC	
5. <u>Cornus canadensis</u>	5%	No	FACU	
6. <u>Tiarella trifoliata</u>	2%	No	FAC	
7. <u>Maianthemum dilatatum</u>	2%	No	FAC	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	72%			
50% of total cover:	36%	20% of total cover:	14%	
Plot size (radius, or length x width)	5 ft radius	% Bare Ground	0%	
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	45%	
(Where applicable)				

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P51**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-29+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Gleyed (A13)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Redox (A14)	⁴ Give details of color change in Remarks		
<input type="checkbox"/> Alaska Gleyed Pores (A15)			

Restrictive Layer (if present):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:		<u>Secondary Indicators (2 or more required)</u>	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	8	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	Surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P52
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Toeslope bench
 Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion: Southeast Alaska Lat: 57.468985 Long: -134.545236 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u>Picea sitchensis</u>	<u>40%</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
2. <u>Tsuga heterophylla</u>	<u>35%</u>	<u>Yes</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover: <u>75%</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>72</u> x 3 = <u>216</u> FACU species <u>74</u> x 4 = <u>296</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>176</u> (A) <u>542</u> (B) Prevalence Index = B/A = <u>3.08</u>	
50% of total cover: <u>38%</u>		20% of total cover: <u>15%</u>			
Sapling/Shrub Stratum					
1. <u>Oplopanax horridus</u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>		
2. <u>Menziesia ferruginea</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
3. <u>Vaccinium parvifolium</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover: <u>31%</u>				Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
50% of total cover: <u>16%</u>		20% of total cover: <u>6%</u>			
Herb Stratum					
1. <u>Athyrium cyclosorum</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>		
2. <u>Lysichiton americanus</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>		
3. <u>Tiarella trifoliata</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		
4. <u>Gymnocarpium dryopteris</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
5. <u>Maianthemum dilatatum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>70%</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
50% of total cover: <u>35%</u>		20% of total cover: <u>14%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>30%</u>			
(Where applicable)					

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P52**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-26+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
 Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>11</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P53
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Ridge
 Local relief (concave, convex, none): Convex Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.470022 Long: -134.547130 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?		
Hydric Soil Present?	Yes _____	No <u>X</u>		Yes _____	No <u>X</u>
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: _____					

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
1. <u>Picea sitchensis</u>	30%	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
2. <u>Tsuga heterophylla</u>	30%	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover:	<u>60%</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>37</u> x 3 = <u>111</u> FACU species <u>48</u> x 4 = <u>192</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>85</u> (A) <u>303</u> (B) Prevalence Index = B/A = <u>3.56</u>
50% of total cover:	<u>30%</u>	20% of total cover:	<u>12%</u>	
Sapling/Shrub Stratum				
1. <u>Menziesia ferruginea</u>	5%	Yes	FACU	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Menziesia ferruginea</u>	5%	Yes	FACU	
3. <u>Vaccinium ovalifolium</u>	5%	Yes	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	<u>15%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover:	<u>8%</u>	20% of total cover:	<u>3%</u>	
Herb Stratum				
1. <u>Cornus canadensis</u>	8%	Yes	FACU	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>Maianthemum dilatatum</u>	2%	Yes	FAC	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
Total Cover:	<u>10%</u>			Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
50% of total cover:	<u>5%</u>	20% of total cover:	<u>2%</u>	
Plot size (radius, or length x width)	<u>5 ft radius</u>	% Bare Ground	<u>10%</u>	
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	<u>80%</u>	
(Where applicable)				

Remarks: *Identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P53**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-27	7.5YR 3/4	100					organics	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Thick Dark Surface (A12)			
<input type="checkbox"/> Alaska Gleyed (A13)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,		
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks		

Restrictive Layer (if present): Type: <u>Bedrock</u> Depth (inches): <u>27</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>27</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>>27</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slightly moist throughout. No saturation or water table. Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P54
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope bench
 Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion: Southeast Alaska Lat: 57.470075 Long: -134.547064 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u>Picea sitchensis</u>	15%	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)	
2. <u>Tsuga heterophylla</u>	15%	Yes	FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover:	30%			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>25</u> x 1 = <u>25</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>32</u> x 3 = <u>96</u> FACU species <u>39</u> x 4 = <u>156</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>96</u> (A) <u>277</u> (B) Prevalence Index = B/A = <u>2.89</u>	
50% of total cover:	15%	20% of total cover:	6%		
Sapling/Shrub Stratum					
1. <u>Oplopanax horridus</u>	15%	Yes	FACU		
2. <u>Rubus spectabilis</u>	4%	No	FACU		
3. <u>Vaccinium parvifolium</u>	3%	No	FACU		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover:	22%				
50% of total cover:	11%	20% of total cover:	4%		
Herb Stratum					
1. <u>Lysichiton americanus</u>	25%	Yes	OBL	Hydrophytic Vegetation Indicators: X Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u>Athyrium cyclosorum</u>	15%	Yes	FAC		
3. <u>Tiarella trifoliata</u>	2%	No	FAC		
4. <u>Gymnocarpium dryopteris</u>	2%	No	FACU		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover:	44%				
50% of total cover:	22%	20% of total cover:	9%		
Plot size (radius, or length x width)	5 ft radius	% Bare Ground	31%		
% Cover of Wetland Bryophytes	_____	Total Cover of Bryophytes	25%		
(Where applicable)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Remarks: _____ *Identifies indicator status is tentative					

Entered by: sar QC by: cmw

SOIL

Sampling Point: **P54**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-30+	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
Underlying Layer
Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
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Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>Surface</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw
 Approx. 2" deep ponding in wetland near plot.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Ketchikan Gateway Borough Sampling Date: 9/15/2013
 Applicant/Owner: ADOT&PF Sampling Point: P55
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Hillslope
 Local relief (concave, convex, none): Convex Slope (%): 5-10
 Subregion: Southeast Alaska Lat: 57.471071 Long: -134.546331 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Remarks: _____			

VEGETATION - Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum					
1. <u><i>Tsuga heterophylla</i></u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)	
2. <u><i>Picea sitchensis</i></u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
Total Cover: <u>35%</u>					
50% of total cover: <u>18%</u>		20% of total cover: <u>7%</u>			
Sapling/Shrub Stratum					
1. <u><i>Rubus spectabilis</i></u>	<u>25%</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>55</u> x 4 = <u>220</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>140</u> (A) <u>455</u> (B) Prevalence Index = B/A = <u>3.25</u>	
2. <u><i>Oplopanax horridus</i></u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>		
3. <u><i>Vaccinium ovalifolium</i></u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>		
4. <u><i>Menziesia ferruginea</i></u>	<u>5%</u>	<u>No</u>	<u>FACU</u>		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
Total Cover: <u>60%</u>					
50% of total cover: <u>30%</u>		20% of total cover: <u>12%</u>			
Herb Stratum					
1. <u><i>Athyrium cyclosorum</i></u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>		
2. <u><i>Lysichiton americanus</i></u>	<u>10%</u>	<u>Yes</u>	<u>OBL</u>		
3. <u><i>Tiarella trifoliata</i></u>	<u>8%</u>	<u>No</u>	<u>FAC</u>		
4. <u><i>Coptis asplenifolia</i></u>	<u>5%</u>	<u>No</u>	<u>FAC</u>		
5. <u><i>Rubus pedatus</i></u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
Total Cover: <u>45%</u>					
50% of total cover: <u>23%</u>		20% of total cover: <u>9%</u>			
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>			
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>55%</u>			
(Where applicable)					

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

SOIL

Sampling Point: **P55**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-25	10YR 2/1	100					muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils³:
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Alaska Gleyed (A13)	
<input type="checkbox"/> Alaska Redox (A14)	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

Alaska Gleyed Without Hue 5Y or Redder
 Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

⁴Give details of color change in Remarks

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Bedrock</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): <u>25</u>	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: sar QC by: cmw

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport 12a with access to 12 Borough/City: Hoonah Angoon Sampling Date: 9/16/2013
 Applicant/Owner: ADOT&PF Sampling Point: P56
 Investigator(s): Stacey Reed and Taya MacLean Landform (hillside, terrace, hummocks, etc.): Bench on hillslope
 Local relief (concave, convex, none): Concave Slope (%): <3
 Subregion: Southeast Alaska Lat: 57.465138 Long: -134.539918 Datum: NAD 1983
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

Remarks: _____

VEGETATION - Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)
1. <u>Pinus contorta</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tsuga heterophylla</u>	<u>5%</u>	<u>Yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>10%</u>				
50% of total cover: <u>5%</u>		20% of total cover: <u>2%</u>		
Sapling/Shrub Stratum				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>7</u> x 1 = <u>7</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>12</u> x 4 = <u>48</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>111</u> (A) <u>329</u> (B) Prevalence Index = B/A = <u>2.96</u>
1. <u>Alnus viridis</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Tsuga mertensiana</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Vaccinium alaskaense</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Picea sitchensis</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Tsuga heterophylla</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
6. <u>Rhododendron groenlandicum</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
Total Cover: <u>75%</u>				
50% of total cover: <u>38%</u>		20% of total cover: <u>15%</u>		
Herb Stratum				Hydrophytic Vegetation Indicators: X Dominance Test is >50% Prevalence Index is ≤3.0 ¹ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Carex species</u>	<u>70%</u>	<u>Yes</u>	<u>OBL to FACU</u>	
2. <u>Calamagrostis canadensis</u>	<u>8%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Lysichiton americanus</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
4. <u>Athyrium cyclosorum</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Nephrophyllidium crista-galli</u>	<u>2%</u>	<u>No</u>	<u>OBL</u>	
6. <u>Tiarella trifoliata</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
7. <u>Angelica genuflexa</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
8. <u>Coptis asplenifolia</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
9. <u>Cornus canadensis</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
10. <u>Agrostis species</u>	<u>2%</u>	<u>No</u>	<u>FAC?</u>	
Total Cover: <u>98%</u>				
50% of total cover: <u>49%</u>		20% of total cover: <u>20%</u>		
Plot size (radius, or length x width) <u>5 ft radius</u>		% Bare Ground <u>0%</u>		
% Cover of Wetland Bryophytes _____		Total Cover of Bryophytes <u>0%</u>		
(Where applicable)				

Remarks: *identifies indicator status is tentative Entered by: sar QC by: cmw

Also 5% *Menziesia ferruginea* in shrub stratum.

SOIL

Sampling Point: **P56**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-25	7.5YR 3/2	100					peat	
25-30+	10YR 2/1	100					mucky peat	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input type="checkbox"/> Alaska Color Change (TA4) ⁴	<input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Other (Explain in Remarks)	
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Alaska Redox With 2.5Y Hue		
<input type="checkbox"/> Thick Dark Surface (A12)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.		
<input type="checkbox"/> Alaska Gleyed (A13)	⁴ Give details of color change in Remarks		
<input type="checkbox"/> Alaska Redox (A14)			
<input type="checkbox"/> Alaska Gleyed Pores (A15)			

Restrictive Layer (if present):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks: s = sand; si = silt; c = clay; l = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Water-Stained Leaves (B9)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Water Marks (B1)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	

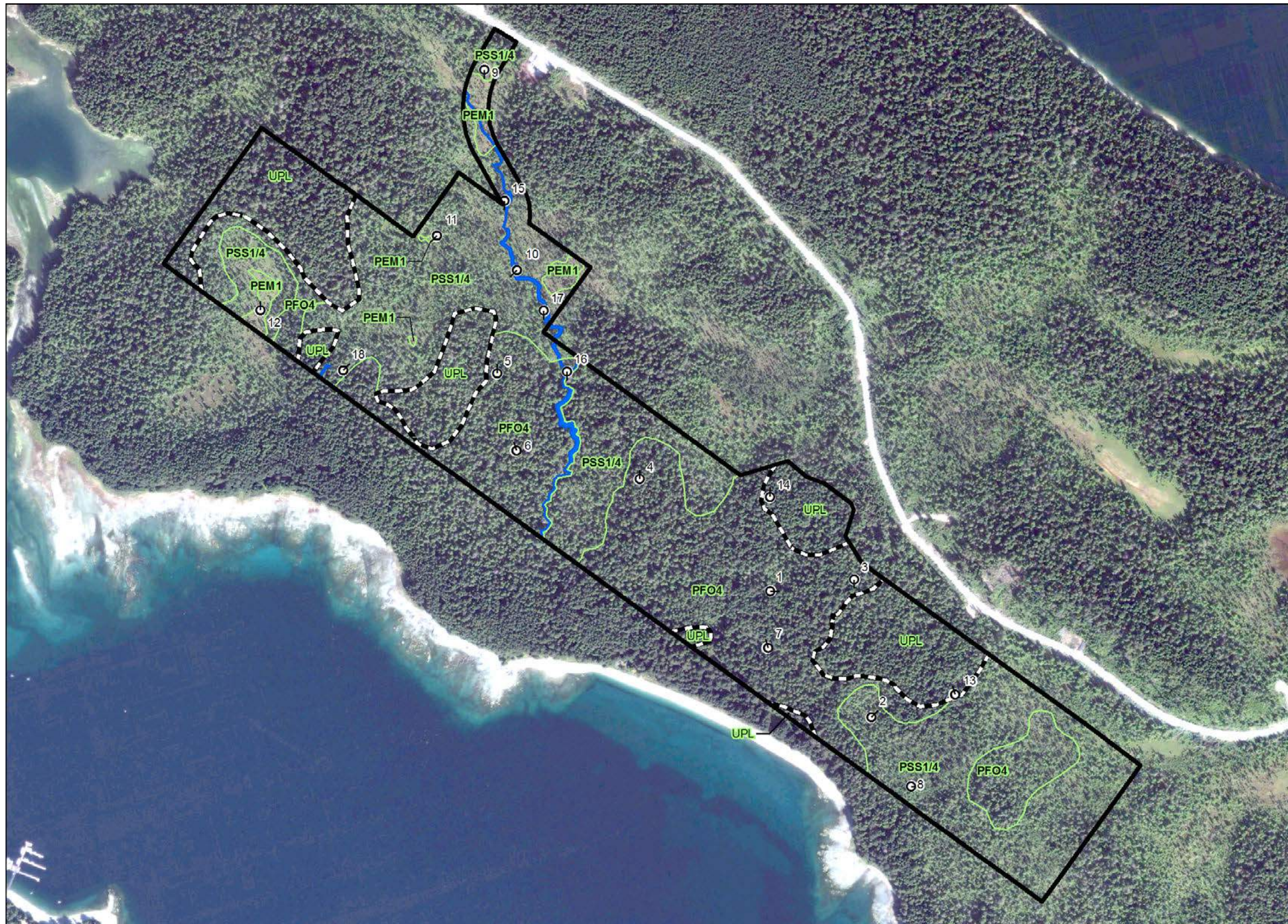
Field Observations:				Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	_____	
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	2	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	Surface	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: _____ Entered by: sar QC by: cmw

APPENDIX D. GROUND-LEVEL SITE PHOTOGRAPHS

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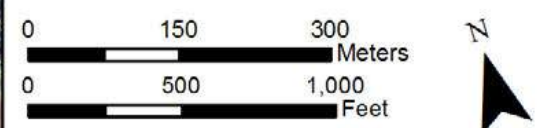


Angoon Airport EIS Airport 12a with Access 12a

- Photo Points 1-18 and Direction of View
- Wetland Boundary
- Wetland and Water Delineation Study Area Boundary
- Wetland and Water Delineation Study Area Boundary
- Potentially Jurisdictional Perennial Waters

PEM1 - Palustrine Emergent Persistent
 PFO4 - Palustrine Forested Needle-Leaved Evergreen
 PSS1/4 - Palustrine Scrub-Shrub Needle-Leaved Evergreen and Broad-Leaved Deciduous
 UPL - Upland

T51S R68E, Sections 5, 6, and 8
 Center location: -134.5468W, 57.4722N
 UTM Zone 8N, NAD83
 Copper River Meridian
 Source: Imagery (c) Digital Globe, 2004.



Contains Privileged Information: Do Not Release

QuickBird satellite imagery
 acquired on August 15th, 2004 (c)
 DigitalGlobe, Inc. All Rights Reserved



ANGOON AIRPORT
 Environmental Impact Statement

Photo location map.

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Photo 1. View of isolated upland ridge in wetland/
upland mosaic area.



Photo 2. View of wetland drainage feature.



Photo 3. View of palustrine forested wetland community.



Photo 4. View of palustrine forested wetland community.



Photo 5. View of organic muck at wetland Plot 10.



Photo 6. View of scattered, isolated ponding in forested wetland.



Photo 7. View of iron deposits in wetland.



Photo 8. View of palustrine scrub-shrub broad-leaved deciduous wetland community.



Photo 9. View of palustrine scrub-shrub needle-leaved evergreen wetland community.



Photo 10. View of palustrine scrub-shrub wetland community.



Photo 11. View of palustrine emergent wetland community.



Photo 12. View of peat soils in palustrine emergent fen community.



Photo 13. View of upland community.



Photo 14. View of upland soils at Plot 16.



Photo 15. View of upstream portions of narrow perennial drainage flowing through fern.



Photo 16. View of downstream portion of perennial drainage.



Photo 17. View of the main perennial drainage that flows southerly through the site



Photo 18. View of headwaters of perennial drainage located in the southwestern portion of the study area.

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APPENDIX E. VEGETATION TABLES

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Angoon Airport 12A with Access 12
Table of Vascular Vegetation Observed On-Site
8/19-8/22/2013 (Plots 1-41) and 9/14-9/16/2013 (Plots 42-56)

Common Name	Scientific Name	Wetland Indicator Status
WETLAND VEGETATION		
Rocky Mountain maple	<i>Acer glabrum</i>	FACU
common yarrow	<i>Achillea millefolium</i>	FACU
Red Baneberry	<i>Actaea rubra</i>	FAC
mountain alder, Sitka alder	<i>Alnus viridis</i>	FAC
kneeling angelica	<i>Angelica genuflexa</i>	FACW
Western Lady Fern	<i>Athyrium cyclosorum</i>	FAC
bluejoint	<i>Calamagrostis canadensis</i>	FAC
white marsh marigold	<i>Caltha leptosepala</i>	OBL
giant mountain aster, Canada aster	<i>Canadanthus modestus</i>	FAC
water sedge, leafy tussock sedge	<i>Carex aquatilis</i>	OBL
sedge	<i>Carex species</i>	OBL to FACU
yellow sedge, yellow-green sedge	<i>Carex flava</i>	OBL
livid sedge	<i>Carex livida</i>	OBL
Umbell's Bittercress	<i>Cardamine umbellata</i>	FACW
Northwest Territory sedge	<i>Carex utriculata</i>	OBL
purple marshlocks	<i>Comarum palustre</i>	OBL
fern-leaf goldthread	<i>Coptis aspleniifolia</i>	FAC
three-leaf goldthread	<i>Coptis trifolia</i>	FAC
Red Osier	<i>Cornus alba</i>	FAC
bunchberry dogwood, Canadian bunchberry	<i>Cornus canadensis</i>	FACU
round-leaf sundew	<i>Drosera rotundifolia</i>	OBL
spikerush species	<i>Eleocharis species</i>	OBL to FACW
black crowberry	<i>Empetrum nigrum</i>	FAC
field horsetail	<i>Equisetum arvense</i>	FAC
water horsetail	<i>Equisetum fluviatile</i>	OBL
variegated scouring-rush	<i>Equisetum variegatum</i>	FACW
tall cotton-grass	<i>Eriophorum angustifolium</i>	OBL
fragrant bedstraw	<i>Galium triflorum</i>	FAC
western oakfern, northern oak fern	<i>Gymnocarpium dryopteris</i>	FACU
common cowparsnip, American cow-parsnip	<i>Heracleum maximum</i>	FACU
meadow barley	<i>Hordeum brachyantherum</i>	FACW
common woodrush	<i>Luzula multiflora</i>	FACU
American skunkcabbage, yellow-skunk-cabbage	<i>Lysichiton americanus</i>	OBL
false lily of the valley, two-leaf false Solomon's-seal	<i>Maianthemum dilatatum</i>	FAC
Oregon crabapple	<i>Malus fusca</i>	FACU
rusty menziesia, fool's-huckleberry	<i>Menziesia ferruginea</i>	FACU
buck-bean	<i>Menyanthes trifoliata</i>	OBL
seep monkey-flower	<i>Mimulus guttatus</i>	OBL
Heart-Leaf Twayblade	<i>Thelypodium cordata</i>	FACU
deer-cabbage	<i>Thelypodium cristatum</i>	OBL
devil's-club	<i>Oplopanax horridus</i>	FACU
sidebells wintergreen	<i>Orthilia secunda</i>	FACU
Sitka spruce	<i>Picea sitchensis</i>	FACU
lodgepole pine	<i>Pinus contorta</i>	FAC
Scentbottle	<i>Piperia dilatata</i>	FACW

Angoon Airport 12A with Access 12
Table of Vascular Vegetation Observed On-Site
8/19-8/22/2013 (Plots 1-41) and 9/14-9/16/2013 (Plots 42-56)

Common Name	Scientific Name	Wetland Indicator Status
slender bog orchid	<i>Platanthera stricta</i>	FACW
Arctic False Bent	<i>Podagrostis aequivalvis</i>	OBL
western bracken fern, northern bracken fern	<i>Pteridium aquilinum</i>	FACU
Rusty Labrador-Tea	<i>Rhododendron groenlandicum</i>	FAC
cloudberry	<i>Rubus chamaemorus</i>	FACW
strawberry-leaf raspberry	<i>Rubus pedatus</i>	FAC
salmonberry, salmon raspberry	<i>Rubus spectabilis</i>	FACU
Canadian burnet	<i>Sanguisorba canadensis</i>	FACW
clasping twistedstake	<i>Streptopus amplexifolius</i>	FACU
Douglas aster, leafy-bract American-aster	<i>Symphotrichum subspicatum</i>	FAC
three-leaf foamflower	<i>Tiarella trifoliata</i>	FAC
tufted leafless-bulrush	<i>Trichophorum caespitosum</i>	OBL
sticky tofieldia, sticky false asphodel	<i>Triantha glutinosa</i>	FACW
western hemlock	<i>Tsuga heterophylla</i>	FAC
mountain hemlock	<i>Tsuga mertensiana</i>	FAC
Alaska blueberry	<i>accinium alaskaense</i>	FAC
oval-leaf blueberry	<i>accinium ovalifolium</i>	FAC
small cranberry	<i>accinium oxycoccos</i>	OBL
red huckleberry	<i>accinium parvifolium</i>	FACU
bog blueberry, alpine blueberry	<i>accinium uliginosum</i>	FAC
lingonberry, northern mountain-cranberry	<i>accinium vitis-idaea</i>	FAC
green false hellebore, American false hellebore	<i>eratrum viride</i>	FAC
squashberry	<i>iburnum edule</i>	FACU
UPLAND VEGETATION		
Rocky Mountain maple	<i>Acer glabrum</i>	FACU
common yarrow	<i>Achillea millefolium</i>	FACU
Red Baneberry	<i>Actaea rubra</i>	FAC
Western Lady Fern	<i>Athyrium cyclosorum</i>	FAC
queen's cup, bride's bonnet	<i>Clintonia uniflora</i>	NOL
fern-leaf goldthread	<i>Coptis aspleniifolia</i>	FAC
Red Osier	<i>Cornus alba</i>	FAC
bunchberry dogwood, Canadian bunchberry	<i>Cornus canadensis</i>	FACU
black crowberry	<i>Empetrum nigrum</i>	FAC
western oakfern, northern oak fern	<i>Gymnocarpium dryopteris</i>	FACU
false lily of the valley, two-leaf false Solomon's-seal	<i>Maianthemum dilatatum</i>	FAC
rusty menziesia, fool's-huckleberry	<i>Menziesia ferruginea</i>	FACU
single-delight	<i>Moneses uniflora</i>	FACU
devil's-club	<i>Oplopanax horridus</i>	FACU
Sitka spruce	<i>Picea sitchensis</i>	FACU
western rattlesnakeroot	<i>Prenanthes alata</i>	NOL
Nootka rose	<i>Rosa nutkana</i>	FACU
western thimble-berry	<i>Rubus parviflorus</i>	FACU
strawberry-leaf raspberry	<i>Rubus pedatus</i>	FAC
salmonberry, salmon raspberry	<i>Rubus spectabilis</i>	FACU
red elderberry	<i>Sambucus racemosa</i>	FACU
Sitka Mountain-Ash	<i>Sorbus sitchensis</i>	FACU

Angoon Airport 12A with Access 12
Table of Vascular Vegetation Observed On-Site
8/19-8/22/2013 (Plots 1-41) and 9/14-9/16/2013 (Plots 42-56)

Common Name	Scientific Name	Wetland Indicator Status
clasping twistedstake	<i>Streptopus amplexifolius</i>	FACU
western hemlock	<i>Tsuga heterophylla</i>	FAC
Alaska blueberry	¶ <i>accinium alaskaense</i>	FAC
oval-leaf blueberry	¶ <i>accinium ovalifolium</i>	FAC
red huckleberry	¶ <i>accinium parvifolium</i>	FACU

Wetland Indicator Status and taxonomy for the Alaska Region per the National Wetland Plant List.

Accessed 7/12/2013:

<http://rsgisias.crrel.usace.army.mil/NWPL/>

WETLAND INDICATOR STATUS - Alaska Region	
OBL	Obligate Wetland – Plant that almost always is a hydrophyte, rarely in uplands.
FACW	Facultative Wetland - Plant that usually is a hydrophyte but occasionally found in uplands.
FAC	Facultative – Plant that commonly occurs as either a hydrophyte or non-hydrophyte.
FACU	Facultative Upland - Plant that occasionally is a hydrophyte but usually occurs in uplands.
UPL	Upland - Plant that rarely is a hydrophyte, almost always in uplands.
NOL	Not Listed - Plants that are not on the list and assumed to be UPL.

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From: Jamie C. M. Young
Sent: Thursday, March 20, 2014 3:25 PM
To: Randy Vigil (randal.p.vigil@usace.army.mil)
Cc: Stacy N. Benjamin; Stacey Reed; Amanda Childs; Leslie Grey (Leslie.Grey@faa.gov); Lara Bjork
Subject: Angoon Airport EIS: clarification regarding connectivity of waters

Hello Randy,

At your request, I'm writing to clarify that it is our best professional judgment that the waters delineated in the "*Wetland and Waters Delineation, Preliminary JD Report, Angoon Airport EIS*" are hydrologically connected to Killisnoo Harbor, which is a marine water body located on the western shore of Admiralty Island, off of Chatham Strait.

Section 8.0 (pages 10-11) clarifies that the "Wetland conditions extend off-site to the south of the study area and are located immediately adjacent to Killisnoo Harbor (a tidally influenced traditional navigable water of the U.S.). Based on aerial photography, an upland ridge may be present along the shoreline, separating the estuarine community from the palustrine wetlands. However, the perennial drainages delineated in the study area are non-navigable, perennial, relatively permanent waters that are directly adjacent to and drain wetlands in the study area. The drainages flow southerly and potentially flow directly into the harbor. Therefore, due to the potential hydrologic connection to Killisnoo Harbor, wetlands and drainages delineated in the study area may be determined to be jurisdictional by the Alaska District USACE."

Please let us know, if you need any further information or clarification.

Thank you for your time!

Jamie C. M. Young
Natural Resources Specialist

SWCA Environmental Consultants
4435 E. Canvasback Ave.
Post Falls, ID 83854
P 208.262.9323 | C 907.821.0404 | F 907.279.7922



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Jamie

Jamie C. M. Young
Natural Resources Specialist

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DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 22270
JUNEAU, ALASKA 99802-2270

AUG 04 2014

Regulatory Division
POA-2009-1254

Ms. Leslie Grey
Federal Aviation Administration
222 West 7th Avenue, Box #14
Anchorage, Alaska 99513

Dear Ms. Grey:

This is in response to your January 9, 2014, request for a jurisdictional determination for a 163.54 - acre parcel of land described as Angoon Airport Environmental Impact Statement, Airport Alternative 12a with Access 12. It has been assigned number POA-2009-1254, Killisnoo Harbor, which should be referred to in all correspondence with us. The project site is located within Sections 5, 6, and 8, T. 51 S., R. 68 E., Copper River Meridian; USGS Quad Map Sitka B-2; Latitude 57.473° N., Longitude 134.547° W., in Angoon, Alaska.

Based on our review of the information you furnished, including the January 2014, Wetland and Waters Delineation Preliminary Jurisdictional Determination Report Angoon Airport Environmental Impact Statement Admiralty Island (PJD), prepared by SWCA Environmental Consultants, we have determined the above property contains waters of the United States (U.S.), including wetlands, under the Corps' regulatory jurisdiction. Specifically, there are: 128.43 acres of wetlands and 1.31 acres of stream on the site. These waters of the U.S. are shown on the enclosed drawing from the PJD (Figure 4) prepared by SWCA Environmental Consultants. A copy of the Approved Jurisdictional Determination form is available at www.poa.usace.army.mil/Missions/Regulatory/JurisdictionalDeterminations.aspx under the above file number.

This approved jurisdictional determination is valid for five (5) years from the date of this letter, unless new information supporting a revision is provided to us before the expiration date. Enclosed is a Notification of Administrative Appeal Options and Process and Request for Appeal form (see section titled "Approved Jurisdictional Determination").

DA authorization is required if you propose to place dredged and/or fill material into waters of the U.S., including wetlands and/or perform work in navigable waters of the U.S.

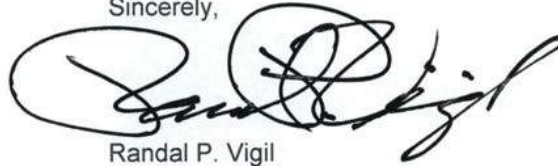
Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including jurisdictional wetlands (33 U.S.C. 1344). The Corps defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for structures or work in or affecting navigable waters of the U.S. (33 U.S.C. 403). Section 10 waters are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or other waters identified by the Alaska District.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at Randal.P.Vigil@usace.army.mil, by mail at the address above, or by phone at (907) 790-4491, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Randal P. Vigil". The signature is stylized with large loops and flourishes.

Randal P. Vigil
Chief, Southeast Section

Enclosures

CF:

sreed@swca.com
jyoung@swca.com



Figure 4. 2004 aerial wetland and waters delineation map.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Federal Aviation Administration		File Number: POA-2009-1254	Date: August 4, 2014
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
XX	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Randal Vigil
Alaska District Corps of Engineers
Juneau Regulatory Field Office (CEPOA-RD-S)
PO Box 22270
Juneau, Alaska 99802-2270
(907) 790-4491

If you only have questions regarding the appeal process you may also contact:

Commander
USAED, Pacific Ocean Division
ATTN: CEPOD-PDC/Cindy Barger
Building 525
Fort Shafter, HI 96858-5440

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

From: Amanda Childs
Sent: Friday, January 17, 2014 4:38 PM
To: Carroll, Lawrence P (DOT); Mike.Edelmann@faa.gov
Cc: Gendron, Jane D (DOT); Barnett, John C (DOT); Jamie C. M. Young; Lara Bjork; Leslie.Grey@faa.gov; Skagerberg, Verne R (DOT)
Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

To summarize for the group, the following provides the detail on how we will proceed with analysis revisions regarding these Airport 3a avigation easements and their associated roads:

- The roads to the 3a avigation easements will be analyzed as the Action called "Terrain Disturbance," which assumes potential cut and fill
- The road width used for these roads will be 40'
- We've added 200' diameter turnarounds at the end of both roads into the avigation easements that can serve as landings
- We will not include an assumption regarding the closure of the roads associated with the avigation easements
- The attached figure shows the Actions that we plan to analyze

From: Carroll, Lawrence P (DOT) [<mailto:pat.carroll@alaska.gov>]
Sent: Thursday, January 16, 2014 5:11 PM
To: Mike.Edelmann@faa.gov
Cc: Amanda Childs; Gendron, Jane D (DOT); Barnett, John C (DOT); Jamie C. M. Young; Lara Bjork; Leslie.Grey@faa.gov; Skagerberg, Verne R (DOT)
Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

Thanks Mike-

These would not be DOT standard roads, they would be logging roads solely for the purpose of accessing the areas to extract the timber. We do not expect them to be public roads. They will be very minimalistic facilities. If the roads were 500' long or less I agree that they may not require provisions for passing but, there will need to be an area to turn around at the end of the road. This would also likely serve as the landing/loading area for the logging operations



L. Pat Carroll, P.E.
Design Group Chief
pat.carroll@alaska.gov
Phone: (907) 465-4415
Fax: (907) 465-4414

From: Mike.Edelmann@faa.gov [<mailto:Mike.Edelmann@faa.gov>]
Sent: Thursday, January 16, 2014 3:16 PM
To: Carroll, Lawrence P (DOT)

Cc: Amanda Childs; Gendron, Jane D (DOT); Barnett, John C (DOT); iyoung@swca.com; lbjork@swca.com; Leslie.Grey@faa.gov; Skagerberg, Verne R (DOT)

Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

Pat, John, et al:

Spoke with my team to confirm a few things, but want to get this out there in front of everyone this afternoon.

Terrain disturbance is our highest level, most permanent level of impact, that encompasses all the effects that John mentions below. If I am reading my notes correctly, the definitions are on pages 32-33 of the EIS. By including any of the easement roads as a terrain disturbance, we are capturing all the items mentioned in John's message below.

If I understand correctly, the length of the temporary roads required for easement clearing is only about 500'. I am not sure we can justify passing areas and turnarounds on a road of that length. Will caveat that statement by saying that I have not verified that distance, nor am I familiar with standard DOT road design standards to know whether one would be required.

Hope that helps

Mike E.

907-271-5026

From: "Carroll, Lawrence P (DOT)" <pat.carroll@alaska.gov>

AAL-601, Airports Division

To: "Barnett, John C (DOT)" <john.barnett@alaska.gov>, Mike Edelmann/AAL/FAA@FAA, "Skagerberg, Verne R (DOT)" <verne.skagerberg@alaska.gov>, "Gendron, Jane D (DOT)" <jane.gendron@alaska.gov>,

Cc: Leslie Grey/AAL/FAA@FAA, Amanda Childs <achilds@swca.com>, "iyoung@swca.com" <iyoung@swca.com>, "lbjork@swca.com" <lbjork@swca.com>

Date: 01/16/2014 02:17 PM

Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

My Quick comments-

I will defer to John Barnett's opinion on the applicability of the silviculture exemption.

The corridor width of 40' sounds OK. These will not need to be wide roads (single lane of adequate for log trucks and logging equipment) for their entire length but there will need to be regularly spaced pull outs to allow trucks to pass and possibly turnarounds. I am assuming that your 40 corridor is referring to the full footprint - slope limit to slope limit.

It is not reasonable to assume that these roads will not involve cut and fill. Most of our existing soils cannot support traffic, at an absolute minimum some rock fill will be needed, the terrain will dictate whether cuts will be required but I would contend that too is likely.

I question the decision to close the roads after the timber is removed. Trees will grow back and will require removal in the future. It may be many years but we will most certainly have to clear trees again in this area to maintain the unobstructed flight paths.

Thanks



L. Pat Carroll, P.E.
Design Group Chief
pat.carroll@alaska.gov
Phone: (907) 465-4415
Fax: (907) 465-4414

From: Barnett, John C (DOT)
Sent: Thursday, January 16, 2014 1:50 PM
To: Mike.Edelmann@faa.gov; Skagerberg, Verne R (DOT); Carroll, Lawrence P (DOT); Gendron, Jane D (DOT)
Cc: Leslie.Grey@faa.gov; Amanda Childs; jyoung@swca.com; lbjork@swca.com
Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

Thanks Mike,

A presently unknown quantity of rock fill will probably be required to construct access roads for logging purposes. Unless there are some big marsh buggy's in the area it will take a bit of fill to access the various avigation easement tracts.

Terrain "disturbance" is probably somewhat of an understatement – my sense, based on the wetland delineation work done in the areas surrounding the alternatives, suggest that the vegetation removal and necessary access roads will cause permanent wetland impacts, and possibly some temporary impacts, that should all be included in the SEIS as well as in the Individual Permit Application to USACE.

John C. Barnett
Acting Regional Environmental Manager
DOT&PF, Southeast Region
6860 Glacier Hwy.
P.O. Box 112506
Juneau, Alaska USA 99811-2506
Phone (907) 465-4504

From: Mike.Edelmann@faa.gov [<mailto:Mike.Edelmann@faa.gov>]
Sent: Thursday, January 16, 2014 1:32 PM
To: Barnett, John C (DOT); Skagerberg, Verne R (DOT); Carroll, Lawrence P (DOT); Gendron, Jane D (DOT)
Cc: Leslie.Grey@faa.gov; Amanda Childs; jyoung@swca.com; lbjork@swca.com
Subject: re: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

John, et al:

Thank you for your quick response.

Based on your concern re: the Silvicultural Exemption's applicability and potential for wetland fill, we will analyze those roads as "Terrain Disturbance".

We understand your preference to consult with Verne and Pat prior to providing comments. Unfortunately, to keep on schedule, we cannot delay these revisions for a week. We will revise the avigation easement access roads' "Action" to "Terrain Disturbance", and will proceed assuming that we have otherwise accurately portrayed the "Vegetation Removal" and "Tree Felling" for the avigation easements.

Thanks!
Mike E.
907-271-5026

----- Forwarded by Mike Edelman/AAL/FAA on 01/16/2014 01:17 PM -----

From: Barnett, John C (DOT) [<mailto:john.barnett@alaska.gov>]
Sent: Thursday, January 16, 2014 1:07 PM
To: Jamie C. M. Young; Carroll, Lawrence P (DOT)
Cc: Skagerberg, Verne R (DOT); Gendron, Jane D (DOT); Leslie.Grey@faa.gov; Amanda Childs; Lara Bjork
Subject: RE: Angoon Airport EIS: DOT concurrence of updated Actions for analysis

Verne and Pat are out of town right now and I would prefer to have a discussion with them prior to us providing comments back to you.

We certainly have some concerns over using a Silvicultural Exemption for these logging roads, as well as any assumptions regarding the whether or not any fill might be required in forested wetlands for logging purposes. We require additional time to evaluate these concerns.

I would like to propose we provide comments to you by close of business next Friday, January 24. Would that be acceptable?

~~~~~  
John C. Barnett  
Design Group Environmental Lead  
Engineering Assistant III  
CISEC, AK-CESCL Master Instructor  
DOT&PF, Southeast Region  
6860 Glacier Hwy.  
P.O. Box 112506  
Juneau, Alaska USA 99811-2506  
Phone (907) 465-4504

**From:** Jamie C. M. Young [<mailto:jyoung@swca.com>]  
**Sent:** Thursday, January 16, 2014 11:25 AM  
**To:** Carroll, Lawrence P (DOT); Barnett, John C (DOT)  
**Cc:** Skagerberg, Verne R (DOT); Gendron, Jane D (DOT); [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov); Amanda Childs; Lara Bjork  
**Subject:** Angoon Airport EIS: DOT concurrence of updated Actions for analysis

Hello John and Pat,  
We want to get your confirmation that we've accurately portrayed the "Actions" associated with the proposed Angoon alternatives before proceeding to update our maps and analysis in the EIS. As a reminder, we've changed most of the avigation easements to "Vegetation Removal" based on our discussion on 12/19/13. Also, I've listed below the assumptions we'll be making in the EIS relative to the temporary logging roads. Can you please provide your concurrence of the attached "Actions" and our temp logging road assumptions **by close of business tomorrow (1/17)**, so that we can move forward with our revisions?

Thanks for your time! Sincerely, Jamie

The temporary logging roads to the Airport 3a avigation easements on the Angoon Peninsula are approximately a tenth of

a mile long over an elevation gain of approximately 50' (ie. relatively flat terrain). These are the assumptions that we'll use in our EIS analysis of those roads' potential effects:

- The EIS "Action" assigned to these roads will be "Vegetation Removal", ie. in resource sections, these roads' acreages should be combined with "Vegetation Removal" already in the analysis. In most cases, it shouldn't be necessary to add additional descriptions of effects.
- The entire road corridor width will be 40'. The USFS (Quentin Smith, Tongass NF Roads Program Manager) suggested using 20', but because we do not yet know the exact location of these roads a wider width will be analyzed.
- Because the purpose of these roads is to remove timber from the avigation easements and the roads do not involve cut and fill, these roads would be covered under the Silvicultural Exemption to the Clean Water Act.
- Closure of these roads would occur, once the timber harvest in the avigation easements has been completed to the satisfaction of the DOT&PF.

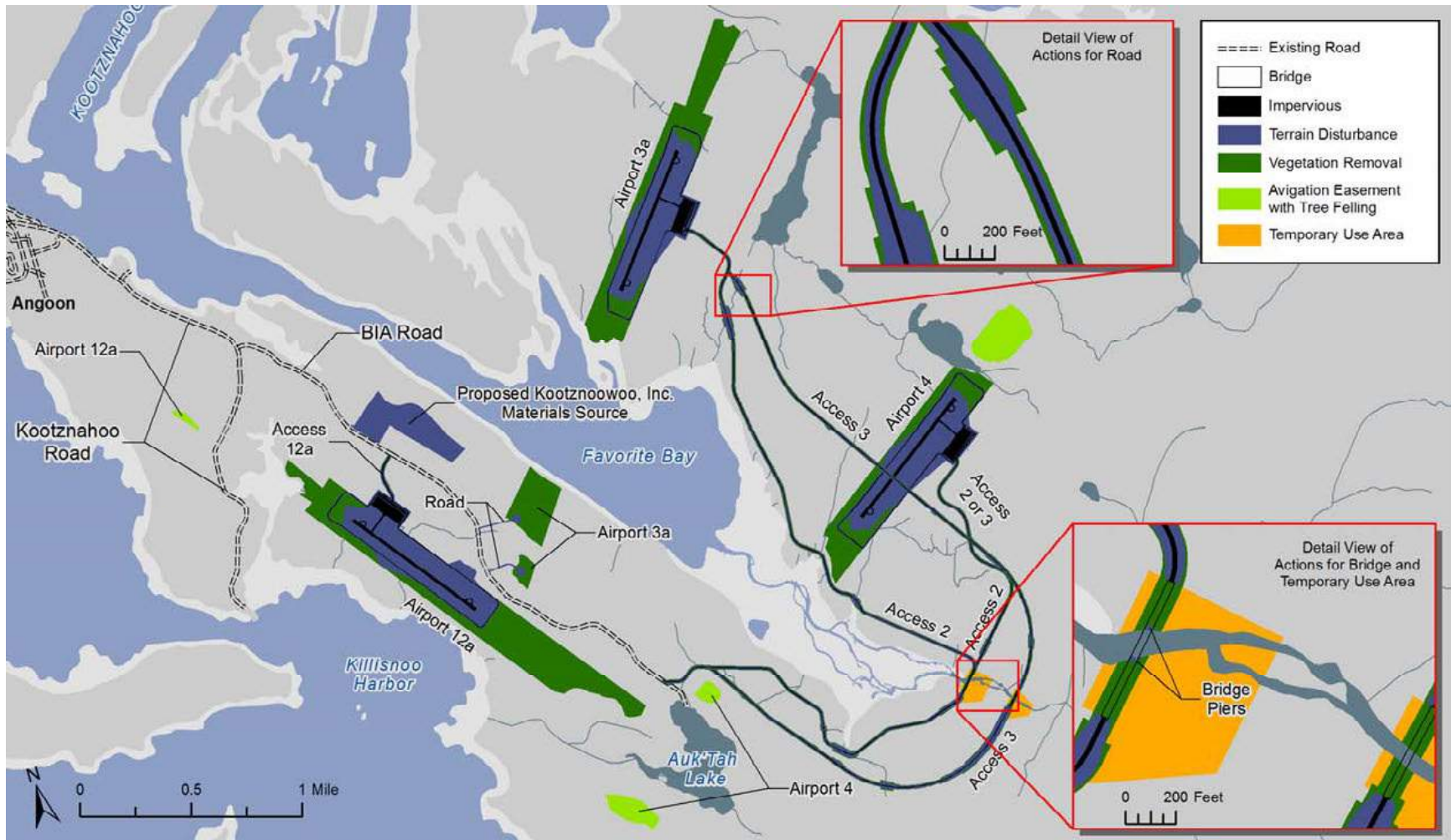
**Jamie C. M. Young**  
Natural Resources Specialist

**SWCA Environmental Consultants**  
C 907.821.0404 | F 907.279.7922



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## Lara Bjork

---

**From:** George Weekley  
**Sent:** Monday, January 27, 2014 3:24 PM  
**To:** Amanda Childs; Sue Wilmot  
**Cc:** Lara Bjork  
**Subject:** FW: Outfitter Guide Use for 2010-2012 for Kootznoowoo Wz  
**Attachments:** 2010KootzOGuse.pdf; 2011KootzOGuse.pdf; 2012KootzOGuse.pdf

This should be what you need to update use numbers. Let me know if you have any questions on the data.

**Geo Weekley**  
**Alaska Business Development Lead**

**SWCA Environmental Consultants**  
1205 East International Airport Road, Suite 103, Anchorage, AK 99518  
C 801.819.3560



---

**From:** Hood, Kevin E -FS [<mailto:kehood@fs.fed.us>]  
**Sent:** Monday, January 27, 2014 4:20 PM  
**To:** George Weekley  
**Subject:** Outfitter Guide Use for 2010-2012 for Kootznoowoo Wz

Hey George,

Attached are reports tallying outfitter-guide use for Kootznoowoo Wz for 2010-2012. This would be the use that occurs as part of a guided tour, whether it is brown bear hunting, fly fishing, sea kayaking, hiking or what have you.

For each year, the report has these column headers:

Wilderness = Kootznoowoo

Outfitter = Guiding Company Name. The numbers are tallied by company, so each company will only be listed once with all use totaled up under it.

Fee Activity = What kind of use they were charged for on the Forest/in the Wilderness. Note that some categories are broad. For instance Remote Setting Nature Tour can be a hike, a photo safari or people accompanying a hunt without hunting.

Total Clients= the number of clients the company took on the Forest/in the Wilderness for the year.

Location Clients= User Days (or Service Days used) on the Forest/in the Wilderness for the year. This number differs from Total Clients in that if 3 clients were taken to 5 locations, you'd have 3 Total Clients and 15 Location Clients.

Groups = the number of groups the Company took folks ashore for the year.

I notice that a few companies have Pack Creek listed, so there might a little bit of overlap between these numbers and Pack Creeks. You might be able to compensate for that by subtracting the total guided numbers for each year from Pack Creek from the Total Client number to get the total of guided people on Kootz.

These reports are the best data we have, but they likely have a few reporting errors incorporated into them as well. My guess is that they are only off by a few percentage points though. My main point here is that these numbers aren't

100% exact, but they give us a very good idea as to what is occurring. You should feel free to report them without all of this qualifying – I am mostly just letting you know what I know. I hope this all makes sense!

Cheers,

Kevin

Kevin E Hood  
Wilderness Manager  
Admiralty Island National Monument – Juneau Ranger District  
8510 Mendenhall Loop Road  
Juneau, AK 99801  
(907)789-6220  
[kehood@fs.fed.us](mailto:kehood@fs.fed.us)



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## Wilderness Use by Outfitter and Activity Report

**Region:** 10                      **Date Range:** 01-01-2010 and 12-31-2010  
**Forest:** 05                      **Wilderness:** KOOTZNOOWOO  
**District:** ADMIRALTY NATIONAL MONUM

| Wilderness  | Outfitter                                    | Fee Activity                                                  | Total Clients | Loc Clients | Groups |
|-------------|----------------------------------------------|---------------------------------------------------------------|---------------|-------------|--------|
| KOOTZNOOWOO | ABOVE AND BEYOND ALASKA, LLC                 | CAMPING                                                       | 3             | 15          | 5      |
|             | ALASKA BEAR GUIDES, LLC                      | HUNTING - BROWN BEAR (DAY USE)                                | 7             | 44          | 20     |
|             | ALASKA COASTAL GUIDING                       | HUNTING - BROWN BEAR (DAY USE)                                | 3             | 17          | 13     |
|             | ALASKA COASTAL HUNTING                       | HUNTING - BROWN BEAR (DAY USE)                                | 3             | 5           | 5      |
|             |                                              | REMOTE-SETTING NATURE TOURS                                   | 1             | 2           | 2      |
|             | ALASKA DISCOVERY, INC.                       | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 34            | 68          | 12     |
|             | ALASKA FLY N FISH CHARTERS                   | FRESHWATER FISHING                                            | 6             | 6           | 2      |
|             |                                              | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 243           | 243         | 5      |
|             | ALASKA PASSAGES, INC.                        | REMOTE-SETTING NATURE TOURS                                   | 17            | 17          | 5      |
|             | ALASKA SAILING CHARTERS, LLC                 | REMOTE-SETTING NATURE TOURS                                   | 14            | 18          | 5      |
|             | ALASKA YACHT CHARTERS                        | FRESHWATER FISHING                                            | 6             | 2           | 1      |
|             |                                              | REMOTE-SETTING NATURE TOURS                                   | 18            | 16          | 3      |
|             | ALL ABOARD YACHT CHARTERS                    | REMOTE-SETTING NATURE TOURS                                   | 40            | 40          | 4      |
|             | AMERICAN SAFARI CRUISES LLC                  | REMOTE-SETTING NATURE TOURS                                   | 5             | 5           | 1      |
|             | ANCHOR EXCURSIONS, INC.                      | REMOTE-SETTING NATURE TOURS                                   | 21            | 21          | 3      |
|             | BARANOF WILDERNESS LODGE                     | FRESHWATER FISHING                                            | 83            | 126         | 36     |
|             | BEAR CREEK OUTFITTERS                        | FRESHWATER FISHING                                            | 39            | 10          | 2      |
|             | BLUEWATER ADVENTURES LTD.                    | REMOTE-SETTING NATURE TOURS                                   | 11            | 19          | 2      |
|             | DOLPHIN CHARTERS                             | REMOTE-SETTING NATURE TOURS                                   | 23            | 46          | 11     |
|             | GLACIER GUIDES, INC.                         | HUNTING - BROWN BEAR (DAY USE)                                | 14            | 71          | 28     |
|             |                                              | HUNTING - DEER (DAY USE)                                      | 1             | 3           | 3      |
|             | ISLAND VOYAGES, INC.                         | REMOTE-SETTING NATURE TOURS                                   | 31            | 37          | 6      |
|             | JUNEAU YOUTH SERVICES                        | CAMPING                                                       | 22            | 210         | 20     |
|             | KAYAK TRANSPORT COMPANY, LLC                 | REMOTE-SETTING NATURE TOURS                                   | 9             | 12          | 3      |
|             | M/V SIKUMI, LLC                              | REMOTE-SETTING NATURE TOURS                                   | 80            | 79          | 10     |
|             | MAPLE LEAF ADVENTURES                        | REMOTE-SETTING NATURE TOURS                                   | 5             | 5           | 1      |
|             | NINE LIVES CHARTERS                          | HUNTING - BROWN BEAR (DAY USE)                                | 2             | 16          | 8      |
|             | NORTH ALASKA EXPEDITIONS                     | HUNTING - BROWN BEAR (CAMPING)                                | 6             | 51          | 17     |
|             | NORTHWEST NAVIGATION                         | REMOTE-SETTING NATURE TOURS                                   | 5             | 13          | 4      |
|             | PACIFIC CATALYST II, INC.                    | REMOTE-SETTING NATURE TOURS                                   | 80            | 99          | 13     |
|             | SEABEAR ADVENTURES                           | HUNTING - BROWN BEAR (DAY USE)                                | 4             | 16          | 15     |
|             | SOUTHEAST CHARTERS, INC.                     | REMOTE-SETTING NATURE TOURS                                   | 28            | 28          | 7      |
|             | SOUTHEAST ALASKA GUIDANCE ASSOCIATION (SAGA) | CAMPING                                                       | 8             | 40          | 5      |
|             | SOUTHEAST ALASKA GUIDING SERVICE             | HUNTING - BROWN BEAR (DAY USE)                                | 6             | 37          | 37     |
|             | STONE BEACH CHARTERS                         | FRESHWATER FISHING                                            | 20            | 25          | 5      |
|             |                                              | REMOTE-SETTING NATURE TOURS                                   | 2             | 2           | 1      |

## Wilderness Use by Outfitter and Activity Report

Region: 10                      Date Range: 01-01-2010 and 12-31-2010  
 Forest: 05                      Wilderness: KOOTZNOOWOO  
 District: ADMIRALTY NATIONAL MONUM

| Wilderness  | Outfitter                | Fee Activity                   | Total Clients | Loc Clients  | Groups       |            |
|-------------|--------------------------|--------------------------------|---------------|--------------|--------------|------------|
| KOOTZNOOWOO | THE BOAT COMPANY         | FRESHWATER FISHING             | 116           | 102          | 18           |            |
|             |                          | REMOTE-SETTING NATURE TOURS    | 259           | 235          | 37           |            |
|             | TONGASS KAYAK ADVENTURES | CAMPING                        | 14            | 14           | 3            |            |
|             | URSA MAJOR CHARTERS, INC | REMOTE-SETTING NATURE TOURS    | 17            | 14           | 3            |            |
|             | WHALERS COVE LODGE       | FRESHWATER FISHING             | 41            | 44           | 14           |            |
|             |                          | REMOTE-SETTING NATURE TOURS    | 16            | 23           | 7            |            |
|             | WOLFPK GUIDE-OUTFITTER   | HUNTING - BROWN BEAR (DAY USE) | 5             | 34           | 34           |            |
|             |                          | HUNTING - DEER (DAY USE)       | 1             | 1            | 1            |            |
|             | <b>Wilderness Total:</b> |                                |               | <b>1,369</b> | <b>1,931</b> | <b>437</b> |
|             | <b>Grand Total:</b>      |                                |               | <b>1,369</b> | <b>1,931</b> | <b>437</b> |

## Wilderness Use by Outfitter and Activity Report

**Region: 10**                      **Date Range: 01-01-2011 and 12-31-2011**  
**Forest: 05**                        **Wilderness: KOOTZNOOWOO**  
**District: ADMIRALTY NATIONAL MONUM**

| Wilderness  | Outfitter                                    | Fee Activity                                                  | Total Clients | Loc Clients | Groups |
|-------------|----------------------------------------------|---------------------------------------------------------------|---------------|-------------|--------|
| KOOTZNOOWOO | ALASKA BEAR GUIDES, LLC                      | HUNTING - BROWN BEAR (DAY USE)                                | 7             | 50          | 18     |
|             | ALASKA COASTAL GUIDING                       | HUNTING - BROWN BEAR (DAY USE)                                | 3             | 12          | 10     |
|             | ALASKA COASTAL HUNTING                       | HUNTING - BROWN BEAR (DAY USE)                                | 3             | 21          | 19     |
|             |                                              | REMOTE-SETTING NATURE TOURS                                   | 2             | 18          | 18     |
|             | ALASKA DISCOVERY, INC.                       | REMOTE-SETTING NATURE TOURS                                   | 64            | 128         | 16     |
|             | ALASKA FLY N FISH CHARTERS                   | FRESHWATER FISHING                                            | 15            | 19          | 8      |
|             |                                              | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 212           | 212         | 60     |
|             | ALASKA PASSAGES, INC.                        | REMOTE-SETTING NATURE TOURS                                   | 25            | 29          | 6      |
|             | ALASKA SAILING CHARTERS, LLC                 | REMOTE-SETTING NATURE TOURS                                   | 18            | 18          | 4      |
|             | ALASKA YACHT CHARTERS                        | REMOTE-SETTING NATURE TOURS                                   | 44            | 44          | 8      |
|             | ALL ABOARD YACHT CHARTERS                    | REMOTE-SETTING NATURE TOURS                                   | 54            | 54          | 6      |
|             | ANCHOR EXCURSIONS, INC.                      | REMOTE-SETTING NATURE TOURS                                   | 42            | 52          | 5      |
|             | BARANOF WILDERNESS LODGE                     | FRESHWATER FISHING                                            | 99            | 97          | 31     |
|             | BEAR CREEK OUTFITTERS                        | FRESHWATER FISHING                                            | 18            | 13          | 2      |
|             | BEYOND BOUNDARIES EXPEDITIONS                | CAMPING                                                       | 6             | 4           | 1      |
|             | BLUEWATER ADVENTURES LTD.                    | REMOTE-SETTING NATURE TOURS                                   | 10            | 10          | 1      |
|             | CAMP MANITO-WISH YMCA                        | REMOTE-SETTING NATURE TOURS                                   | 10            | 55          | 11     |
|             | CEO EXPEDITIONS, INC.                        | REMOTE-SETTING NATURE TOURS                                   | 37            | 37          | 5      |
|             | DOLPHIN CHARTERS                             | REMOTE-SETTING NATURE TOURS                                   | 40            | 92          | 14     |
|             | GLACIER GUIDES, INC.                         | FRESHWATER FISHING                                            | 6             | 6           | 2      |
|             |                                              | HUNTING - BROWN BEAR (DAY USE)                                | 17            | 73          | 24     |
|             | ISLAND VOYAGES, INC.                         | REMOTE-SETTING NATURE TOURS                                   | 4             | 2           | 1      |
|             | KAYAK TRANSPORT COMPANY, LLC                 | REMOTE-SETTING NATURE TOURS                                   | 10            | 10          | 2      |
|             | M/V SIKUMI, LLC                              | REMOTE-SETTING NATURE TOURS                                   | 63            | 62          | 7      |
|             | MAPLE LEAF ADVENTURES                        | REMOTE-SETTING NATURE TOURS                                   | 10            | 10          | 1      |
|             | NORTH ALASKA EXPEDITIONS                     | HUNTING - BROWN BEAR (CAMPING)                                | 5             | 40          | 16     |
|             | NORTHWEST NAVIGATION                         | REMOTE-SETTING NATURE TOURS                                   | 13            | 39          | 8      |
|             | PACIFIC CATALYST II, INC.                    | REMOTE-SETTING NATURE TOURS                                   | 81            | 114         | 16     |
|             | SEABEAR ADVENTURES                           | HUNTING - BROWN BEAR (DAY USE)                                | 1             | 2           | 2      |
|             | SOUTHEAST CHARTERS, INC.                     | REMOTE-SETTING NATURE TOURS                                   | 19            | 19          | 4      |
|             | SOUTHEAST ALASKA GUIDANCE ASSOCIATION (SAGA) | CAMPING                                                       | 6             | 6           | 1      |
|             | SOUTHEAST ALASKA GUIDING SERVICE             | HUNTING - BROWN BEAR (DAY USE)                                | 6             | 23          | 18     |
|             | SOUTHEAST ALASKAN ADVENTURES                 | HUNTING - DEER (DAY USE)                                      | 3             | 8           | 6      |
|             | STONE BEACH CHARTERS                         | FRESHWATER FISHING                                            | 8             | 15          | 4      |
|             | THE BOAT COMPANY                             | FRESHWATER FISHING                                            | 32            | 31          | 4      |
|             |                                              | REMOTE-SETTING NATURE TOURS                                   | 332           | 333         | 49     |

## Wilderness Use by Outfitter and Activity Report

Region: 10                      Date Range: 01-01-2011 and 12-31-2011  
 Forest: 05                      Wilderness: KOOTZNOOWOO  
 District: ADMIRALTY NATIONAL MONUM

| Wilderness          | Outfitter                | Fee Activity                   | Total Clients | Loc Clients  | Groups       |
|---------------------|--------------------------|--------------------------------|---------------|--------------|--------------|
| KOOTZNOOWOO         | URSA MAJOR CHARTERS, INC | FRESHWATER FISHING             | 4             | 4            | 1            |
|                     |                          | REMOTE-SETTING NATURE TOURS    | 20            | 20           | 5            |
|                     | WHALERS COVE LODGE       | FRESHWATER FISHING             | 123           | 155          | 40           |
|                     |                          | REMOTE-SETTING NATURE TOURS    | 5             | 10           | 4            |
|                     | WOLFPK GUIDE-OUTFITTER   | HUNTING - BROWN BEAR (DAY USE) | 4             | 25           | 25           |
|                     |                          | HUNTING - DEER (DAY USE)       | 1             | 2            | 2            |
|                     | <b>Wilderness Total:</b> |                                |               | <b>1,482</b> | <b>1,974</b> |
| <b>Grand Total:</b> |                          |                                | <b>1,482</b>  | <b>1,974</b> | <b>485</b>   |



## Wilderness Use by Outfitter and Activity Report

**Region:** 10                      **Date Range:** 01-01-2012 and 12-31-2012  
**Forest:** 05                      **Wilderness:** KOOTZNOOWOO  
**District:** ADMIRALTY NATIONAL MONUM

| Wilderness  | Outfitter                                                        | Fee Activity                                                  | Total Clients | Loc Clients | Groups |
|-------------|------------------------------------------------------------------|---------------------------------------------------------------|---------------|-------------|--------|
| KOOTZNOOWOO | ABOVE AND BEYOND ALASKA, LLC                                     | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 219           | 212         | 48     |
|             | ALASKA BEAR GUIDES, LLC                                          | HUNTING - BROWN BEAR (DAY USE)                                | 7             | 58          | 17     |
|             | ALASKA CHARTER SERVICE                                           | FRESHWATER FISHING                                            | 11            | 11          | 2      |
|             | ALASKA COASTAL GUIDING                                           | HUNTING - BROWN BEAR (DAY USE)                                | 5             | 15          | 10     |
|             | ALASKA COASTAL HUNTING                                           | HUNTING - BROWN BEAR (DAY USE)                                | 3             | 21          | 21     |
|             |                                                                  | REMOTE-SETTING NATURE TOURS                                   | 1             | 8           | 8      |
|             | ALASKA FLY N FISH CHARTERS                                       | FRESHWATER FISHING                                            | 35            | 35          | 15     |
|             |                                                                  | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 72            | 69          | 26     |
|             | ALASKA PASSAGES, INC.                                            | REMOTE-SETTING NATURE TOURS                                   | 3             | 3           | 1      |
|             | ALASKA QUEST CHARTERS, INC.                                      | REMOTE-SETTING NATURE TOURS                                   | 5             | 5           | 1      |
|             | ALASKA YACHT CHARTERS                                            | REMOTE-SETTING NATURE TOURS                                   | 42            | 42          | 9      |
|             | ALL ABOARD YACHT CHARTERS                                        | REMOTE-SETTING NATURE TOURS                                   | 94            | 60          | 10     |
|             | ALLEN MARINE TOURS                                               | REMOTE-SETTING NATURE TOURS                                   | 17            | 5           | 1      |
|             | ANCHOR EXCURSIONS, INC.                                          | REMOTE-SETTING NATURE TOURS                                   | 21            | 16          | 2      |
|             | BARANOF WILDERNESS LODGE                                         | FRESHWATER FISHING                                            | 165           | 167         | 47     |
|             | BEYOND BOUNDARIES EXPEDITIONS                                    | CAMPING                                                       | 5             | 2           | 1      |
|             | BLUEWATER ADVENTURES LTD.                                        | REMOTE-SETTING NATURE TOURS                                   | 20            | 40          | 8      |
|             | CAMP MANITO-WISH YMCA                                            | CAMPING                                                       | 22            | 22          | 4      |
|             | CEO EXPEDITIONS, INC.                                            | REMOTE-SETTING NATURE TOURS                                   | 18            | 18          | 2      |
|             | COASTAL ALASKA ADVENTURES                                        | HUNTING - DEER (DAY USE)                                      | 9             | 41          | 20     |
|             | COASTAL ALASKA ADVENTURES, CORPORATION DBA CUSTOM ALASKA CRUISES | REMOTE-SETTING NATURE TOURS                                   | 67            | 63          | 10     |
|             | DOLPHIN CHARTERS                                                 | REMOTE-SETTING NATURE TOURS                                   | 40            | 141         | 23     |
|             | GLACIER GUIDES, INC.                                             | HUNTING - BLACK BEAR (DAY USE)                                | 5             | 4           | 1      |
|             |                                                                  | HUNTING - BROWN BEAR (DAY USE)                                | 23            | 119         | 94     |
|             | ISLAND VOYAGES, INC.                                             | REMOTE-SETTING NATURE TOURS                                   | 51            | 57          | 8      |
|             | KOOTZNOOWOO, INC.                                                | PACK CREEK REMOTE-SETTING WILDLIFE VIEWING AT DEVELOPED SITES | 68            | 71          | 23     |
|             | MAPLE LEAF ADVENTURES                                            | REMOTE-SETTING NATURE TOURS                                   | 83            | 31          | 4      |
|             | NORTHWEST NAVIGATION                                             | REMOTE-SETTING NATURE TOURS                                   | 73            | 32          | 7      |
|             | PACIFIC CATALYST II, INC.                                        | REMOTE-SETTING NATURE TOURS                                   | 94            | 166         | 21     |
|             | SEA WOLF ADVENTURES, INC                                         | REMOTE-SETTING NATURE TOURS                                   | 5             | 5           | 1      |
|             | SEABEAR ADVENTURES                                               | HUNTING - BROWN BEAR (DAY USE)                                | 6             | 19          | 17     |
|             | SOUTHEAST CHARTERS, INC.                                         | REMOTE-SETTING NATURE TOURS                                   | 19            | 14          | 5      |
|             | SOUTHEAST ALASKA GUIDING SERVICE                                 | HUNTING - BROWN BEAR (DAY USE)                                | 5             | 30          | 21     |
|             | STONE BEACH CHARTERS                                             | FRESHWATER FISHING                                            | 21            | 21          | 5      |
|             | THE BOAT COMPANY                                                 | FRESHWATER FISHING                                            | 28            | 26          | 4      |

## Wilderness Use by Outfitter and Activity Report

**Region:** 10                      **Date Range:** 01-01-2012 and 12-31-2012  
**Forest:** 05                      **Wilderness:** KOOTZNOOWOO  
**District:** ADMIRALTY NATIONAL MONUM

| Wilderness          | Outfitter                | Fee Activity                   | Total Clients | Loc Clients  | Groups       |
|---------------------|--------------------------|--------------------------------|---------------|--------------|--------------|
| KOOTZNOOWOO         | THE BOAT COMPANY         | REMOTE-SETTING NATURE TOURS    | 327           | 323          | 56           |
|                     | TONGASS KAYAK ADVENTURES | CAMPING                        | 2             | 6            | 3            |
|                     |                          | REMOTE-SETTING NATURE TOURS    | 2             | 2            | 1            |
|                     | URSA MAJOR CHARTERS, INC | REMOTE-SETTING NATURE TOURS    | 15            | 15           | 5            |
|                     | WHALERS COVE LODGE       | FRESHWATER FISHING             | 154           | 143          | 39           |
|                     | WOLFPK GUIDE-OUTFITTER   | HUNTING - BROWN BEAR (DAY USE) | 5             | 42           | 42           |
|                     |                          | HUNTING - DEER (DAY USE)       | 6             | 24           | 12           |
|                     | <b>Wilderness Total:</b> |                                |               | <b>1,873</b> | <b>2,204</b> |
| <b>Grand Total:</b> |                          |                                | <b>1,873</b>  | <b>2,204</b> | <b>655</b>   |

## Lara Bjork

---

**From:** George Weekley  
**Sent:** Monday, January 27, 2014 4:45 PM  
**To:** Amanda Childs; Sue Wilmot  
**Cc:** Lara Bjork  
**Subject:** FW: Updated cabin use with # in party  
**Attachments:** Admiralty Cabin Use 2010 - 2013 Update.xlsx

More visitor use information

**Geo Weekley**  
**Alaska Business Development Lead**

**SWCA Environmental Consultants**  
1205 East International Airport Road, Suite 103, Anchorage, AK 99518  
C 801.819.3560



---

**From:** Hood, Kevin E -FS [<mailto:kehood@fs.fed.us>]  
**Sent:** Monday, January 27, 2014 5:43 PM  
**To:** George Weekley  
**Subject:** FW: Updated cabin use with # in party

Hey George,

Attached you will find the Admiralty Cabin use numbers for 2010-2013. One column has the number of nights the cabins were reserved for the year. The second column has the Total Visitors tallied for the year. The third column has the average group size.

See Mike's explanation below regarding instances where the number of nights reserved exceeds the number of visitors. Thus the visitor numbers might best be viewed as minimums. The actual visitor numbers may be higher.

Cheers,

Kevin

Kevin E Hood  
Wilderness Manager  
Admiralty Island National Monument – Juneau Ranger District  
8510 Mendenhall Loop Road  
Juneau, AK 99801  
(907)789-6220  
[kehood@fs.fed.us](mailto:kehood@fs.fed.us)



---

**From:** Dilger, Mike -FS  
**Sent:** Monday, January 27, 2014 3:37 PM  
**To:** Hood, Kevin E -FS  
**Subject:** RE: Updated cabin use with # in party

The attachment includes average group size.

It could be the # in party blank is left blank by some people when they make their reservation, resulting in the number of nights reserved greater than the # in party.

Mike Dilger, Recreation Resources Planner  
USDA Forest Service - Juneau Ranger District  
8510 Mendenhall Loop Road  
Juneau, AK 99801  
voice: (907) 789-6228  
fax: (907) 586-8808  
email: [mdilger@fs.fed.us](mailto:mdilger@fs.fed.us)

---

**From:** Hood, Kevin E -FS  
**Sent:** Monday, January 27, 2014 3:18 PM  
**To:** Dilger, Mike -FS  
**Subject:** RE: Updated cabin use with # in party

Thanks Mike – that looks to be the info we seek. A couple of questions:

- it seems that often the number of nights reserved is quite close to the number of visitors – does only 1 person reserve and stay at a cabin often?
- How can the number of nights reserved exceed the number of visitors? Is that when someone reserves a cabin and then doesn't get out to it?

Thanks for your work on this – I appreciate it.

Cheers,

Kevin

---

**From:** Dilger, Mike -FS  
**Sent:** Monday, January 27, 2014 3:15 PM  
**To:** Hood, Kevin E -FS  
**Subject:** Updated cabin use with # in party

I already had the numbers I needed so it only took me 6 minutes to add the new column. See if it's what you were looking for.

Mike Dilger, Recreation Resources Planner  
USDA Forest Service - Juneau Ranger District  
8510 Mendenhall Loop Road  
Juneau, AK 99801  
voice: (907) 789-6228  
fax: (907) 586-8808  
email: [mdilger@fs.fed.us](mailto:mdilger@fs.fed.us)

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| Row Labels                 | 2010       |            | 2011       |            | 2012       |            | 2013       |            |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                            | Nights     | Total      | Nights     | Total      | Nights     | Total      | Nights     | Total      |
|                            | Reserved   | Visitors   | Reserved   | Visitors   | Reserved   | Visitors   | Reserved   | Visitors   |
| ADMIRALTY COVE CABIN       | 129        | 209        | 100        | 141        | 130        | 210        | 107        | 182        |
| BIG SHAHEEN CABIN          | 37         | 55         | 51         | 57         | 46         | 58         | 17         | 24         |
| CHURCH BIGHT CABIN         | 40         | 40         | 70         | 50         | 31         | 42         | 10         | 5          |
| FLORENCE LAKE (EAST) CABIN | 24         | 17         | 34         | 18         | 19         | 14         | 20         | 24         |
| HASSELBORG CREEK CABIN     | 4          | 6          | 18         | 14         | 2          | 4          | 1          | 2          |
| JIMS LAKE CABIN            | 19         | 14         | 31         | 25         | 14         | 7          | 9          | 4          |
| KATHLEEN LAKE CABIN        | 37         | 27         | 33         | 21         | 34         | 20         | 40         | 21         |
| LAKE ALEXANDER CABIN       | 10         | 9          | 19         | 27         | 12         | 14         | 19         | 13         |
| LITTLE SHAHEEN CABIN       | 14         | 17         | 9          | 16         | 42         | 40         | 35         | 26         |
| PYBUS BAY CABIN            | 31         | 17         | 15         | 15         | 27         | 23         | 30         | 14         |
| SPORTSMEN CABIN            | 28         | 35         | 0          | 0          | 10         | 10         | 16         | 14         |
| YOUNG LAKE (NORTH) CABIN   | 16         | 21         | 44         | 41         | 36         | 30         | 31         | 17         |
| YOUNG LAKE (SOUTH) CABIN   | 50         | 61         | 32         | 51         | 27         | 29         | 18         | 14         |
| <b>Annual Totals</b>       | <b>439</b> | <b>528</b> | <b>456</b> | <b>476</b> | <b>430</b> | <b>501</b> | <b>353</b> | <b>360</b> |



| Cabin Name                 | 2010            |                |                  | 2011            |                |                  | 2012            |                |                  | 2013            |                |                  |
|----------------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|-----------------|----------------|------------------|
|                            | Nights Reserved | Total Visitors | Avg No. in Party | Nights Reserved | Total Visitors | Avg No. in Party | Nights Reserved | Total Visitors | Avg No. in Party | Nights Reserved | Total Visitors | Avg No. in Party |
| ADMIRALTY COVE CABIN       | 129             | 209            | 2                | 100             | 141            | 3                | 130             | 210            | 2                | 107             | 182            | 2                |
| BIG SHAHEEN CABIN          | 37              | 55             | 3                | 51              | 57             | 5                | 46              | 58             | 4                | 17              | 24             | 3                |
| CHURCH BIGHT CABIN         | 40              | 40             | 3                | 70              | 50             | 4                | 31              | 42             | 3                | 10              | 5              | 5                |
| FLORENCE LAKE (EAST) CABIN | 24              | 17             | 5                | 34              | 18             | 7                | 19              | 14             | 5                | 20              | 24             | 3                |
| HASSELBORG CREEK CABIN     | 4               | 6              | 1                | 18              | 14             | 3                | 2               | 4              | 1                | 1               | 2              | 1                |
| JIMS LAKE CABIN            | 19              | 14             | 4                | 31              | 25             | 4                | 14              | 7              | 5                | 9               | 4              | 5                |
| KATHLEEN LAKE CABIN        | 37              | 27             | 4                | 33              | 21             | 5                | 34              | 20             | 7                | 40              | 21             | 6                |
| LAKE ALEXANDER CABIN       | 10              | 9              | 3                | 19              | 27             | 2                | 12              | 14             | 4                | 19              | 13             | 3                |
| LITTLE SHAHEEN CABIN       | 14              | 17             | 2                | 9               | 16             | 2                | 42              | 40             | 3                | 35              | 26             | 4                |
| PYBUS BAY CABIN            | 31              | 17             | 3                | 15              | 15             | 4                | 27              | 23             | 4                | 30              | 14             | 5                |
| SPORTSMEN CABIN            | 28              | 35             | 3                | 0               | 0              | 0                | 10              | 10             | 5                | 16              | 14             | 3                |
| YOUNG LAKE (NORTH) CABIN   | 16              | 21             | 3                | 44              | 41             | 3                | 36              | 30             | 4                | 31              | 17             | 4                |
| YOUNG LAKE (SOUTH) CABIN   | 50              | 61             | 3                | 32              | 51             | 2                | 27              | 29             | 3                | 18              | 14             | 3                |



**From:** [Jamie C. M. Young](mailto:Jamie.C.M.Young)  
**To:** [mkookeshjr@hotmail.com](mailto:mkookeshjr@hotmail.com)  
**Cc:** [Amanda Childs](mailto:Amanda.Childs); [Lara Bjork](mailto:Lara.Bjork); [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov); [angooncityclerk@hotmail.com](mailto:angooncityclerk@hotmail.com); [Albert Kookesh III \(albertkookesh@hotmail.com\)](mailto:Albert.Kookesh.III@albertkookesh@hotmail.com)  
**Subject:** RE: Angoon Airport – formal plans for 2 platted parks?  
**Date:** Thursday, January 30, 2014 12:40:00 PM  
**Attachments:** [image001.png](#)

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Hello again Matt, and thank you for your time speaking with me Monday (1/27). When we spoke, you mentioned that Albert Kookesh III will be providing us a response stating that during the 14(c)3 process the City selected these areas as parks to protect them for subsistence gathering, which is not limited to, but includes wood gathering and deer hunting. The FAA understands that all areas surrounding Angoon are used for subsistence gathering, not just the two platted park areas. Can the City provide us any further information on how these two platted park areas are currently being used by and managed by the City?

The FAA wants to confirm that the City understands that these platted parks were not considered “Section 4(f) resources” in the EIS, and what that means for the airport project. At your earliest convenience, please review pages 166-167 of the EIS and pages 12-13 of Appendix D, and give me a call to discuss this further.

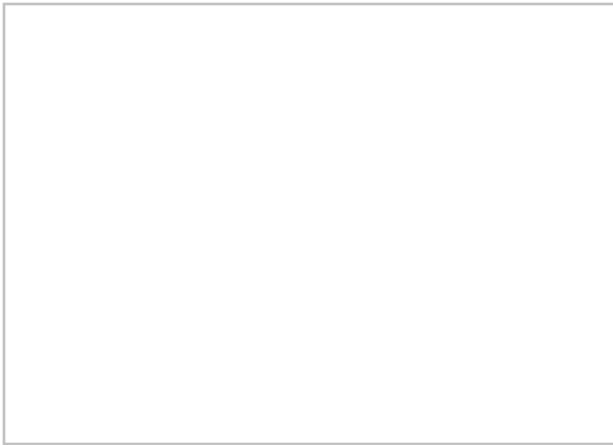
Thank you for your attention to this. Sincerely, Jamie (208.262.9323)

---

**From:** Jamie C. M. Young  
**Sent:** Thursday, January 23, 2014 11:57 AM  
**To:** 'mkookeshjr@hotmail.com'  
**Cc:** Amanda Childs; Lara Bjork; 'Leslie.Grey@faa.gov'; 'angooncityclerk@hotmail.com'; Albert Kookesh III (albertkookesh@hotmail.com)  
**Subject:** RE: Angoon Airport – formal plans for 2 platted parks?

Hello Matt,  
I just left a message for you at the City office, as well.

Based on comments that we received from DOT during the internal agency and tribal review of the EIS, we want to confirm that the City doesn't have any formal written plans for the two platted park properties shown with yellow in the figure below. In the EIS (section 4.4), we haven't analyzed those two platted parks as parks in use or having formal plans for use. Do you have any formal written plans that you could email or mail to us for the future of those areas? In order to include these plans in the EIS, we need them from the City as soon as possible.



Also, can you please email us a list of current City Council members?

Thanks for your help! Sincerely, Jamie (208.262.9323)

---

**From:** Jamie C. M. Young  
**Sent:** Friday, November 15, 2013 4:13 PM  
**To:** Albert Kookesh III ([albertkookesh@hotmail.com](mailto:albertkookesh@hotmail.com)); Lillian Woodbury ([angooncityclerk@hotmail.com](mailto:angooncityclerk@hotmail.com))  
**Cc:** Amanda Childs; Lara Bjork; 'Leslie.Grey@faa.gov'; 'Mike.Edelmann@faa.gov'  
**Subject:** Angoon Airport – 30-day Agency and Tribal Review of Internal Agency

Thank you for your time, Albert!

We welcome the City's comments on all components of the EIS, but these sections may be of particular concern to the City. We assume the City Council members will want to, at least, focus their review on these sections:

- 4.3 Compatible Land Use
- 4.4. U.S. Department of Transportation Act Section 4(f) Evaluation Summary
- 4.8 Cultural Resources
- 4.10 Energy Supply, Natural Resources, and Sustainable Design
- 4.12 Socioeconomics
- 4.13 Subsistence Resources and Uses
- 4.18 Environmental Justice and Children's Health and Safety
- Chapter 9 Consultation and Coordination

Please note that Leslie Grey will be out of the office November 18 through December 22, 2013. During this time, Mike Edelmann will be FAA's acting project manager. Should you have any questions during your review, he can be reached at 907-271-5026 or [Mike.Edelmann@faa.gov](mailto:Mike.Edelmann@faa.gov). Amanda Childs, the consultant project manager, is also available to respond to questions. Amanda can be reached by email at [achilds@swca.com](mailto:achilds@swca.com) or 503-224-0333, extension 6256.

Please submit your comments by November 25, 2013 via [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com), or FAX: 503-224-1851, or if hardcopy to:

Angoon Airport EIS  
1220 SW Morrison, Suite 700

Portland, OR 97205

Thank you again for your help, sincerely, Jamie

**Jamie C. M. Young**

Natural Resources Specialist

**SWCA Environmental Consultants**

C 907.821.0404 | F 907.279.7922



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of Transportation  
**Federal Aviation  
Administration**

AAL-614  
Alaskan Region Airports  
Division  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

**In Reply Refer To:  
AIP-3-02-0018-0705**

February 14, 2014

Ms. Judith Bittner  
State Historic Preservation Officer  
Alaska Office of History and Archaeology  
550 W. 7th Avenue, Suite 1310  
Anchorage, AK 99501-3565

**RE: File No. 3131-1R FAA  
Angoon Airport Environmental Impact Statement**

Dear Ms. Bittner:

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Aviation Administration (FAA), is proposing to construct a new land-based airport for the community of Angoon on Admiralty Island in Southeast Alaska. As you may recall from our initial consultation with your office in May 2008 and follow-on correspondence in April 2012 and July 2013, the FAA is considering three action alternatives and one no action alternative for this land-based airport. Two of the action alternatives (Airport 3a and Airport 4) are located primarily on lands administered by the U.S. Forest Service (USFS). The third action alternative, Airport 12a, is located on lands owned by private individuals, the City of Angoon, and the village corporation (Kootznoowoo, Inc.). The FAA has identified Airport 12a with its associated access road as the preferred alternative. Airport 12a with Access 12a is located in Sections 5, 6, and 8, Township 51 South, Range 68 East, Copper River Meridian (U.S. Geological Survey quadrangles Sitka B-2). Pursuant to 36 Code of Federal Regulations (CFR) 800.4(d)(1), the implementing regulations of Section 106 of the National Historic Preservation Act, the FAA finds that no historic properties would be affected by the proposed project at the FAA's preferred location (Airport 12a with Access 12a).

### **The Project**

The Project consists of a new airport and an associated access road. The Project would require ground disturbance from both temporary construction activities and long-term or permanent structures and terrain alteration. In general terms, the Project would consist of the following activities and components with the potential to affect historic properties:

- A 3,300-foot-long, 75-foot-wide paved runway

**Pages three through six contain confidential information related to heritage resources and have been removed.**

- A 150-foot-wide runway safety area centered on the runway centerline but extending 300 feet beyond each runway end
- A 75-foot-wide, roughly 150-foot-long paved taxiway
- A roughly 70,000-square-foot paved apron area with future hangar, lease lots, and passenger shelter space and vehicle parking space
- A paved airport access road comprising two 10-foot-wide travel lanes with 5-foot shoulders
- Excavation of post holes and installation of an airport perimeter fence
- Vegetation removal related to the airport and road (clearing for construction or for visibility)
- Terrain disturbance related to the airport and road (includes cutting and filling of soil, and ripping and blasting of shallow bedrock to level the ground)
- Terrain disturbance from potential extraction of construction materials such as gravel, soil, and rock from on-island materials sources
- Pavement related to the airport and road (creating smooth surfaces for airplanes and vehicles)
- Tree felling (cleared trees would be left where they fall) related to certain aviation easements (creating visually open areas for flight approach and takeoff)
- Rerouting or culverting of streams (to continue water flow that otherwise would be impeded by newly filled areas)

### **Area of Potential Effects**

As discussed in the April 2012 and July 2013 correspondence with your office, the FAA implemented a phased approach to identifying cultural resources that could be affected by construction and operation of the airport. These phases consist of Phase 1 (preliminary studies of all three airports and their associated access road locations) and Phase 2 (intensive studies of only the FAA's preferred alternative). Following the identification of the preferred alternative, the FAA implemented Phase 2 for Airport 12a with Access 12a. The FAA has identified the direct area of potential effects (APE) for the preferred alternative to include all lands that would be subject to the above activities. Your office provided a letter of no objection to this APE in August 2013. Following our consultation with your office on the APE, the FAA identified additional areas wherein historic properties could be affected indirectly through visual intrusion, noise, and vibration. These APEs are shown on Figure 1 and Figure 2.

### **Historic Properties Identification Efforts**

As part of the literature review conducted during the Phase 1 studies, the FAA's cultural resource consultant team reviewed the Office of History and Archaeology (OHA) citation database, Alaska Heritage Resources Survey (AHRs) records and location editor (geographic information system [GIS] site locator maps), Alaska Resources Library and Information Services data archives, and the Tongass National Forest Heritage Resources Survey data. Additionally, the FAA's cultural resource consultant reviewed the works of de Laguna (1960), Erlandson and Moss (1983), and Moss and Erlandson (1985), all of whom have conducted extensive work in

receive a copy of this finding of effect. Beyond the USFS, only local community members and Kootznoowoo, Inc. have provided information regarding the potential locations of historic properties and their relative importance to the community.

The FAA respectfully requests your concurrence with our findings of No Historic Properties Affected for this project. Please feel free to contact me if you have any questions or comments regarding the enclosed materials or require additional information. I can be reached at the address above or at 907-271-5453.

Sincerely,



Leslie A. Grey  
FAA Project Manager  
Angoon Airport Environmental Impact Statement

Enclosures:

Figures 1 and 2  
Office of History and Archaeology Cover Sheet  
SWCA Environmental Consultants. 2014. *Cultural Resources Technical Report for the Area of Potential Effects for Airport 12a with Access 12a (Preferred Alternative)*. Anchorage, Alaska: SWCA

cc w/ enclosures:

Laurie Mulcahy, DOT&PF, Cultural Resources Manager

cc w/o enclosures:

Verne Skagerberg, DOT&PF Southeast Region, Project Manager  
Jane Gendron, DOT&PF Southeast Region, Regional Environmental Manager  
John Barnett, DOT&PF, Acting Regional Environmental Manager  
Michael Kell, DOT&PF, Historic Archaeologist

The information in this figure is protected by federal law. It is not for public release.

**Figure 1.** Phase 2 Direct APE and AHRS point sites within 1 mile of this APE.

The information in this figure is protected by federal law. It is not for public release.

**Figure 2.** Phase 2 indirect APEs and AHRS recorded sites within these APEs.

**From:** Angoon Airport EIS <maillist@angoonairporteis.com>  
**Sent:** Tuesday, February 18, 2014 12:26 PM  
**To:** Angoon Airport EIS  
**Subject:** Angoon Airport EIS News & Announcements



**Angoon Airport EIS News, Announcements, & Updates (02/18/14)**

FAA is pleased to announce that we have posted the February Project Update to our Angoon Airport project website. We invite you to visit the site at [www.angoonairporteis.com](http://www.angoonairporteis.com). You can view the update by clicking on the link below:

[February Monthly Update](#)

Please visit our web page at [www.angoonairporteis.com](http://www.angoonairporteis.com) and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

Sincerely,  
Leslie

Angoon Airport EIS Project Manager



**Leslie Grey**, Federal Aviation Administration  
Alaskan Region Airports Division  
222 West 7th Avenue, Box #14  
Anchorage, Alaska 99513-7587  
**Phone.** 907-271-5453 **Fax.** 907-271-2851  
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## February 2014 Monthly Update

Hello! It's been a busy couple months for the FAA as we've been addressing comments received from state and federal agencies, the City of Angoon, Kootznoowoo, Inc., and the Angoon Community Association on the preliminary Draft EIS. I want to thank all of these entities for their valuable input and review of the document. At this point the EIS team has prepared a response to almost all of the comments. We still have a few more to resolve and are working toward resolution as quickly as we can. Once these issues are resolved we will finalize the public Draft EIS. As always, we will keep you informed as we know more about the anticipated date for the release of the draft.

We are excited about our continued progress and are looking to making the EIS available for the public review just as soon as we can. In the meantime, please don't hesitate to be in touch with me at 907-271-5453 or [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov) if you have any questions or concerns about the Angoon Airport EIS project.

Best regards,

Leslie Grey

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|                               |              |                      |
|-------------------------------|--------------|----------------------|
| <b>RECORD OF CONVERSATION</b> | <b>Time:</b> | <b>Date: 2/20/14</b> |
|-------------------------------|--------------|----------------------|

**TYPE**       In-person Conversation       Meeting/Conference       Telephone       E-mail Chain (summarized here due to length and to focus on relevant information; copy should accompany this ROC)

Incoming       Outgoing

**Location of In-person Conversation, Meeting, or Conference: NA**

|                                                                                                 |                                                             |                                      |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|
| <b>Name of Persons Contacted or in Contact with You</b><br>Jim Potdevin, Marine Systems Planner | <b>Organization</b><br>Alaska DOT&PF (DOT) Southeast Region | <b>Telephone No.</b><br>907.465.8864 |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------|

**Subject:** DOT evaluation of increasing ferry service to and from Angoon and future plans re: implementation of increased service.

**Summary of Conversation**

DOT has already evaluated increasing ferry service to Angoon. The DOT is currently updating the SEAK Transportation Plan (SATP) (last updated in 2004), which addresses all levels of transportation. In this plan, they are looking at the following alternatives for ferry service to and from Angoon:

Alt 1  Frequency stays the same (2 to Juneau summer and winter, 1 to Sitka summer and winter)

Alt 2  same as alt 1 (for Angoon)

Alt 3  same as alt 1

Alt 4  same as alt 1

Alternative 5 in SATP 2011 scoping report would increase trips to Angoon to 7 during the summer and 4 in the winter.

Alternative 5 they have determined is at a minimum 20 years away and would cost approx. 400 million to implement. The ferry service to and from Angoon will stay the same in the reasonably foreseeable future.

The SATP study and plan looks at all modes of transportation with a goal to “Ensure the continuing opportunity to travel among the communities of Southeast Alaska to meet basic needs and support the local and regional economy by providing the most financially sustainable transportation system that State of Alaska resources permit”. The land-based airport in Angoon was part of the 2004 Plan.

The Alaska Marine Highway System (AMHS) works to provide a consistent schedule that meets the minimum needs of the community. The primary constraints of ferry service are: the level of service that can be supported by traffic demand and what the AMHS can afford to provide. There is not demand in Angoon to support any additional ferry service. The AMHS focus is providing a consistent schedule.

The SATP responded to the request for increased ferry service: The current balance in AMHS provided service between communities is appropriate, given funding limits, revenue generation, and other constraints. In response to public concerns, new ways of providing service are actively being investigated.

From the SATP: Aircraft are more efficient than personal vehicles or ferries for transporting passengers over long distances.

- Air service is more easily scaled to meet short-term changes in demand than is ferry service.
- Access to air service is essential for all communities in order to meet certain health, safety, and quality-of-life criteria.
- In any community where a runway can be constructed, the level of air service that can be provided will be superior to that possible by floatplane alone.

**Action Required:** None

**Name of Person Documenting Conversation:** Amanda Childs, SWCA Environmental Consultants



File Code: 1900

Date: March 4, 2014

Leslie Grey  
Angoon Airport EIS Project Manager  
FAA - Alaskan Region Airports Division  
222 West 7th Ave #14  
Anchorage, AK 99513

Dear Ms. Grey:

Regarding the environmental impact statement (EIS) for the proposed Angoon Airport, I've reviewed your evaluation pursuant to Section 4(f) of the Department of Transportation Act of 1966 (Public Law 89-670).

With this letter, I concur with FAA's four specific findings:

- The Kootznoowoo Wilderness Area is a publicly owned property, for which a primary purpose is recreation.
- The Kootznoowoo Wilderness Area is a significant public recreational resource in the National Forest System.
- The permanent incorporation of land from the Kootznoowoo Wilderness Area into an airport and access road – through easement, special use permit, long-term lease, or other instrument not involving a land exchange – would not constitute a *de minimis* use (in the context of Section 4(f)) of the wilderness area.
- Section 4(f) does not apply to the archaeological site known as the Favorite Bay Garden Site (SIT-00302).

The Kootznoowoo Wilderness Area exemplifies a complex character which includes outstanding opportunities for solitude or primitive and unconfined types of recreation; untrammelled areas and natural conditions where wildlife and waterfowl may thrive, and unrestricted opportunities for subsistence.

I agree with FAA's finding that alternatives Airport 3a and 4 and their access road options would constitute "use" of land from the Kootznoowoo Wilderness Area, as defined in Section 4(f), at 23 CFR 774.17. Permanent incorporation of wilderness area lands into the airport and access road under either Airport 3a or 4 would adversely affect the activities, features, or attributes of the wilderness area that qualify it for Section 4(f) protection.

Additionally, I concur with FAA's finding that alternative Airport 12a and its associated access road, would not use lands within the Kootznoowoo Wilderness Area. Airport 12a would not permanently incorporate lands designated as wilderness into either the airport or access road, nor would it require temporary occupancy of wilderness or result in constructive use of said lands.



Should you require additional information or consultation, please feel free to contact Jennifer Berger of the Admiralty Island National Monument staff. She can be reached at (907) 789-6278 or via email at [jberger@fs.fed.us](mailto:jberger@fs.fed.us) . Thank you for your efforts on this project to date.

Sincerely,

A handwritten signature in cursive script, appearing to read "Forrest Cole".

FORREST COLE  
Forest Supervisor

cc:

Chad VanOrmer

Jennifer Berger

---

**From:** Jamie C. M. Young  
**Sent:** Thursday, March 20, 2014 3:25 PM  
**To:** Randy Vigil (randal.p.vigil@usace.army.mil)  
**Cc:** Stacy N. Benjamin; Stacey Reed; Amanda Childs; Leslie Grey (Leslie.Grey@faa.gov); Lara Bjork  
**Subject:** Angoon Airport EIS: clarification regarding connectivity of waters

Hello Randy,

At your request, I'm writing to clarify that it is our best professional judgment that the waters delineated in the "*Wetland and Waters Delineation, Preliminary JD Report, Angoon Airport EIS*" are hydrologically connected to Killisnoo Harbor, which is a marine water body located on the western shore of Admiralty Island, off of Chatham Strait.

Section 8.0 (pages 10-11) clarifies that the "Wetland conditions extend off-site to the south of the study area and are located immediately adjacent to Killisnoo Harbor (a tidally influenced traditional navigable water of the U.S.). Based on aerial photography, an upland ridge may be present along the shoreline, separating the estuarine community from the palustrine wetlands. However, the perennial drainages delineated in the study area are non-navigable, perennial, relatively permanent waters that are directly adjacent to and drain wetlands in the study area. The drainages flow southerly and potentially flow directly into the harbor. Therefore, due to the potential hydrologic connection to Killisnoo Harbor, wetlands and drainages delineated in the study area may be determined to be jurisdictional by the Alaska District USACE."

Please let us know, if you need any further information or clarification.  
Thank you for your time!

**Jamie C. M. Young**  
Natural Resources Specialist

**SWCA Environmental Consultants**  
4435 E. Canvasback Ave.  
Post Falls, ID 83854  
P 208.262.9323 | C 907.821.0404 | F 907.279.7922



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Jamie

**Jamie C. M. Young**  
Natural Resources Specialist

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# ANGOON AIRPORT

## Environmental Impact Statement



### A Message from the FAA

Hello! It's been a few months since our last newsletter and we've been hard at work finalizing the Draft EIS and responding to agency comments.

We're currently working with the State of Alaska and DOT&PF on ANILCA and Section 4(f)



resources. When that is resolved, we'll be able to release the Draft EIS to everyone for review and comment.

I want to personally thank all of the agencies, stakeholders, and members of the public who have offered their thoughts about the project and have provided information about the natural and cultural resources in the study area over the past several years. Your input has been invaluable in getting us to this point, and your involvement shows how much you all care about Angoon, this project, and the resources that are a very important part of your daily lives. I look forward to the opportunity to speak with you all again when we visit later this year for public meetings on the Draft EIS.

In the meantime, as always, my contact information is provided on the last page of this newsletter. Please feel free to contact me with any questions, concerns, or comments.

Best wishes,

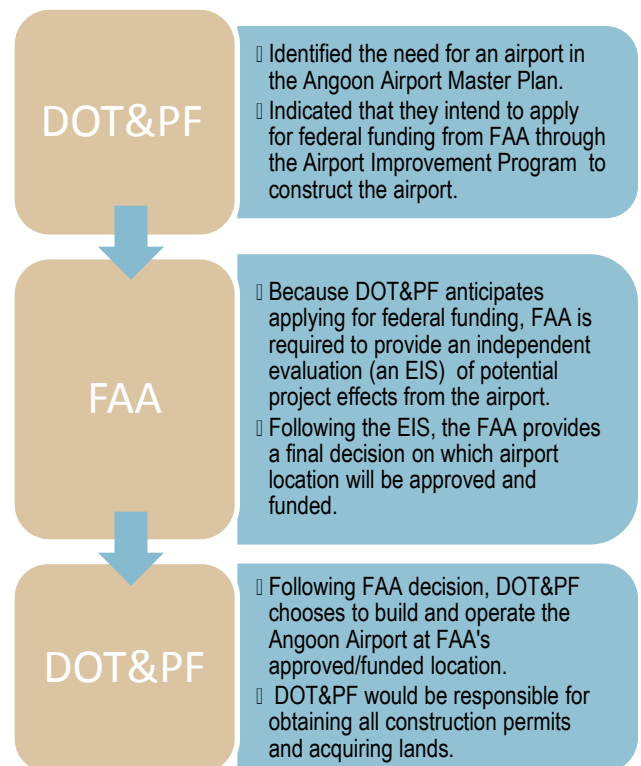
Leslie Grey  
FAA Alaskan Region Airports Division  
Angoon Airport EIS Project Manager

### The Angoon Airport Decision Process

Over the past few months I've received emails asking how the decision-making process works for airport projects and who will make the final decision for the Angoon Airport. It is FAA's responsibility to make the final decision on the location for the proposed Angoon Airport because the FAA is the agency with the authority over airports and airways in the United States. FAA's alternative selection will be provided in the Final EIS and Record of Decision.

Once FAA has made this decision, it will be up to the DOT&PF (as the owner and operator of the airport) to design, construct, and operate the airport at the selected location.

FAA has identified a preferred alternative (see the Q&A section on the following page for more information on this topic). FAA and DOT&PF are currently coordinating on the fact that DOT&PF's proposed action is not FAA's preferred alternative. As we get more information, we'll be sure to keep the public and agencies informed.



## Your Questions, Our Answers

Since our last newsletter, we've also received other questions on the Angoon Airport EIS project. These questions and our answers are shared below.

### **Q: Has FAA made a final decision regarding the airport location?**

A: No, FAA's identification of a preferred alternative at this point in the process is not the final decision. The Council on Environmental Quality (CEQ) and FAA guidance encourage us to identify the preferred alternative as soon as we have the justification to do so and to communicate to the public that we believe this alternative is preferable. However, we are fully evaluating and disclosing the impacts for all alternatives equally in the Draft EIS. The Draft EIS is expected to be out for public review and comment this summer. A final decision will not be made until all comments have been reviewed and considered by FAA.

### **Q: Are there any aviation differences between the alternatives?**

A: There are some small aviation differences between the three locations based on instrument approach capability, minimums for visibility, and year-round availability. However, the FAA went through an extensive alternatives development process to ensure that any analyzed alternative would improve the availability and reliability of aviation service to and from Angoon. All three locations would double the current availability of air travel in and out of Angoon and all three locations meet or exceed FAA standards for the type of aircraft that would be using the proposed airport.

## Stay Involved with the Project!

As always, you can submit comments via email to [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com), or you can contact Leslie Grey, the FAA project manager, via her contact information below. We will be in touch with the community at important milestones in the project as well as at other times just to check in. We are also on Facebook and post short updates as often as possible. Join the conversation! [www.facebook.com/AngoonAirportEIS](http://www.facebook.com/AngoonAirportEIS)



**Do you have any community information, events, stories, or news that you'd like to share?** If so, send it our way and we'll publish it in the next newsletter.

## How to Contact Us

If you have any questions about the proposed project or the EIS, please contact Leslie Grey.



### **FAA Project Manager**

Leslie Grey – AAL 614  
Angoon Airport EIS  
222 West 7th Avenue  
Box #14  
Anchorage, AK 99513-7587  
Telephone: 907-271-5453  
Fax: 907-271-2851  
E-mail: [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

**From:** Angoon Airport EIS <maillist@angoonairporteis.com>  
**Sent:** Thursday, March 27, 2014 12:19 PM  
**To:** Angoon Airport EIS  
**Subject:** Angoon Airport EIS News & Announcements



**Angoon Airport EIS News, Announcements, & Updates (03/27/2014)**

We are excited to announce that the latest version of the Angoon Airport Environmental Impact Statement Newsletter, published by the Federal Aviation Administration - Alaskan Region Airports Division, is now available on our website. Please visit [www.angoonairporteis.com](http://www.angoonairporteis.com) or click the link below to check it out!

Click [HERE](#) for the March 2014 Newsletter Please visit our web page at [www.angoonairporteis.com](http://www.angoonairporteis.com) and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

Sincerely,  
Leslie

Angoon Airport EIS Project Manager



**Leslie Grey**, Federal Aviation Administration  
Alaskan Region Airports Division  
222 West 7th Avenue, Box #14  
Anchorage, Alaska 99513-7587  
**Phone.** 907-271-5453 **Fax.** 907-271-2851  
**Email.** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

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## Endangered Species Act Consultation Briefing

Construction of the Angoon Airport preferred alternative would require 30 barge trips to Angoon during construction. The temporary increase in barge traffic in the project area would increase the risk of ship strikes on marine mammals. The marine mammals that use the project area are primarily humpback whales and Steller sea lions. Because this project would receive federal funding, the Federal Aviation Administration (FAA), as the lead action agency, must adhere to the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). NEPA requires the FAA to consult with agencies that have jurisdictional authority over resources potentially affected by the project. The National Marine Fisheries Service (NMFS) has jurisdictional authority over marine mammals protected by both the ESA and the Marine Mammal Protection Act; therefore, the FAA must consult with NMFS under Section 7(a)(2) of the ESA regarding potential effects to listed marine mammals.

### Angoon Endangered Species Act Effect Determination History

Initially (in the Interagency Preliminary Draft Environmental Impact Statement [EIS]), the FAA stated a “no effect” determination with the inclusion of a best management practice (BMP) that would require barge operators to adhere to a maximum barge speed of 7 knots. Based on previous studies of ship strikes on marine mammals (Pace and Silber 2005; Vanderlaan and Taggart 2007; Wiley et al. 2011), the FAA determined that the 7 knot maximum speed limit would allow marine mammals sufficient time to avoid most collisions and minimize mortality. It was the FAA’s intention that this BMP be included in the construction contract language issued by the Department of Transportation and Public Facilities (DOT&PF). The Alaska DOT&PF does not want to include this BMP, and requested that the FAA remove it from the Draft EIS. To address the DOT&PF’s concerns, the FAA conducted further research into Southeast Alaska vessel traffic and potential effects from ship strikes to marine mammals.

A more recent study is now available that documents the mean probabilities of lethal marine mammal strikes at various vessel speeds; according to this study, a barge traveling at 10 knots has a 50% probability of a lethal strike (95% credible interval ranging from 35% to 70%; Conn and Silber 2013). Though this study is applicable to the project area, it used vessel speed data from seasonal management areas (SMAs) on the east coast of the United States. SMAs are designated locations where right whale densities are high (due to migration, feeding, and nursery activities) and vessel traffic densities are high (typically near sizable port entrances and vessel traffic bottlenecks). Though humpback whale densities in Southeast Alaska waters are high (Dahlheim et al. 2009), vessel traffic density in Southeast Alaska may be lower than in the studies from which the risk probabilities were established; thus, the probability of a lethal strike may also be lower. For this analysis, we assume the mean probability of a lethal strike in Southeast Alaska is lower than the probability scale published by Conn and Silber (2013) □ that is, the mean probability of a lethal marine mammal strike from a vessel traveling 10 knots near Angoon would be less than 50%.

Though vessel traffic densities in Southeast Alaska may be lower than those in eastern seaboard SMAs, areas of Southeast Alaska have implemented vessel speed restrictions. The National Park Service adopted regulations implementing a 13-knot speed limit for vessels in Glacier Bay National Park and Monument to reduce the likelihood of hitting humpback whales in 2003. This speed restriction was established due to evidence that the probability of a lethal strike increases with ship speed (Pace and



Silber 2005; Vanderlaan and Taggart 2007; Wiley et al. 2011), but before data were available indicating that even slower speeds may result in lethal strikes.

Though data in Conn and Silber (2013) are not specific to barges, insufficient data exist to determine if the probability of strike differs among vessel type as speed increases. (Not all ships have the same strike reporting requirements, so data are inadequate to assess probability across vessel types.) Thus, it is assumed that travel speeds affect strike rates similarly regardless of vessel type. Similarly, in the *Federal Register* NMFS noted that the force striking a whale is likely more a function of vessel speed and mass of the whale, rather than vessel mass, as indicated by Vanderlaan and Taggart (2007) (*Federal Register* 2008).

## Current Effects Determination and Rationale

There are an estimated 1,489 vessels (of all varieties) traveling north-south in Southeast Alaska annually (data from 2011; Nuka Research & Planning Group 2012). The additional 30 barge trips that would be required for the Angoon preferred alternative equal approximately 2% of the existing (2011) traffic. Barge speeds in Southeast Alaska range from 5 to 10 knots, with an average speed of 8.5 knots (personal communication, Boyer Towing 2014).

Humpback whales inhabit the same Southeast Alaska waters as the 30 barges that would transport project construction materials and equipment. The average annual serious injury and mortality rate (SI/M) to humpback whales from ship strikes in Southeast Alaska is 0.8 individuals (according to NMFS Stock Assessment; Allen and Angliss 2012).

If a 2% increase in the amount of existing vessel traffic equals a 2% increase in the average annual mortality rate, then 0.016 additional individuals would be injured or killed. Thus, the project may affect humpback whales, but is **not likely to adversely affect (NLAA)** them because the change in the baseline mortality rate is minor and effects would be discountable.

The FAA met informally with NMFS to discuss these preliminary analyses and the FAA's effects determination. NMFS agreed with the FAA that there is the potential for effects to humpback whales from ship strikes, and that proceeding with formal consultation is appropriate. NMFS also agreed with FAA's NLAA determination in light of two recommended mitigation measures: use of marine mammal observers and a maximum barge speed of 10 knots.

Given DOT&PF's response to the inclusion of these mitigation measures, FAA went back to NMFS to see if they were open to an NLAA determination without the mitigations recommendations. NMFS was amenable to certain changes and expressed that they were willing to work with FAA in regard to these issues since FAA has been willing to talk candidly with NMFS. NMFS also reiterated that "the NLAA tactic is the best one for the animals and for FAA." NMFS is open to not including observers in this case, and recommended stating what our anticipated barge speed would be (to make our effects determination defensible) without saying that it would be a maximum speed (i.e., not phrasing it as a restriction). Hence the biological assessment (BA) will state: because typical barge speeds in Southeast Alaska range from 5 to 10 knots (personal communication, Boyer Towing 2014), animals should have sufficient time and ability to move out of the vessel path if needed.

NMFS reiterated that an abbreviated BA (or biological evaluation (BE)) is sufficient for this consultation; they would prefer the document not include species descriptions or extensive project description text.

## Literature Cited

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- Dahlheim, Marilyn, Paula A. White, and Janice M. Waite. 2009. Cetaceans of Southeast Alaska: distribution and seasonal occurrence. *Journal of Biogeography* 36:410-426.
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- Vanderlaan, Angelia, and S.M. Taggart. 2007. Vessel collisions with whales: the probability of lethal injury based on vessel speed. *Marine Mammal Science* 23 (1):144-156.
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THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

Department of Natural Resources

DIVISION OF PARKS AND OUTDOOR RECREATION  
Office of History and Archaeology

550 West 7<sup>th</sup> Avenue, Suite 1310  
Anchorage, Alaska 99501-3566  
Web: <http://www.alaska.gov/parks/oha>  
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Fax: 907.259.8908

April 4, 2014

File No.: 3130-IR FAA  
3330-6 SIT-00014, 3330-6 SIT-00169, 3330-6 SIT-00749

Leslie A. Grey  
FAA Project Manager  
Angoon Airport EIS  
AAL-614  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Avenue, #14  
Anchorage, AK 99513

Subject: Angoon Airport Environmental Impact Statement and Cultural Resources Technical Report for the Area of Potential Effects for Airport 12A with Access 12A (Preferred Alternative)

Dear Ms. Grey:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated February 14, 2014) on February 18, 2014. Following a request for additional information from this office, you provided a summary of consulting party comments on March 20, 2014. In addition, we received a summary of comments / concerns from DOT&PF Southeast Region on April 2-3, 2014.

Following our review of the documentation provided, we offer the following comments:

- Although FAA specified in the cover letter provided that they would forego formal determinations of eligibility and assume three sites eligible for the National Register of Historic Places (NRHP), we believe that the cultural resource report and summary information provided in FAA's cover letter provide sufficient support that SIT-00014, SIT-00169, and SIT-00749 are **eligible** for the NRHP. Therefore, rather than assume eligibility, we believe that SIT-00014 is eligible under criteria A and D, SIT-00169 is eligible, at a minimum, under criterion D and additional research may reveal that it is eligible under other criteria, and that SIT-00749 is eligible under criteria consideration D and criterion A.
- We recommend that the FAA provide a formal determination of eligibility for SIT-00056. If it is no longer present and no archaeological material remains, a formal determination of 'not eligible' may be appropriate. It appears that there is sufficient documentation available to make this eligibility call.
- We understand that local community members (e.g., elders and others) and Kootznoowoc, Inc. provided feedback regarding the locations of Beaver Tail Rock (SIT-00781). However, the nature or location of site is not discussed in the report nor does our office have any additional information for SIT-00781. Will it be affected by the undertaking?
- With respect to the known sites located within the indirect visual APE (SIT-00014 and SIT-00749), we believe the proposed project presents the potential for effects to these sites. We recommend that FAA apply the Criteria of Adverse Effect (36 CFR 800.5[a]) in order to assess whether the effect is adverse or not.

- A review of comments provided by other consulting parties – primarily DOT&PF – we believe that some key concerns remain unaddressed:
  - While we did not object to the APE as defined in FAA’s July 2013 correspondence, it appears that other key consulting parties believe the APE has been inadequately defined. We recommend that the FAA respond to the comments provided by DOT&PF regarding the definition of the APE and provide a basis for its definition. Does the indirect APE adequately encompass the geographic area where effects may occur to historic properties?
  - The archaeological survey was conducted in mid-summer 2013 when ground-covering vegetation is at its height and surface visibility must have been somewhat limited. Does FAA believe that additional pedestrian inventory is warranted during a season of improved surface visibility?
  - A concern has been raised that the boundary of SIT-00169 has not been sufficiently defined and that it may be more extensive than the present survey reports. Does the FAA have a high level of confidence in the boundary of SIT-00169 as presently defined? Is there a potential for the site to be affected by the proposed undertaking?
  - Given the presence of cemetery sites in the vicinity, has the potential for encountering buried human remains been adequately addressed?
  - For similar reasons, would it be advisable to require archaeological monitoring during construction?
  - Has the FAA adequately considered the potential long-term indirect effects that could result from increased access in the vicinity of the project area?

Thank you for the opportunity to comment. We look forward to continued consultation on the subject undertaking. Please contact Shina duVall at 269-8720 or [shina.duvall@alaska.gov](mailto:shina.duvall@alaska.gov) if you have any questions or if we can be of further assistance.

Sincerely,



Judith E. Bittner  
State Historic Preservation Officer  
JEB:sad



**From:** [Amanda Childs](#)  
**To:** [verne.skagerberg@alaska.gov](mailto:verne.skagerberg@alaska.gov)  
**Cc:** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)  
**Subject:** Angoon Barge Effects Briefing  
**Date:** Wednesday, April 16, 2014 2:39:00 PM  
**Attachments:** [bargeeffectsbriefing\\_04-02-14\\_Final\\_DOT.pdf](#)  
[SWCA Client Workspaces.PDF](#)  
[image002.jpg](#)

---

Hi Verne,

See attached for the barge effects briefing paper. I've also attached directions for the client workspace. All references discussed in the document are loaded into the ADOTPF folder.

<https://client.swca.com>

Name: ADOTPF

Password: ADOTPF2012

---

**Amanda Childs**

Project Manager/NEPA Specialist

**SWCA Environmental Consultants**

1220 SW Morrison, Suite 700

Portland, OR 97205-2235

P 503.224.0333 x6256 | C 435.757.5092







U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

AAL-614  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

**In Reply Refer To: AIP-3-02-0018-0705**

April 30, 2014

Ms. Judith Bittner  
State Historic Preservation Officer  
Alaska Office of History and Archaeology  
550 W 7th Avenue, Suite 1310  
Anchorage, AK 99501-3565

**RE: File No. 3131-1R FAA  
Angoon Airport Environmental Impact Statement and Cultural Resources Technical  
Report for the Area of Potential Effects for Airport 12a with Access 12a (Preferred  
Alternative) Determinations of Eligibility**

Dear Ms. Bittner:

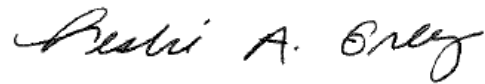
In your letter dated April 4, 2014, which was submitted in response to our consultation with your office regarding the above-referenced undertaking, you requested that the Federal Aviation Administration (FAA) make formal determinations of eligibility for the National Register of Historic Places (NRHP) for several cultural resource sites located within the area of potential effects (APE) of the project rather than merely assume eligibility for the purposes of assessing project effects. The sites in question are SIT-00014, SIT-00169, SIT-00749, and SIT-00056. This letter provides our formal determinations for these sites and requests your concurrence with them.

In our consultation letter to you dated February 14, 2014, we provided a review of NRHP eligibility considerations for sites SIT-00014, SIT-00169, and SIT-00749. We reiterate those here, with additional evaluation, along with our formal determinations regarding site eligibility. Also, as requested, we have included a more detailed evaluation of site SIT-00056 and a formal determination of eligibility for said site.

- Pages two through 4 contain confidential information related to heritage resources and have been removed.

information we have provided in support of our determinations. I can be reached at the address above or at 907-271-5453. We will be submitting under separate cover our amended findings of effect and responses to the other comments you provided in your April 4, 2014, correspondence. We look forward to continuing our consultation with your office regarding the Angoon Airport.

Sincerely,



Leslie A. Grey  
FAA Project Manager  
Angoon Airport Environmental Impact Statement

cc:

Laurie Mulcahy, DOT&PF, Cultural Resources Manager  
Verne Skagerberg, DOT&PF Southeast Region, Project Manager  
Jane Gendron, DOT&PF Southeast Region, Regional Environmental Manager  
John Barnett, DOT&PF, Acting Regional Environmental Manager  
Michael Kell, DOT&PF, Historic Archaeologist

#### **References**

de Laguna, Frederica. 1960. *The Story of a Tlingit Community*. Washington D.C.: United States Government Printing Office.



### Angoon Airport EIS Project Milestones

| Milestone                          | Begin      | End        |
|------------------------------------|------------|------------|
| Public Draft EIS Released          | 08/22/2014 |            |
| Public Comment Period              | 08/22/2014 | 10/06/2014 |
| Comment resolution and FAA reviews | 10/2014    | 01/2015    |
| Final EIS Released                 | 01/30/2015 |            |
| Record of Decision Published       | 03/06/2015 |            |

\*assumes Airport 12a with Access 12a is selected in the FEIS and ROD

\*\*subject to change based on level of comments received

**From:** Amanda Childs  
**Sent:** Friday, May 02, 2014 2:46 PM  
**To:** verne.skagerberg@alaska.gov  
**Cc:** Leslie.Grey@faa.gov  
**Subject:** Angoon Schedule  
**Attachments:** AngoonAirportEIS\_DRAFT\_Agency\_Schedule\_05\_02\_2014.pdf

Hi Verne,

I'm sending the attached schedule. Will you please share with those that need it at the State? I know Susan Magee was asking for one too.

Hope you have a great weekend!

---

**Amanda Childs**  
Project Manager/NEPA Specialist

**SWCA Environmental Consultants**  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
P 503.224.0333 x6256 ☎ 435.757.5092





THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

Department of Transportation and  
Public Facilities

Southeast Region  
Planning

PO Box 112506  
Juneau, Alaska 99811-2506  
Phone: 907-465-4477  
Fax: 907-465-2016

May 7, 2014

Ms. Leslie Grey  
FAA Alaska Region Airports Division  
222 West 7<sup>th</sup> Ave. #14  
Anchorage, AK 99513

Dear Ms. Grey:

In your letter of May 22, 2013, you explained the FAA's reasons for selecting site 12a as the preferred alternative for the location of the Angoon Airport. You also provided us with the opportunity to respond with our concurrence or non-concurrence with your selection, a choice we determined we would make after reviewing the analysis in the preliminary draft EIS (PDEIS). Having had the opportunity to do so and to discuss our comments on that document, we are prepared to give you a preliminary response to your selection that, if not definitive, should help you to understand our position and enable us to move forward.

We have two overarching and closely related concerns with the PDEIS as it stands today: there are very important unknowns that could cause a change in selection of the preferred alternative; and, the analysis supporting the selection is not compelling and we believe it to be incomplete in some important ways. The first problem is irreconcilable prior to the release of the public review draft EIS and resolution, at least in part, of the second. Therefore, we will address the second problem first.

There are a number of practical considerations that lead to FAA's conclusion that Site 12a is a suitable location for the airport and, but for one aspect, preferable to Site 3a. Alternative 12a is nearer to the population center, has a considerably shorter access road, would be easier and less costly to maintain, and provides very good availability for IFR operations – though not as good as 3a. However, in your letter and in the PDEIS, the predominant factor leading you to select Alternative 12a is your determination that there are no 4(f) resources there while there are 4(f) resources at 3a. As we discussed in the meeting on April 10<sup>th</sup>, it is indeed within the FAA's purview to make that determination; however, the discussion in the PDEIS does not seem to us to fully support that determination in the sense that conclusions about the status of lands conveyed to the city for "parks" are stated as assertions based on lack of certain documents, i.e., management plans. We believe that the process you followed and reference to communication

with the City of Angoon should be more explicit in the discussion in order to make it clear that the community concurs with your 4(f) determination.

The PDEIS also asserts that Alternative 12a is preferred within the context of Section 4(f) because it is economically feasible and prudent. As we have discussed, the feasibility of 12a is thus far undeniable, but its prudence is not supported in the PDEIS. Arguments that the airport will be of economic value to the community are insufficient, and the implication that it will be of greater benefit at 12a than at 3a are arguably incorrect. As we have pointed out, lands within the community are available for productive economic development, while those in the Monument are not; lands used for an airport at 12a would cease to be available for that purpose, ergo, the developable economic assets of the community would be diminished. We believe that more explicit support for a determination that 12a is prudent should be included in the PDEIS.

Much of the discussion on April 10<sup>th</sup> concerned the requirements of ANILCA Title XI. Comments from Sue Magee, the State ANILCA Program Coordinator, and from our reviewers addressed our concern that the determination of the preferred alternative was made without considering all criteria identified in Section 1104 and that the FAA is relying on an incomplete and preliminary determination as justification to forego the process established in ANILCA. The response to those comments was that a) because there was an economically feasible and prudent alternative that was not in designated wilderness and b) because the state had not tendered an application for a Title XI permit, the ANILCA process was not germane – that it would only be appropriate in the event that an application were submitted. Given that the impetus for this EIS was our proposal to construct an airport within the Kootznoowoo Wilderness, and that it was understood by all concerned that the document would provide the backup material for a Title XI application, it seems clear to us that, in retrospect, the FAA ought to have required, and we ought to have submitted the Title XI application immediately with our proposal. The reason for not doing so was to provide the FAA more time and flexibility in preparing the DEIS before starting the more restrictive clock associated with the ANILCA process – now, for lack of a piece of paper, that process seems to have been obviated despite our initial understanding. For reasons addressed a bit later, we feel that the document should address all of the factors listed in section 1104.

Our last concern regarding the content of the PDEIS is the inclusion of a commitment with which we have not agreed – to wit, the limitation of tug and barge speeds and a requirement that they have marine mammal observers on board while engaged on this project. This topic has been the subject of lengthy discussion, and we understand from the latest information you have provided that no limitations or requirements will be included in the Biological Assessment. However, we are concerned about any precedent concerning our use of barges for the transport of equipment and materials for projects that do not include work in marine waters. For that reason, we would prefer that the document not imply that there is any potential impact in marine waters which would lead to such limitations for any of the alternatives being considered. Our objections, as stated before, are that the requirement is unenforceable, that the subject traffic is insignificant and indistinguishable from all other traffic in Chatham Strait, and that we proposed no work in marine waters, so consultation with NMFS is inappropriate in this instance.

Having explained our concerns about the content of the PDEIS, we can better address the first of the concerns we stated earlier, i.e., the unknowns that might cause a change in the preferred alternative. There are two: a) the discovery of significant historical or cultural resources that



would be affected by construction on Site 12a, and b) a Right of Way impasse that would preclude our acquisition of the necessary property without condemnation – a proceeding which we all agreed we would be unlikely to undertake. These uncertainties lead us to two conclusions regarding the draft document. The first is that it should make clear that additional analysis concerning 4(f) impacts may be required to support the selection of Site 12a in the event that field work results in the discovery of additional historical or cultural resources. Second, it should also clarify that the proposed action has not been eliminated from consideration under the provisions of either NEPA or ANILCA and, given additional information gained from field work and public review, may still be the selected alternative in the final EIS.

It is our view that the release of a draft EIS for public review should not be delayed until all of these items are resolved, nor would that be possible; some issues require public review in order to be resolved. We do believe that it would be beneficial to address those things which do not require additional investigation or substantial analysis; that is, we would ask for the clarifying changes that can be made editorially to be accomplished in the DEIS prior to release.

Finally, we recognize the FAA's desire to have our unequivocal concurrence with your selection of a preferred alternative. However, it would be premature for us to take that position now. Please consider that prior to our determination of a proposed action we concluded a lengthy reconnaissance and planning process that included a great deal of public involvement and gained the community's supporting resolution. The preparation of the EIS is FAA's responsibility and we have done our best to support an objective process. We do not feel that it would be appropriate at this juncture to change our proposed action without the community's express approval, or to engage in ex-officio public process to obtain their input. Therefore, we intend to submit the SF 299 application for Site 3a (the proposed action) and reference the EIS as supporting documentation, as originally intended.

We believe FAA's position regarding the selection of the preferred alternative -- that Alternative 12a is acceptable and, in many respects, superior to 3a -- is constructive. Given a fortuitous outcome of some additional fieldwork and public comments on the draft EIS which demonstrate community support for Site 12a, we anticipate that we would be able to formalize our concurrence and rescind the SF 299 application.

We look forward to providing Angoon with a new airport and will do all we can to bring that about.

Sincerely,



Verne R. Skagerberg, MPA  
Aviation Planner

cc: Al Clough, Director, Southeast Region  
Amanda Childs, SWCA  
Sue Magee, State ANILCA Program Coordinator



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

AAL-614  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

May 13, 2014

Jon Kurland  
NOAA Fisheries, Assistant Regional Administrator  
Protected Resources Division  
P.O. Box 21668  
Juneau, AK 99802

Re: Section 7 Consultation for Angoon Airport Project

Dear Mr. Kurland,

Enclosed is the biological assessment (BA) for the Angoon Airport Project. The Alaska Department of Transportation and Public Facilities (ADOT&PF) proposes to build a new airport and access road in the community of Angoon on Admiralty Island in Southeast Alaska. The project will include approximately 30 barge trips to Angoon during construction. Because of the potential for ship strikes on marine mammals, this BA is provided as a request for informal consultation with NOAA Fisheries.

This BA address effects to the humpback whale (*Megaptera novaeangliae*) and Steller sea lion (*Eumetopias jubatus*). The Action Area is not located in designated critical habitat for the Steller sea lion. Based on this BA, we have determined that the project may affect but is **not likely to adversely affect** the Steller sea lion and humpback whale. The project will have **no effect** on Steller sea lion critical habitat.

The FAA will likely release the draft environmental impact statement (EIS) in August to evaluate the environmental consequences of the Airport and access road. The BA and your letter of concurrence will be included in the draft EIS.

Please feel free to contact me (271-5453, [leslie.grey@faa.gov](mailto:leslie.grey@faa.gov)) or Leyla Arsan (279-7922 x6350, [larsan@swca.com](mailto:larsan@swca.com)) to discuss the BA or request additional information to comply with this request for informal consultation.

Sincerely,

Leslie Grey  
FAA, Alaska Region Airports Division  
Angoon Airport EIS Project Manager

cc: Kate Savage, NOAA Fisheries  
Amanda Childs, SWCA Environmental Consultants  
Leyla Arsan, SWCA Environmental Consultants

---

**From:** Amanda Childs  
**Sent:** Friday, May 16, 2014 3:10 PM  
**To:** Randy Vigil (randal.p.vigil@usace.army.mil)  
**Cc:** Leslie.Grey@faa.gov; George Weekley; Lara Bjork  
**Subject:** Angoon Airport update  
**Attachments:** AngoonAirportEIS\_DRAFT\_Agency\_Schedule\_05\_02\_2014.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Randy,

As we discussed on the phone earlier today, the DOT&PF has indicated they will be submitting an ANILCA application with the public draft EIS for Angoon. They want to keep their options open depending on what the community reaction is to Airport 12a. What this means for the USACE is:

- You will be receiving the ANILCA application from DOT&PF at the same time as the public draft (currently estimated for August/September, see attached schedule). At the end of the public comment period, you will have to respond to DOT&PF indicating if the EIS has enough information for you to make a tentative decision on the application. You will not be making a decision at that point, that will only happen if DOT&PF doesn't rescind the application after hearing from the public and would occur at final EIS.
- We recommend someone from the USACE present at all hearings. The hearings will be combined with the public meetings in Juneau and Angoon. An additional hearing is required under ANILCA in Washington DC.

If you have further questions on the ANILCA process, the best person to reach out to is George Weekley (cc'd on this email). He is SWCA's ANILCA specialist. If you have project specific questions, please contact Leslie Grey at FAA (also cc'd).

Thank you!

---

**Amanda Childs**  
Project Manager/NEPA Specialist

**SWCA Environmental Consultants**  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
P 503.224.0333 x6256 ☎ 435.757.5092



**From:** [Amanda Childs](#)  
**To:** [Berger, Jennifer -FS](#)  
**Cc:** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov); [Jamie C. M. Young](#); [Lara Bjork](#)  
**Subject:** Angoon Comments and Schedule  
**Date:** Friday, May 16, 2014 1:05:38 PM  
**Attachments:** [AngoonComments\\_20140509\\_forUSFS.xlsx](#)  
[AngoonAirportEIS\\_DRAFT\\_Agency\\_Schedule\\_05\\_02\\_2014.pdf](#)  
[image002.jpg](#)

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Hi Jenn,

Per our discussion yesterday, I have attached a draft Angoon schedule and an excel spreadsheet of all the comments received during the agency review of the PDEIS. The comments are in an excel spreadsheet, and there are tabs for each section/chapter of the EIS. There is also one tab that has all of the comments.

I am going to be on vacation May 19-29. If you have questions about the comments or SWCA responses during that time, Leslie is the best person to ask. She can always reach out to Jamie and SWCA specialists as needed. Otherwise, I'll follow up with you when I get back.

---

**Amanda Childs**  
Project Manager/NEPA Specialist

**SWCA Environmental Consultants**  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
P 503.224.0333 x6256 | C 435.757.5092



-Amanda

From: Leyla Arsan  
Sent: Monday, June 02, 2014 12:12 PM  
To: Kate Savage - NOAA Federal  
Cc: Amanda Childs; Leslie.Grey@faa.gov  
Subject: RE: Angoon Airport BA

Hi Kate,

We do not have info specific to the barge that will be used for the Angoon Airport. However, we can provide some info on typical noise levels for barges.

Barges traveling 13 knots (3 knots faster than those expected for the Angoon Airport) would be expected to have noise levels that range from up to 150 dB re 1  $\mu$ Pa at a distance of <100 m from the source to 100 dB re 1  $\mu$ Pa at a distance of 13-34 km depending on bathymetry and substrate (Li et al. 2011). Sound pressure levels attenuate to non-discernible levels from background noise with distance from the sound source. These modeled SPLs are for Hudson Bay, an area with little vessel traffic that would affect ambient noise levels and audibility of barge noise. Audibility of Angoon vessel noise along the proposed barge route will be limited by ambient noise levels and noise from existing vessel traffic, and thus will be less than the SPLs described above for faster vessels in lesser trafficked areas.

Airborne noise associated with tugboat activity as recorded from the Port of Los Angeles ranged from 81- 84 dBA (average A-weighted noise level At 100 feet) during activities such as wharf demolition, wharf construction with pile driving, rip-rap placement, and dredging (LAHD and USACE 2007).

Both the underwater and airborne sound pressure levels expected from barge traffic are less than the acoustic threshold levels of the onset of PTS (permanent hearing threshold shifts: 230 dBpeak & 198 dB SELcum) and TTS (temporary hearing threshold shifts: 224 dBpeak & 178 dB SELcum) for humpback whales for non-impulsive sound (NOAA 2013).

Feel free to call or email with any further questions or concerns, I'm happy to talk through anything. Also, please cc this group on all ESA consultation emails. I'll be on vacation June 12-17, but this group

can respond in my absence. Thanks Kate.

Literature Cited:

Li, Z., MacGillivray, A., and Wladichuk, J. 2011. Underwater Acoustic Modeling of Tug and Barge Noise for Estimating Effects on Marine Animals. Version 1.0. Technical report prepared for AREVA Resources Canada by JASCO Applied Sciences. Kiggavik Project Environmental Impact Statement, Tier 3 Technical Appendix 7B.

Los Angeles Harbor Department (LAHD) and U.S. Army Corps of Engineers (USACE). 2007. The 23 Berth 136-147 [TraPac] Container Terminal Project Draft EIS/EIR. Appendix N: Noise. Available at: <[http://www.portoflosangeles.org/EIR/TraPac/DEIR/deir\\_trapac.asp](http://www.portoflosangeles.org/EIR/TraPac/DEIR/deir_trapac.asp)>  
[http://www.portoflosangeles.org/EIR/TraPac/DEIR/deir\\_trapac.asp](http://www.portoflosangeles.org/EIR/TraPac/DEIR/deir_trapac.asp). Accessed: 5/30/14

NOAA. 2013. Draft Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammals.

Leyla Arsan

Anchorage Office Manager

Pacific Northwest Aquatic Science Lead

SWCA Environmental Consultants

1205 East International Airport Road, Suite 103, Anchorage, AK 99518

T 907.279.7922 x6350 | C 503.539.6398 | F 907.279.7944

<<http://www.swca.com/>> [www.swca.com](http://www.swca.com)

From: Kate Savage - NOAA Federal [mailto:kate.savage@noaa.gov]

Sent: Wednesday, May 28, 2014 10:09 AM

To: Leyla Arsan

Subject: Re: Angoon Airport BA



Hi Leyla,

Quick question: do you have any info on the noise signature of the Angoon Airport barge?

Thanks!  
Kate

On Fri, May 9, 2014 at 1:32 PM, Leyla Arsan <larsan@swca.com> wrote:

Hello Kate,

Attached is the Angoon Airport Biological Assessment. We look forward to your review and response to this consultation. If you have any questions or require more information, feel free to call me anytime.

Thank you,

Leyla Arsan

Anchorage Office Manager

Pacific Northwest Aquatic Science Lead

SWCA Environmental Consultants

1205 East International Airport Road, Suite 103, Anchorage, AK 99518

T 907.279.7922 x6350 <tel:907.279.7922%20x6350> | C 503.539.6398 | F 907.279.7944

<<http://www.swca.com/>> [www.swca.com](http://www.swca.com/)

--

Kate Savage, DVM

Marine Mammal Specialist

Protected Resources Division

NOAA Fisheries

Juneau, AK.

(907) 586-7312



THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

**Department of Natural Resources**

DIVISION OF PARKS AND OUTDOOR RECREATION  
Office of History and Archaeology

550 West 7<sup>th</sup> Avenue, Suite 1310  
Anchorage, Alaska 99501-3565  
Web: <http://dnr.alaska.gov/parks/oha>  
Phone: 907.269.8721  
Fax: 907.269.8908

RECEIVED

JUN 10 2014

June 9, 2014

File No.: 3130-1R FAA  
3330-6 SIT-00014, 3330-6 SIT-00169, 3330-6 SIT-00749, 3360-6 SIT-00056

Leslie A. Grey  
FAA Project Manager  
Angoon Airport EIS  
AAL-614  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Avenue, #14  
Anchorage, AK 99513

Subject: Angoon Airport Environmental Impact Statement and Cultural Resources Technical Report for the Area of Potential Effects for Airport 12A with Access 12A (Preferred Alternative) Determinations of Eligibility

Dear Ms. Grey:

The Alaska State Historic Preservation Office (AK SHPO) received your correspondence (dated April 30, 2014) on May 12, 2014.

Following our review of the documentation provided, we offer the following comments:

- As noted in a letter from our office dated April 4, 2014, we concur that SIT-00014, SIT-00169, and SIT-00749 are **eligible** for the National Register of Historic Places (NRHP). Specifically, that SIT-00014 is eligible under criteria A and D, SIT-00169 is eligible under criterion D, and that SIT-00749 is eligible under criteria consideration D and criterion A.
- We further concur that SIT-00056 is **eligible** for the NRHP under criterion D and that additional investigations may tell us more about the extent and significance of archaeological deposits present at the site.

Thank you for the opportunity to comment. We look forward to continued consultation on the subject undertaking. Please contact Shina duVall at 269-8720 or [shina.duvall@alaska.gov](mailto:shina.duvall@alaska.gov) if you have any questions or if we can be of further assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Judith E. Bittner".

Judith E. Bittner  
State Historic Preservation Officer  
JEB:sad



**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration**

National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802-1668

July 9, 2014

Leslie Grey  
Angoon Airport EIS Project Manager  
FAA Alaskan Region Airports Division  
AAL-600  
222 West 7<sup>th</sup> Ave. #14  
Anchorage, AK. 99513

Re: Angoon Airport Construction Project, NMFS #AKR-2014-9380

Dear Ms. Grey:

The National Marine Fisheries Service (NMFS) has completed informal consultation under section 7(a)(2) of the Endangered Species Act (ESA) regarding the proposed Angoon Airport Project. The Alaska Department of Transportation and Public Facilities (DOT), as the non-federal designee for the Federal Highway Administration, is proposing to build a new airport and access road in the community of Angoon on Admiralty Island in Southeast Alaska. The DOT determined that this project may affect, but is not likely to adversely affect, the endangered humpback whale (*Megaptera novaengliae*) or the endangered western Distinct Population Segment (DPS) of the Steller sea lion (*Eumetopias jubatus*).

NMFS received your request for written concurrence on May 13, 2014. Based on our analysis of the information provided to us by the DOT, NMFS concurs with your determination that this project is not likely to adversely affect humpback whales or Steller sea lions.

**Description of the Proposed Action**

The project includes the construction of a land-based airport and associated infrastructure. All aspects of the project will occur in terrestrial or upland habitats except for the barging of construction materials. Because the terrestrial components of the project are not expected to affect the marine environment and listed species, only the barging of materials is considered in the consultation.

An estimated total of 30 barge trips, spread throughout two construction seasons, are expected to complete construction of the Angoon airport. While a construction season typically extends from May to October, construction may occur throughout the year pending mild weather. The 1,900 ton barge, approximately 200 feet long, will likely travel from Juneau or Seattle via Clarence, Sumner, and Chatham Straits as well as Frederick Sound to the work site.



### **Description of the Action Area**

The action area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The action area is distinct from and larger than the project footprint because some elements of the project may affect listed species some distance from the project footprint. The action area, therefore, extends out to a point where no measurable effects from the project are expected to occur.

Since 1997, NMFS has used generic sound exposure thresholds to determine whether an activity produces underwater and out-of-water sounds that might result in impacts to marine mammals (70 FR 1871). The current threshold for continuous noise is 120 dB re 1  $\mu$ Pa RMS.

While the DOT considers the action area as including the main navigation channels on the west side of Admiralty Island including Chatham Strait, for purposes of this consultation NMFS considers the action area to include all waters along the navigational routes between Juneau and Angoon and Seattle and Angoon. Within these routes, the action area includes the physical location of the barges radiating to the 120 dB isopleth for noise emanating from associated tug boats, a radius of approximately 4-6 km.

### **Proposed Mitigation Measures**

DOT proposed the following mitigation measures as part of the action:

- Barges used for construction will follow standard BMPs for vessels to minimize the potential for oil or fuel spills, such as having an oil spill emergency plan. The only oil or fuel associated with barging of construction materials will be the fuel tanks used to operate the equipment to move the materials.
- Barges will not be grounded in kelp stands.

### **Listed Species**

#### Humpback Whales

Humpback whales are found in all ocean basins worldwide, and typically occur in tropical and subtropical waters during the winter and migrate seasonally to high latitudes during the summer (Allen and Angliss 2013). Populations of these whales were depleted in the nineteenth and twentieth centuries due to commercial exploitation, and numbers in the North Pacific following the cessation of whaling in 1966 have been estimated as low as 1,400 (Gambell 1976) and 1,200 (Johnson and Wolman 1984). Humpback whales are currently found throughout their historic summer feeding range in the North Pacific, including coastal and inland waters around the Pacific Rim from Point Conception, California, north to the Gulf of Alaska and the Bering Sea, west through the Aleutian Islands to the Kamchatka Peninsula and the Sea of Okhotsk (Allen and Angliss 2013). Populations appear to be increasing worldwide and the best current estimate for humpback whale abundance in the North Pacific is 21,063 animals (data from 2006-08), which exceeds some estimates of pre-whaling numbers (Barlow et al. 2011).

Humpback whales are the most common large cetacean in Southeast Alaska. The abundance of humpback whales that forage throughout British Columbia and Southeast Alaska is estimated at between 3,000 and 5,000 individuals with an increasing annual population trend of 4 to 8% (Calambokidis et al. 2008; Barlow et al. 2011). Although migration timing varies among individuals, most whales depart for Hawaii in fall or winter and begin returning to Southeast Alaska in spring, with continued returns through the summer and a peak occurrence in Southeast Alaska during late summer to early fall. However, there are significant overlaps in departures and returns (Baker et al. 1985; Straley 1990). In Southeast Alaska, primary prey species include euphausiids and small schooling fishes such as capelin, Pacific sand lance, walleye pollock, and Pacific herring (Wing and Kreiger 1983; Kreiger and Wing 1984, 1986; Straley 1990).

Within Southeast Alaska, humpback whales are found throughout all major waterways and in a variety of habitats, including open-ocean entrances, open-strait environments, nearshore waters, areas with strong tidal currents, and secluded bays and inlets. Annual concentrations are consistent at several locations primarily around northern southeast Alaska, with lesser historical presence in Sumner and Clarence Strait (Baker et al. 1985; Straley et al. 1995; Dahlheim 2009). These patterns of occurrence likely follow the spatial and temporal changes in types, densities and distribution of prey (Bryant et al. 1981; Baker et al. 1985; Kreiger and Wing 1986; Baker et al. 1992). Both fish and euphausiid densities show significant annual, seasonal, and spatial variations (Wing and Kreiger 1983) and humpbacks adjust their foraging locations to areas of high prey densities.

#### Western DPS Steller Sea Lions

Steller sea lions range throughout the North Pacific Ocean from Japan, east to Alaska, and south to central California (Loughlin et al. 1984). Steller sea lions, the largest of the eared seals (Otariidae), currently have a worldwide population estimated at 126,543-140,432 animals (Allen and Angliss 2012a; Allen and Angliss 2012b). Historical abundance was significantly greater with an estimated worldwide population of 245,000 to 290,000 animals in the late 1970s (1976-1980) (Loughlin et al. 1984).

There are two Steller sea lion populations in Alaska: the endangered western DPS generally occurs west of Cape Suckling; and the eastern DPS (no longer listed under the ESA) generally occurs east of Cape Suckling (144°W). Steller sea lions are not known to migrate annually, but individuals may widely disperse outside of the breeding season (late May to early July) (Allen and Angliss 2013). In Southeast Alaska, most Steller sea lions are considered to be part of the eastern DPS, although some intermingling of animals from the endangered western DPS may occur. NMFS considers waters north of Sumner Strait as the area where animals from the western DPS commonly occur (NMFS 2013). Consequently, waters around Angoon are located in an area of overlap between the two Steller sea lion DPSs (Jemison et al. 2013). We expect a majority of Steller sea lions near the project area to be eastern DPS individuals, but some western DPS individuals may be present as well.



The most recent comprehensive estimate (pups and non-pups) for the western DPS abundance in Alaska is 52,209 sea lions based on aerial surveys of non-pups conducted in June and July 2008-2011, and aerial and ground-based pup counts conducted in June and July 2009-2011 (Allen and Angliss 2013). The western DPS declined in abundance by about 70% between the late 1970s and 1990, with evidence that the decline had begun even earlier. Factors that may have contributed to this decline include 1) incidental take in fisheries, 2) legal and illegal shooting, 3) predation, 4) contaminants, 5) disease, and 6) climate change (NMFS 2008). Although Steller sea lion abundance continues to decline in the western Aleutians, numbers are thought to be increasing in the eastern part of the western DPS range (DeMaster 2011), closest to Southeast Alaska and the proposed action area.

The foraging strategy of Steller sea lions is strongly influenced by seasonality of both sea lion reproductive activities, which occur on rookeries, and the ephemeral nature of many prey species. Steller sea lions are considered opportunistic foragers and may relocate based upon seasonal prey availability. In Southeast Alaska, the sea lions forage on herring aggregations in winter, spawning fish, including herring and eulachon, in spring, and various other cephalopod and fish species throughout the year, including Atka mackerel, walleye pollock, capelin, Pacific cod, Pacific sandlance, and salmon (Merrick et al., 1997; Pitcher, 1981; Winship and Trites 2003; Sigler et al. 2009; Womble et al. 2009).

Steller sea lions are marine based predators, but rely on terrestrial rookeries and haulouts for activities such as reproduction and predator avoidance. Steller sea lion critical habitat is defined as a terrestrial zone, an aquatic zone, and an air zone that extends 3,000 feet (0.9 km) landward, seaward, and above each major rookery and major haulout. The action area does not include Steller sea lion critical habitat. The closest rookery is on the outer coast of the Alexander Archipelago. While there are a number of haulouts along the barge route, they are not within the action area.

### **Effects of the Action**

For purposes of the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). To concur that an action may affect, but is not likely to adversely affect, listed species, NMFS must find that all of the effects of the proposed action or interrelated or interdependent actions are expected to be insignificant, discountable, or entirely beneficial. *Insignificant effects* relate to the size of the impact and should never reach the scale where a take will occur. *Discountable effects* are those that are extremely unlikely to occur. Based on best judgment, one would not 1) be able to meaningfully measure, detect, or evaluate insignificant effects; or 2) expect discountable effects to occur. *Beneficial effects* are contemporaneous positive effects with no adverse effects to listed species.

The potential effects of the proposed action on listed species include ship strike and harm or behavioral alteration due to noise. The probability of ship strike and acoustic disturbance depends upon the type, frequency, speed, and route of the marine transportation as well as the distribution of marine mammals in the area.

### ***Ship Strike***

While Steller sea lions frequent all coastlines along the action area, they are not often found in deep water channels and are therefore extremely unlikely to be struck by vessels. In the NMFS Alaska region stranding records on file since 1995, only three reports mention the possibility of ship strike/trauma as a cause of death of Steller sea lions.

An analysis of the incidence of humpback whale ship strikes in US waters between 1975 and 2002 revealed the most common vessel speed at 13 to 15 knots, followed by 16 to 18 knots and 22 to 24 knots (Jensen and Silber 2003). In Alaskan waters between 1978 and 2011, 49% of reported vessel-whale collisions (n = 75) occurred with vessels speeds greater or equal to 12 knots and 31% at speeds between 1 and 11 knots. The project barge is anticipated to travel at an average speed of 8.5 (range 5 – 10) knots, which should allow humpback whales to move out of the vessel path. The vessel type is also a significant factor in describing ship strikes. In the 89 reports of Alaskan vessel/whale collisions where the vessel type was known, only 3 reports were from cargo ships, including large container ships. No reports specifically concerned a barge collision. The areas with the highest collision densities centered around Point Adolphus in Icy Strait and around North Pass in lower Lynn Canal, both popular whale watching destinations. Chatham Strait was not included as a high risk area. Of the whale vessel collisions reported, 23% resulted in mortality, 5% were reported as alive, and the remaining 72% were of unknown outcome (Neilsen et al. 2012).

Because there is little overlap between Steller sea lions and the deep channels along the proposed barge route, the likelihood of a physical interaction between a project vessel and Steller sea lion is discountable. Because vessel traffic associated with the project will be infrequent, travel will occur at slow speeds, and ship strikes with cargo vessels in southeast Alaska are a rare occurrence, the likelihood of physical impact between a project vessel and humpback whales is also discountable.

### ***Noise***

Possible impacts to marine mammals exposed to loud underwater or in-air noise include mortality (directly from the noise, or indirectly from a reaction to the noise), injury, and disturbance ranging from severe (e.g., abandonment of vital habitat) to mild (e.g., startle response) (Thompson et al. 2013). The significance of potential impacts of noise to marine mammals is dependent on a number of factors including the magnitude of sound pressure levels, species receiving the sound, exposure type (e.g., continuous vs. pulse), duration, site characteristics, species' auditory characteristics, and individual marine mammal characteristics, (e.g., habituation, season, motivation) (Dazey et al. 2012; Ellison et al. 2012).

Steller sea lions rely on their ability to detect sound and communicate underwater for a variety of life functions, including reproduction and predator avoidance. Steller sea lions are categorized in the pinniped functional hearing group which has an estimated auditory bandwidth of 75 Hz to 75 kHz in-water, and 75 Hz to 30 kHz on land (Southall et al. 2007). Studies of Steller sea lion

auditory sensitivities have found that this species detects sounds underwater between 1 to 25 kHz (Kastelein et al. 2005), and in the air between 0.25 to 30 kHz (Mulsow and Reichmuth 2010). While Steller sea lions frequent all coastlines along the action area, they are not often found in deep water channels and are therefore not likely to be exposed to significant barge noise.

As is the case for all large baleen whales, direct information about the hearing abilities of humpback whales is not available. Researchers studying Mysticete auditory apparatus morphology hypothesized that large Mysticetes have acute infrasonic hearing (Ketten 1997). Humpback whales are categorized in the low frequency cetacean functional hearing group (Southall et al. 2007). This group has an estimated auditory bandwidth of 7 Hz to 22 kHz. Direct data on humpback whale hearing sensitivity is not available but has been estimated based on behavioral responses to sounds at various frequencies, favored vocalization frequencies, body size, ambient noise levels at favored frequencies, and cochlear morphometry.

Throughout the year, many different vessel types travel throughout the action area, including large and small cruise ships, Alaska Marine Highway ferries, tank and freight barges with tugs, freight ships, tank ships, personal and commercial fishing vessels, and recreational vessels. These vessels traverse the action area thousands of times every year (NUKA 2012). These vessels may generate significant noise. For example, sound levels from ferry vessels in Puget Sound were recorded at 179 dB re 1  $\mu$ Pa at 1 m (Basset 2010). Small boats, including fishing vessels, may generate noise levels between 140 and 180 dB (Hildebrand 2009; Matzner et al. 2010). The projected noise of the project vessel is unknown. The signature of an individual vessel is a function of many variables, including size, shape, speed, load, propulsion system, and bathymetry (Hildebrand 2009). Generally speaking, most (83%) of the acoustic field surrounding large vessels is the result of propeller cavitation, which is when air spaces created by the motion of propellers collapse (NOAA 2004). Relative to other large vessels, tugs with barges typically produce less near-surface sound than other ships due to the recessing of their propellers as protection against grounding. Speed may also be positively correlated with the amplitude of vessel noise (Bartlett and Wilson 2002) and the slow speed of the project barge should result in some noise reduction. Modeling of tug and barge marine transiting operations associated with a Canadian mining project estimated noise levels down to 120 dB at 4 to 6 km (Li et al. 2011). It is possible that whales may exhibit avoidance behavior at these distances from the vessel. However, many large ships navigate through the channels from Juneau and Seattle, including Chatham Strait, and noise production from these vessels may be sufficiently high to result in habituation of whales in the area. A continued increase in whale population may indicate the benign coexistence of vessel traffic and whale presence in Southeast Alaska.

Because marine traffic associated with the project is relatively infrequent, vessels associated with the project are slow moving, the total number of barge trips is small, and associated noise signatures should not result in injury or harm, impacts to humpback whales and Steller sea lions from noise disturbance associated with this project are likely to be insignificant.

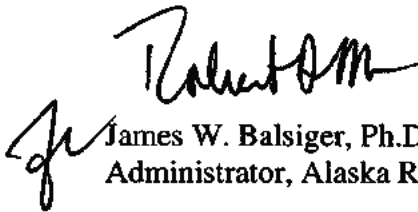
**Conclusion**

Based on this analysis, NMFS concurs with your agency's determination that the planned action may affect, but is not likely to adversely affect, humpback whales or western DPS Steller sea lions.

Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct any questions regarding this letter to Kate Savage at [Kate.Savage@noaa.gov](mailto:Kate.Savage@noaa.gov) or (907) 586-7312.

Sincerely,

  
James W. Balsiger, Ph.D.  
Administrator, Alaska Region

Cc: Leslie Grey, [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)  
Amanda Childs, [achilds@swca.com](mailto:achilds@swca.com)  
Leyla Arsan, [larsan@swca.com](mailto:larsan@swca.com)

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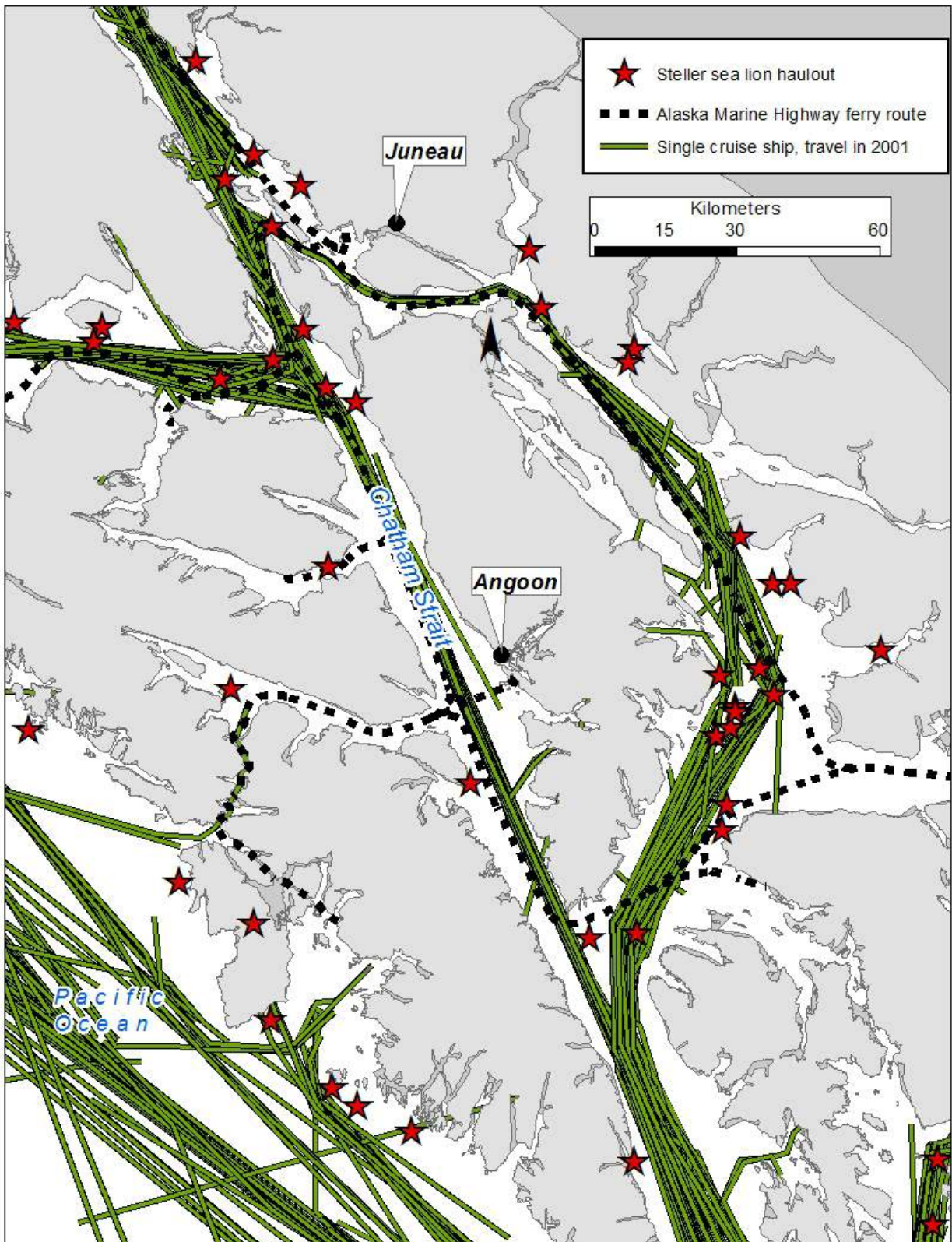


Figure 1. Marine navigational channels leading to project area and sample of vessel traffic in the area.





DEPARTMENT OF THE ARMY  
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
REGULATORY DIVISION  
P.O. BOX 22270  
JUNEAU, ALASKA 99802-2270

AUG 04 2014

Regulatory Division  
POA-2009-1254

Ms. Leslie Grey  
Federal Aviation Administration  
222 West 7<sup>th</sup> Avenue, Box #14  
Anchorage, Alaska 99513

Dear Ms. Grey:

This is in response to your January 9, 2014, request for a jurisdictional determination for a 163.54 - acre parcel of land described as Angoon Airport Environmental Impact Statement, Airport Alternative 12a with Access 12. It has been assigned number POA-2009-1254, Killisnoo Harbor, which should be referred to in all correspondence with us. The project site is located within Sections 5, 6, and 8, T. 51 S., R. 68 E., Copper River Meridian; USGS Quad Map Sitka B-2; Latitude 57.473° N., Longitude 134.547° W., in Angoon, Alaska.

Based on our review of the information you furnished, including the January 2014, Wetland and Waters Delineation Preliminary Jurisdictional Determination Report Angoon Airport Environmental Impact Statement Admiralty Island (PJD), prepared by SWCA Environmental Consultants, we have determined the above property contains waters of the United States (U.S.), including wetlands, under the Corps' regulatory jurisdiction. Specifically, there are: 128.43 acres of wetlands and 1.31 acres of stream on the site. These waters of the U.S. are shown on the enclosed drawing from the PJD (Figure 4) prepared by SWCA Environmental Consultants. A copy of the Approved Jurisdictional Determination form is available at [www.poa.usace.army.mil/Missions/Regulatory/JurisdictionalDeterminations.aspx](http://www.poa.usace.army.mil/Missions/Regulatory/JurisdictionalDeterminations.aspx) under the above file number.

This approved jurisdictional determination is valid for five (5) years from the date of this letter, unless new information supporting a revision is provided to us before the expiration date. Enclosed is a Notification of Administrative Appeal Options and Process and Request for Appeal form (see section titled "Approved Jurisdictional Determination").

DA authorization is required if you propose to place dredged and/or fill material into waters of the U.S., including wetlands and/or perform work in navigable waters of the U.S.

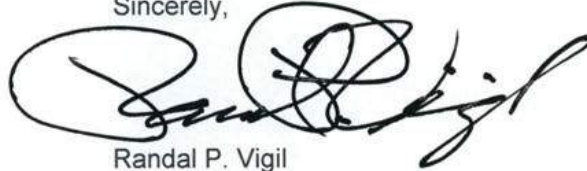
Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including jurisdictional wetlands (33 U.S.C. 1344). The Corps defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for structures or work in or affecting navigable waters of the U.S. (33 U.S.C. 403). Section 10 waters are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or other waters identified by the Alaska District.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

Please contact me via email at [Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil), by mail at the address above, or by phone at (907) 790-4491, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Randal P. Vigil". The signature is stylized with large, overlapping loops and a cursive style.

Randal P. Vigil  
Chief, Southeast Section

Enclosures

CF:

[sreed@swca.com](mailto:sreed@swca.com)  
[jyoung@swca.com](mailto:jyoung@swca.com)





Figure 4. 2004 aerial wetland and waters delineation map.



## NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

|                                            |                                                                    |                            |                      |
|--------------------------------------------|--------------------------------------------------------------------|----------------------------|----------------------|
| Applicant: Federal Aviation Administration |                                                                    | File Number: POA-2009-1254 | Date: August 4, 2014 |
| Attached is:                               |                                                                    |                            | See Section below    |
|                                            | INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission) |                            | A                    |
|                                            | PROFFERED PERMIT (Standard Permit or Letter of permission)         |                            | B                    |
|                                            | PERMIT DENIAL                                                      |                            | C                    |
| <b>XX</b>                                  | <b>APPROVED JURISDICTIONAL DETERMINATION</b>                       |                            | <b>D</b>             |
|                                            | PRELIMINARY JURISDICTIONAL DETERMINATION                           |                            | E                    |

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at [http://www.usace.army.mil/CECW/Pages/reg\\_materials.aspx](http://www.usace.army.mil/CECW/Pages/reg_materials.aspx) or Corps regulations at 33 CFR Part 331.

**A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

**B: PROFFERED PERMIT:** You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

**E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

**SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT**

**REASONS FOR APPEAL OR OBJECTIONS:** (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

**ADDITIONAL INFORMATION:** The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

If you have questions regarding this decision and/or the appeal process you may contact:

**Randal Vigil**  
Alaska District Corps of Engineers  
Juneau Regulatory Field Office (CEPOA-RD-S)  
PO Box 22270  
Juneau, Alaska 99802-2270  
(907) 790-4491

If you only have questions regarding the appeal process you may also contact:

Commander  
USAED, Pacific Ocean Division  
ATTN: CEPOD-PDC/Cindy Barger  
Building 525  
Fort Shafter, HI 96858-5440

**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

\_\_\_\_\_  
Signature of appellant or agent.

Date:

Telephone number:

# MEMORANDUM

## State of Alaska


Department of Fish and Game  
Division of Habitat

TO: Jackie Timothy  
Southeast Regional Supervisor

DATE: August 18, 2014

THRU:

SUBJECT: Angoon Airport Trip Report

FROM: Nicole Legere   
Habitat Biologist

PHONE NO: (907) 465-6979

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The City of Angoon is located within Admiralty Island National Monument. Currently, Angoon is only accessible by seaplane and ferry. The Alaska Department of Transportation and Public Facilities proposes to construct a land-based airport for the community and has requested funding and approval from the Federal Aviation Administration (FAA). There are three proposed airport locations; two of the sites (Alternatives 3a and 4) are located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area. The third site (Alternative 12a) is located on the Angoon peninsula. The FAA preferred alternative location is Alternative 12a<sup>1</sup>.

On August 4, 2014 Fish and Wildlife Technician Rick Hoffman and I conducted a site visit to two streams (10 and 10A) located in the preferred Alternative 12a location for the proposed airport (Table 1, Figure 1). We began electrofishing downstream in stream 10A at a culvert crossing on the dirt road that ends at Auk'Tah Lake (Figure 2). The area is thick with blueberry bushes and devils club. The substrate is mud at the culvert turning to fine sand and gravel downstream. We caught 13 cutthroat trout throughout the creek (Figure 3). Approximately half way down stream 10A we came to the confluence with stream 10. We continued downstream to the mouth which ended at a fish passage barrier. The stream is cut off by a gravel berm that extends along the shoreline (Figure 4). There is a pool at the base of the gravel (Figure 5) and the water infiltrates through the gravel into Killisnoo Harbor (Figure 6) preventing fish passage. It does not appear that water at the highest tide will overtop the berm into the creek (Figure 7).

We determined it was not necessary to sample stream 10 because there was a barrier downstream. However, I did walk to the source of stream 10 (WPT 834) from the road. The stream originates from a seep in a meadow and does not cross the road.

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<sup>1</sup> [http://www.angoonairporteis.com/proposed\\_improvements.html](http://www.angoonairporteis.com/proposed_improvements.html) , accessed August 15, 2014.

Table 1.–Stream 10A survey data on August 4, 2014.

| Waypoint | Latitude | Longitude | Notes                                                                                                                                                                                      | Sample Effort | Sample Results |
|----------|----------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|
| 814      | 57.4735  | -134.5396 | Stream 10A downstream of culvert electrofishing down to mouth. Thick with blueberry and devil's club bushes.                                                                               |               |                |
| 815      | 57.4735  | -134.5397 | Mud substrate.                                                                                                                                                                             | EF            | 1 CT ~ 60mm    |
| 816      | 57.4733  | -134.5409 |                                                                                                                                                                                            | EF            | 1 CT           |
| 817      | 57.4740  | -134.5430 |                                                                                                                                                                                            | EF            | 1 CT           |
| 818      | 57.4743  | -134.5441 |                                                                                                                                                                                            | EF            | 1 CT           |
| 819      | 57.4744  | -134.5442 | Fine sand and gravel substrate.                                                                                                                                                            | EF            | 1 CT           |
| 820      | 57.4744  | -134.5449 |                                                                                                                                                                                            | EF            | 1 CT           |
| 821      | 57.4745  | -134.5454 |                                                                                                                                                                                            | EF            | 2 CT           |
| 822      | 57.4747  | -134.5457 |                                                                                                                                                                                            | EF            | 1 CT           |
| 823      | 57.4748  | -134.5454 |                                                                                                                                                                                            | EF            | 1 CT           |
| 824      | 57.4752  | -134.5468 |                                                                                                                                                                                            | EF            | 1 CT           |
| 825      | 57.4745  | -134.5481 | Confluence with stream 10 entering on river right.                                                                                                                                         |               |                |
| 826      | 57.4742  | -134.5486 |                                                                                                                                                                                            | EF            | 1 CT           |
| 827      | 57.4739  | -134.5486 |                                                                                                                                                                                            | EF            | 1 CT           |
| 830      | 57.4702  | -134.5510 | Visual of several cutthroat in pool. End of connected stream. Gravel pile has built up and cut off all connection to the ocean. Water infiltrates through the gravel with no fish passage. | Visual        | CT             |
| 831      | 57.4701  | -134.5512 | End of gravel pile where water infiltrates out.                                                                                                                                            |               |                |
| 832      | 57.4702  | -134.5511 | High tide line. Water does not spill over into creek.                                                                                                                                      |               |                |
| 834      | 57.4800  | -134.5490 | Top of stream 10. In wet meadow. Water infiltrating from ground.                                                                                                                           |               |                |





Figure 1.–Stream 10A survey map.





Figure 2.—Mr. Rick Hoffman downstream of stream 10A culvert.



Figure 3.—Cutthroat trout caught in stream 10A.



Figure 4.—Mr. Rick Hoffman standing in front of the gravel fish passage barrier in stream 10A.



Figure 5.—Looking down on the pool upstream of fish barrier. Visual of cutthroat trout in pool.



Figure 6.—Water from stream 10A infiltrating out from gravel into Killisnoo Harbor.



Figure 7.—Mr. Rick Hoffman standing on top of gravel berm above the high tide line.



Email cc:

Al Ott, ADF&G Habitat, Fairbanks  
Biologists, ADF&G Habitat, Juneau  
Dan Teske, ADF&G Sportfish, Juneau  
Dave Harris, ADF&G Commfish, Juneau  
Jason Cheney, ADF&G Wildlife, Anchorage  
Susan Magee, ADNR, Anchorage

**From:** [Angoon Airport EIS](#)  
**To:** [Angoon Airport EIS](#)  
**Subject:** Angoon Airport EIS News & Announcements  
**Date:** Monday, October 13, 2014 12:26:47 PM

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## Angoon Airport EIS News, Announcements, & Updates (10/13/2014)

We are excited to announce that the latest version of the Angoon Airport Environmental Impact Statement Newsletter, published by the Federal Aviation Administration - Alaskan Region Airports Division, is now available on our website. Please visit [www.angoonairporteis.com](http://www.angoonairporteis.com) or click the link below to check it out!


Click [HERE](#) for the October 2014 Newsletter.

Please visit our web page at [www.angoonairporteis.com](http://www.angoonairporteis.com) and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

If you have any questions or comments, please feel free to call me at (907) 271-5453 or e-mail me at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

Sincerely,  
Leslie

Angoon Airport EIS Project Manager

 **Leslie Grey**, Federal Aviation Administration  
Alaskan Region Airports Division  
222 West 7th Avenue, Box #14  
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**Phone.** 907-271-5453 **Fax.** 907-271-2851  
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# ANGOON AIRPORT

## Environmental Impact Statement



### A Message from the FAA

*Hello everyone! I hope everyone has had a great summer. As I mentioned in our last project update, we've spent the past few months resolving some remaining comments we received during internal review of the EIS. I'm happy to say that these comments have been resolved and we are now ready to finalize the Draft EIS for release later this winter. This newsletter provides some important information on upcoming project milestones and a question and answer section about the ANILCA process.*



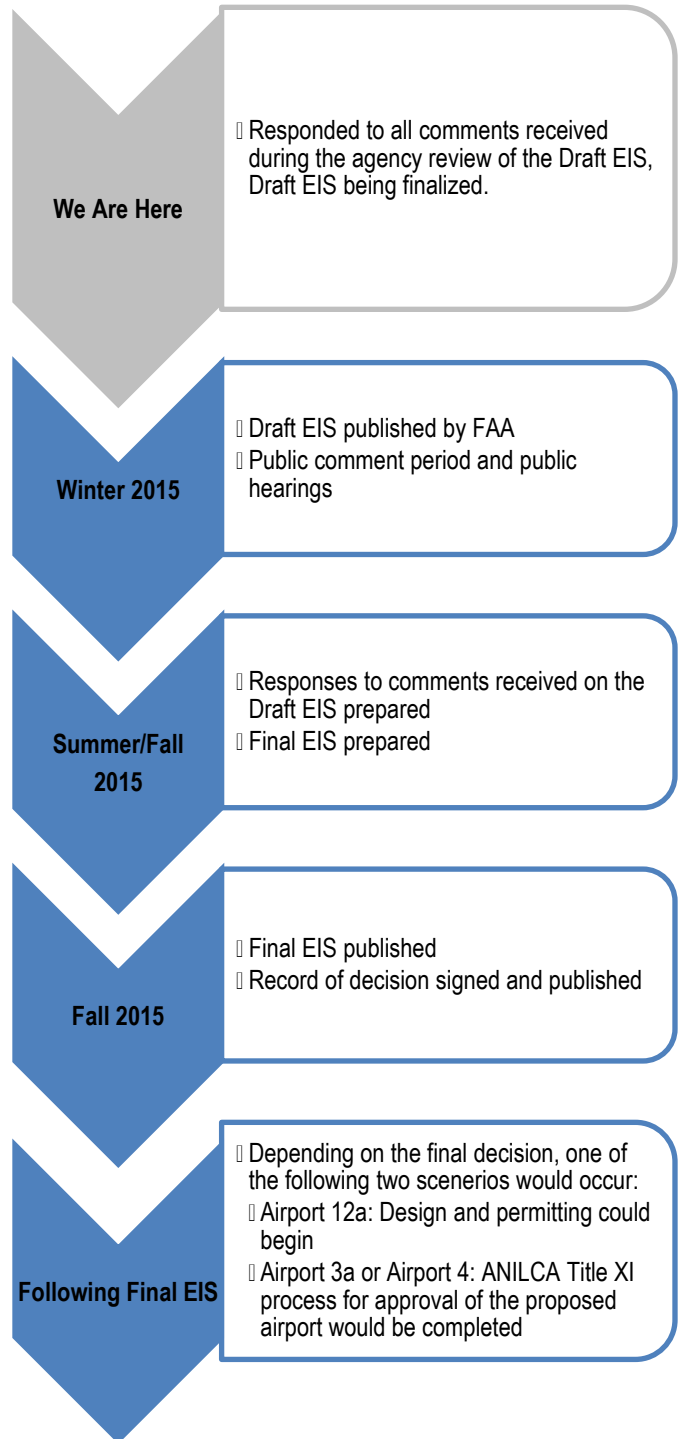
*I've heard from quite a few of you over the last few months with questions about the Angoon project. I always enjoy talking with you and appreciate that you take the time to call. It's very important part of the process for me to hear from you and is very valuable to me. Please continue to feel free to contact me with any questions, concerns, or comments. My contact information is found on the last page of this newsletter.*

*Best wishes,*

*Leslie Grey  
FAA Alaskan Region Airports Division  
Angoon Airport EIS Project Manager*

### Angoon Airport Schedule Updates

To keep everyone up to date, we have provided an update on the timing of upcoming steps to the right. This is our best estimate with the information that we have at this time. We will continue to provide updates if the schedule changes for any reason.



## Your Questions, Our Answers

As we mentioned in our last newsletter, the FAA has identified a preferred alternative (Airport 12a) that is different from the DOT&PF's proposed action (Airport 3a with Access 2). Since that time, we've received several questions about what that means for the EIS process. These questions and our answers are shared below.

### **Q: What happens when the FAA's preferred alternative is different from the DOT&PF's proposed action in the Draft EIS?**

**A:** Because the preferred alternative is different from DOT&PF's proposed action, and because it is ultimately up to the DOT&PF whether or not to build the airport, the FAA is working with DOT&PF to try to reach consensus on which alternative FAA will identify as its final preferred alternative. The FAA and the DOT&PF continue to coordinate on this issue and intend to review all comments received on the draft EIS before coming to a final decision.

### **Q: Does the DOT&PF intend to submit an ANILCA Title XI application even though the FAA's preferred alternative (Airport 12a) is not in the wilderness?**

**A:** Because the FAA's identification of a preferred alternative in the Draft EIS is not considered a final decision, the DOT&PF intends to submit the Title XI ANILCA application for their proposed action (Airport 3a with Access 2) and will use the Draft EIS as the supporting information. The Draft EIS is scheduled to be published this winter.

The DOT&PF is planning to submit an application so that the ANILCA process has been followed and no delays will occur if a decision is made to move forward with the proposed action. This does not mean that the DOT&PF has rejected the FAA's preferred alternative

### **Q: What is the Title XI ANILCA process?**

When Congress passed ANILCA, more than 100 million acres of Alaska lands were transferred into conservation system units. Congress recognized that Alaskans, particularly those living in remote areas, depend on utilities and means of transportation that must often extend across great distances. Air travel is often the only option. To meet the social and public safety needs unique to Alaska, Congress included some exceptions in ANILCA for the ways Alaskans can use federal lands. One such use is the placement of transportation and utility systems on lands considered a conservation system unit, in this case, the potential placement of an airport within the Admiralty Island National Monument and Kootznoowoo Wilderness Area.

ANILCA requires that agencies take certain steps in a project before an airport can be placed in a wilderness area in Alaska. These steps include the following:

- An evaluation of effects (the Angoon Airport EIS)
- Public hearings in local Alaska areas and in Washington, D.C.
- An independent evaluation by each involved federal agency
- Approval by Congress and the president of the United States

These steps are known as the ANILCA Title XI process. The ANILCA Title XI process will be initiated for the Angoon Airport EIS project when DOT&PF submits an application.

## We like to hear from you!

As always, you can submit comments via email to [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com), or you can contact Leslie Grey, the FAA project manager, via her contact information below. We will be in touch with the community at important milestones in the project as well as at other times just to check in. We are also on Facebook and post short updates as often as possible. Join the conversation! [www.facebook.com/AngoonAirportEIS](http://www.facebook.com/AngoonAirportEIS)



**Do you have any community information, events, stories, or news that you'd like to share?** If so, send it our way and we'll publish it in the next newsletter.

## How to Contact Us

If you have any questions about the proposed project or the EIS, please contact Leslie Grey.



### **FAA Project Manager**

Leslie Grey – AAL 611  
Angoon Airport EIS  
222 West 7th Avenue  
Box #14  
Anchorage, AK 99513-7587  
Telephone: 907-271-5453  
Fax: 907-271-2851  
E-mail: [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

Contact information has been removed to protect the privacy of individuals on the mailing list.

| Temp Record # | First Name         | Last Name    | Affiliation  | Organization                       |
|---------------|--------------------|--------------|--------------|------------------------------------|
| None          | Mark               | Powers       | Business     | Whalers Cove Lodge                 |
| None          | Edward             | Jack, Sr.    | Resident     |                                    |
| None          | Randy              | Gamble       | Resident     |                                    |
| None          | Richard            | George       | Resident     |                                    |
| None          | None               | None         | Organization | SEARHC                             |
| None          | Melissa            | Cullum       | Organization | Admiralty Research and Development |
| None          | Alberta            | Saleem       | Resident     | Angoon Senior Center               |
| None          | Fernando J.        | Jim          | Resident     | None                               |
| None          | Georgeann E.       | Jim          | Resident     | None                               |
| None          | Mabel              | Jack         | Resident     | None                               |
| None          | Ed                 | Gamble, Sr.  | Resident     | None                               |
| None          | Annie B.           | Braley       | Resident     | None                               |
| None          | David              | Merculief    | Resident     | None                               |
| None          | Denise             | Jack         | Resident     |                                    |
| None          | John E.            | Howard Jr.   | Resident     | None                               |
| None          | Sheri              | Singon       | Resident     | None                               |
| None          | Audrey             | Howard       | Resident     | None                               |
| None          | Melvin             | Starr, Sr.   | Resident     | None                               |
| None          | Morris             | Jack, Sr.    | Resident     | None                               |
| None          | Ray                | Peck         | Resident     | None                               |
| None          | Christopher        | Williams     | Resident     |                                    |
| None          | Andrew             | Records      | Resident     | None                               |
| None          | Bill               | Grasser      | Resident     | None                               |
| None          | Richard and Sharon | Powers       | Resident     | None                               |
| None          | Dan                | Faloni       | Resident     | None                               |
| None          | Mark               | Powers       | Resident     | None                               |
| None          | Harriet            | Silva        | Resident     |                                    |
| None          | Albert             | Howard       | Government   | Angoon City Council                |
| None          | Alan               | Zuboff       | Resident     | None                               |
| None          | Bessie             | Fred         | Resident     | None                               |
| None          | Donald             | Frank        | Resident     | None                               |
| None          | Frances            | Daniels      | Resident     | None                               |
| None          | Frank              | Jim          | Resident     | None                               |
| None          | Jeffery            | Oleman       | Resident     | None                               |
| None          | Lillian            | Woodbury     | Resident     | None                               |
| None          | Nick               | Johnson      | Resident     |                                    |
| None          | Roger              | Williams     | Resident     |                                    |
| None          | Matthew            | Fred, Jr.    | Resident     | None                               |
| None          | K                  | Getgood      | Resident     | None                               |
| None          | Lenora and Philip  | Walker       | Resident     | None                               |
| None          | Maxine             | Thompson     | Resident     | None                               |
| None          | John               | Mccluskey    | Resident     | None                               |
| None          | Peter              | Mccluskey    | Resident     | None                               |
| None          | Travis             | See          | Resident     |                                    |
| None          | Johnny             | Jack         | Resident     | None                               |
| None          | Kwan?              | Bales        | Resident     | None                               |
| None          | M.                 | Askook       | Resident     | None                               |
| None          | Andrew C.          | Kookesh      | Resident     | None                               |
| None          | Shayne             | Thompson     | Resident     | None                               |
| None          | Sue                | Bates        | Resident     | None                               |
| None          | Charlotte          | Washington   | Resident     | ANS Camp President                 |
| None          | (?)                | Jack         | Resident     | None                               |
| None          | Frank              | Shay         | Resident     | None                               |
| None          | Joyce              | Frank        | Resident     | None                               |
| None          | Reggie             | Nelson(?)    | Resident     | None                               |
| None          | Russell            | James        | Resident     | None                               |
| None          | Wally              | Frank, Sr.   | Resident     | None                               |
| None          | Mike               | Nelson       | Resident     | None                               |
| None          | Duff               | Mitchell     | Resident     | None                               |
| None          | Jan                | Trigg        | Resident     | None                               |
| None          | Loretta            | Pittman      | Resident     | None                               |
| None          | Carol              | Martin       | Resident     | None                               |
| None          | Jamie(?)           | Daniels      | Resident     | None                               |
| None          | Joseph             | Thompson     | Resident     | None                               |
| None          | Staria             | Thomas       | Resident     | None                               |
| None          | Frank              | Jackson      | Resident     | None                               |
| None          | Paul               | Jackson      | Resident     | None                               |
| None          | Peggy              | Williams     | Resident     | None                               |
| None          | Michelle           | Jack         | Resident     | None                               |
| None          | Mickey             | Willard      | Resident     |                                    |
| None          | George             | Nelson, Jr.  | Resident     |                                    |
| None          | Matthew            | Kookesh, Jr. | Tribe        | Kootznookoo Incorporated           |
| None          | Kevin              | Frank, Sr.   | Resident     |                                    |
| None          |                    |              | Tribe        | Angoon Community Association       |
| None          | Alan               | Zuboff       | Tribe        | Angoon Community Association       |
| None          | Floyd              | Jim          | Tribe        | Angoon Community Association       |
| None          | George             | Nelson, Jr.  | Tribe        | Angoon Community Association       |
| None          | Wally              | Frank, Sr.   | Tribe        | Angoon Community Association       |
| None          | Kevin              | Frank, Sr.   | Tribe        | Angoon Community Association       |
| None          | Peter              | Neroz        | Tribe        | Kootznookoo Incorporated           |
| None          | Stanley            | Johnson      | Resident     |                                    |
| None          | Diane              | Church       | Resident     |                                    |
| None          | Georgia & George   | Johnson      | Resident     |                                    |
| None          | Lorena             | Macaet       | Resident     |                                    |
| None          | Larry              | Jack         | Resident     |                                    |
| None          | Walter             | Jack         | Resident     |                                    |
| None          | Alan P.            | James        | Resident     |                                    |
| None          | Helen Cynthia Ann  | Frank        | Resident     |                                    |
| None          | Doris              | Williams     | Resident     |                                    |
| None          | Morris J.          | Jack Jr.     | Resident     |                                    |
| None          | Juanita            | Silva        | Resident     |                                    |
| None          | Raynelle           | Jack         | Resident     | Angoon Community Association       |



|      |                       |              |            |                              |  |
|------|-----------------------|--------------|------------|------------------------------|--|
| None | Robert                | Edenshaw     | Resident   |                              |  |
| None | Delores and Dennis    | Starr        | Resident   |                              |  |
| None | Timothy               | James        | Resident   |                              |  |
| None | Thomas                | James        | Resident   |                              |  |
| None | Ivan                  | Williams     | Resident   |                              |  |
| None | Ted and Janet         | Burke        | Resident   |                              |  |
| None | Roberta Jean          | Jamestown    | Resident   |                              |  |
| None | Kathleen              | Starr        | Resident   |                              |  |
| None | Katherine             | Felipe       | Resident   |                              |  |
| None | Clifford and Debbi Jo | Johnson      | Resident   |                              |  |
| None | Dorothea              | Blake        | Resident   |                              |  |
| None | Richard               | Hogue        | Resident   |                              |  |
| None | Flora                 | John         | Resident   |                              |  |
| None | Loretta               | Williams     | Resident   |                              |  |
| None | Dennis                | Willard      | Resident   |                              |  |
| None | Kevin                 | Frank, Sr.   | Government | Angoon City Council          |  |
| None | Randall               | Gamble       | Government | Angoon City Council          |  |
| None | Edward                | Jack, Sr.    | Government | Angoon City Council          |  |
| None | Matthew               | Kookesh, Jr. | Government | Angoon City Council          |  |
| None | Harriet               | Silva        | Government | Angoon City Council          |  |
| None | Albert                | Howard       | Tribe      | Angoon Community Association |  |
| None | Travis                | See          | Tribe      | Angoon Community Association |  |
| None | Jesse                 | Daniels      | Government | Angoon City Council          |  |

Ad # 11874281 Name SWCA ENVIRONMENTAL CONSULTANTS Size 160 Lines T0001  
 Class 820 PO# Authorized by Account 2010217197

PROOF OF PUBLICATION

District of Columbia, ss., Personally appeared before me, a Notary Public in and for the said District, Alba Cortes well known to me to be BILLING SUPERVISOR of The Washington Post, a daily newspaper published in the City of Washington, District of Columbia, and making oath in due form of law that an advertisement containing the language annexed hereto was published in said newspaper on the dates mentioned in the certificate herein.

I Hereby Certify that the attached advertisement was published in The Washington Post, a daily newspaper, upon the following date(s) at a cost of \$1,920.80 and was circulated in the Washington metropolitan area.

Published 1 Time(s). Date(s):09 of January 2015

Account 2010217197

Alba Cortes

Witness my hand and official seal this 9 day of January 20 15

Eric Coopersmith

Notary Public  
 State of District of Columbia  
 My Commission Expires 12/31/2015

My commission expires \_\_\_\_\_

ANGCOON AIRPORT DEIS RELEASE AND PUBLIC MEETING ANNOUNCEMENT The Federal Aviation Administration (FAA) has prepared a Draft Environmental Impact Statement (DEIS) to disclose the potential impacts of a proposed land-based airport on Admiralty Island to serve the City of Angoon, Alaska. Current transportation service to and from Angoon is solely by seaplane and ferry. These options do not provide sufficient availability and reliability in transportation to and from Angoon. A land-based airport will improve the availability and reliability of transportation services to and from Angoon.

The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for the airport and associated access road. The DOT&PF's proposed action is located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument#Wilderness Area). The FAA has proposed additional alternatives to the proposed action, including the no action alternative. The public comment period starts January 9, 2015, and closes March 11, 2015. The DEIS is available for download at <http://www.angoonairporthois.com/deis.html>. Information on other ways to access the DEIS is also located at this link or by contacting Leslie Grey, FAA, Alaskan Region, during business hours at (907) 271 5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov). You can submit your comments in any of the following ways: 1.Email them to [comments@angoonairporthois.com](mailto:comments@angoonairporthois.com) 2.Send them as a hard copy to Angoon Airport EIS / 1220 SW Morrison, Suite 700 / Portland, Oregon 97205 3.Fax them to (503) 224-1851 The FAA intends to host public information meetings and hearings on the DEIS/810 Evaluation/4(f) Evaluation in early March in Angoon, Juneau, and Washington D.C. The meetings will be held in March 3, 2015 in Juneau, Alaska, at the Centennial Hall, 101 Egan Dr. from 6:00 PM to 9:00 PM, March 5, 2015 in Angoon, Alaska, at the Angoon Community Association Building, 315 Heendae Rd from 2:00 PM to 7:00 PM, and March 10, 2015 in Washington, D.C. at the Holiday Inn, 550 C St., SW, from 2:00 PM to 5:00 PM. The FAA encourages all interested parties to provide comments concerning the scope and content of the DEIS. Comments should be as specific as possible and address the analysis of potential environmental Angoon Airport EIS Document 0905

impacts and the adequacy of the proposed action or merits of alternatives and the mitigation being considered. Reviewers should organize their participation so that it is meaningful and makes the agency aware of the viewer's interests and concerns using quotations and other specific references to the text of the DEIS and related documents. Matters that could have been raised with specificity during the comment period on the DEIS may not be considered if they are raised for the first time later in the decision process. This commenting procedure is intended to ensure that substantive comments and concerns are made available to the FAA in a timely manner so that the FAA has an opportunity to address them. FOR FURTHER INFORMATION CONTACT: Leslie Grey, AAL-611, Federal Aviation Administration, Alaskan Region, Airports Division, 222 W. 7th Avenue Box #14, Anchorage, AK 99513. Ms. Grey may be contacted during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

**[4910-13]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**Notice of Availability for Draft Environmental Impact Statement (Draft EIS), Draft  
Section 4(f) Evaluation, Draft Subsistence Evaluation, and Schedule of Public  
Hearings for the Proposed Airport, Angoon, Alaska**

**AGENCY:** Federal Aviation Administration (FAA)

**ACTION:** Notice of Availability (NOA), Notice of Comment Period, Notice of Public  
Hearing.

**SUMMARY:** In accordance with the National Environmental Policy Act of 1969  
(NEPA; 42 USC 4321 *et seq.*) and Council on Environmental Quality (CEQ) regulations  
(40 CFR Parts 1500-1508), the FAA issues this notice to advise the public that a Draft  
EIS for the proposed airport in Angoon has been prepared and is available for public  
review and comment. Included in the Draft EIS are a subsistence evaluation consistent  
with Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) and  
a draft evaluation pursuant to Section 4(f) of the Department of Transportation Act of  
1966 (recodified as 49 USC 303(c)).

**DATES:** Comments must be received on or before March 11, 2015. The public  
comment period will commence on January 9, 2015 and will close on March 11, 2015.  
The FAA intends to host public information meetings and hearings on the Draft EIS/810  
Evaluation/4(f) Evaluation on the following dates:

1. March 3, 2015 in Juneau, Alaska, at the Centennial Hall, 101 Egan Dr., Juneau,  
AK from 6:00 PM to 9:00 PM

2. March 5, 2015 in Angoon, Alaska, at the Angoon Community Association Building, 315 Heendae Rd, Angoon, AK from 2:00 PM to 7:00 PM
3. March 10, 2015 at the Holiday Inn, 550 C St., SW, Washington, D.C., from 2:00 PM to 5:00 PM.

**ADDRESSES:** Copies of the Draft EIS and the evaluations are available at the following locations:

1. Online at [www.angoonairporteis.com](http://www.angoonairporteis.com)
2. Juneau Public Library
  - Downtown Branch, 292 Marine Way, Juneau, AK 99801
  - Douglas Branch, 1016 3rd Street, Douglas, AK 99824
  - Mendenhall Mall Branch, 9109 Mendenhall Mall Rd, Juneau, AK 99801
3. U.S Forest Service, Admiralty Island National Monument Office, 8510 Mendenhall Loop Road, Juneau, AK 99801
4. Angoon Community Association Building, 315 Heendae Rd, Angoon, AK 99820
5. Angoon City Government Office, 700 Aan Deina Aat Street, Angoon, AK 99820
6. Angoon Senior Center, 812 Xootz Rd Angoon, AK 99820
7. The FAA, Airports Division. Please contact Leslie Grey at (907) 271-5453 for a copy.

You may submit comments or request more information by any of the following methods:

1. Email: [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com); include “Angoon Airport EIS comments” in the subject line of the message.

2. U.S. Mail: Angoon Airport EIS Comments, 1220 SW Morrison, Suite 700, Portland, Oregon 97205.

3. In person: To drop off comments, contact Leslie Grey at (907) 271-5453.

Comments from interested parties on the Draft EIS are encouraged, and may be presented orally at the public hearings. Testimony will be limited to 5 minutes per speaker.

The FAA encourages all interested parties to provide comments concerning the scope and content of the Draft EIS. Comments should be as specific as possible and address the analysis of potential environmental impacts and the adequacy of the proposed action or merits of alternatives and the mitigation being considered. Reviewers should organize their participation so that it is meaningful and makes the agency aware of the viewer's interests and concerns using quotations and other specific references to the text of the Draft EIS and related documents. Matters that could have been raised with specificity during the comment period on the Draft EIS may not be considered if they are raised for the first time later in the decision process. This commenting procedure is intended to ensure that substantive comments and concerns are made available to the FAA in a timely manner so that the FAA has an opportunity to address them.

**FOR FURTHER INFORMATION CONTACT:** Leslie Grey, AAL-611, Federal Aviation Administration, Alaskan Region, Airports Division, 222 W. 7<sup>th</sup> Avenue Box #14, Anchorage, AK 99513. Ms. Grey may be contacted during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

**SUPPLEMENTARY INFORMATION:** The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for a new land-based airport and an access road to improve the availability and reliability of



transportation services to and from Angoon. The DOT&PF's proposed action is located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The FAA has proposed additional alternatives to the proposed action, including the no action alternative. The purpose and need is discussed in detail in the Draft EIS.

The proposed project would be comparable to other rural airports in Southeast Alaska, such as those at Kake or Hoonah. It would consist of a paved, 3,300-foot-long and 75-foot-wide runway, with future expansion to 4,000 feet long.

Construction of the proposed airport would be completed in two to three construction seasons. The impact categories considered in the Draft EIS include numerous categories as required by FAA Orders 1050.1E and 5050.4B. In addition, subsistence activities and wilderness character are evaluated. Because the DOT&PF's proposed action is located in the Monument–Wilderness Area, the DOT&PF has indicated that it intends to submit an application under ANILCA Title XI to use the lands, using the Draft EIS as supporting documentation.

Additional details regarding the project can be found on the project website at [www.angoonairporteis.com](http://www.angoonairporteis.com).

Issued in Anchorage, Alaska, on January 9, 2015.

Byron K. Huffman,

*Manager, Airports Division, AAL-600.*

and accurately clear and settle its cleared CDS contracts. In addition, the proposed revisions are consistent with the relevant requirements of Rule 17Ad-22.<sup>6</sup> In particular, the amendments to the Risk Management Framework will enhance the financial resources available to the clearing house by imposing a more conservative initial margin requirement, and are therefore reasonably designed to meet the margin and financial resource requirements of Rule 17Ad-22(b)(2-3).<sup>7</sup> Additionally, the amendments to the Risk Management Framework related to ICC's CF allocation methodology further ensure ICC maintains sufficient financial resources consistent with the requirements of Rule 17Ad-22(b)(3).<sup>8</sup> As such, the proposed rule change is designed to promote the prompt and accurate clearance and settlement of securities transactions, derivatives agreements, contracts, and transactions within the meaning of Section 17A(b)(3)(F)<sup>9</sup> of the Act.

**B. Self-Regulatory Organization's Statement on Burden on Competition**

ICC does not believe the proposed rule change would have any impact, or impose any burden, on competition. The risk model enhancements apply uniformly across all market participants. Therefore, ICC does not believe the proposed rule change imposes any burden on competition that is inappropriate in furtherance of the purposes of the Act.

**C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others**

Written comments relating to the proposed rule change have not been solicited or received. ICC will notify the Commission of any written comments received by ICC.

**III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action**

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove such proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

**IV. Solicitation of Comments**

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

*Electronic Comments*

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or
- Send an email to [rule-comments@sec.gov](mailto:rule-comments@sec.gov). Please include File Number SR-ICC-2014-24 on the subject line.

*Paper Comments*

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549-1090.

All submissions should refer to File Number SR-ICC-2014-24. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (<http://www.sec.gov/rules/sro.shtml>). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICE Clear Credit and on ICE Clear Credit's Web site at <https://www.theice.com/clear-credit/regulation>.

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR-ICC-2014-24 and should

be submitted on or before January 30, 2015.<sup>10</sup>

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.

**Brent J. Fields,**  
*Secretary.*

[FR Doc. 2015-00126 Filed 1-8-15; 8:45 am]

BILLING CODE 8011-01-P

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**Notice of Availability for Draft Environmental Impact Statement (Draft EIS), Draft Section 4(f) Evaluation, Draft Subsistence Evaluation, and Schedule of Public Hearings for the Proposed Airport, Angoon, Alaska**

**AGENCY:** Federal Aviation Administration (FAA).

**ACTION:** Notice of availability (NOA), notice of comment period, notice of public hearing.

**SUMMARY:** In accordance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and Council on Environmental Quality (CEQ) regulations (40 CFR parts 1500-1508), the FAA issues this notice to advise the public that a Draft EIS for the proposed airport in Angoon has been prepared and is available for public review and comment. Included in the Draft EIS are a subsistence evaluation consistent with Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) and a draft evaluation pursuant to Section 4(f) of the Department of Transportation Act of 1966 (recodified as 49 U.S.C. 303(c)).

**DATES:** Comments must be received on or before March 11, 2015. The public comment period will commence on January 9, 2015 and will close on March 11, 2015. The FAA intends to host public information meetings and hearings on the Draft EIS/810 Evaluation/4(f) Evaluation on the following dates:

1. March 3, 2015 in Juneau, Alaska, at the Centennial Hall, 101 Egan Dr., Juneau, AK from 6:00 p.m. to 9:00 p.m.
2. March 5, 2015 in Angoon, Alaska, at the Angoon Community Association Building, 315 Heendae Rd., Angoon, AK from 2:00 p.m. to 7:00 p.m.
3. March 10, 2015 at the Holiday Inn, 550 C St. SW., Washington, DC, from 2:00 p.m. to 5:00 p.m.

**ADDRESSES:** Copies of the Draft EIS and the evaluations are available at the following locations:

<sup>10</sup> 17 CFR 200.30-3(a)(12).

<sup>6</sup> 17 CFR 240.17Ad-22.

<sup>7</sup> 17 CFR 240.17Ad-22(b)(2-3).

<sup>8</sup> 17 CFR 240.17Ad-22(b)(3).

<sup>9</sup> 15 U.S.C. 78q-1(b)(3)(F).

1. Online at [www.angoonairports.com](http://www.angoonairports.com)
2. Juneau Public Library
- Downtown Branch, 292 Marine Way, Juneau, AK 99801
- Douglas Branch, 1016 3rd Street, Douglas, AK 99824
- Mendenhall Mall Branch, 9109 Mendenhall Mall Rd., Juneau, AK 99801
3. U.S. Forest Service, Admiralty Island National Monument Office, 8510 Mendenhall Loop Road, Juneau, AK 99801
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6. Angoon Senior Center, 812 Xootz Rd., Angoon, AK 99820
7. The FAA, Airports Division. Please contact Leslie Grey at (907) 271-5453 for a copy.

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1. Email: [comments@angoonairports.com](mailto:comments@angoonairports.com); include "Angoon Airport EIS comments" in the subject line of the message.

2. U.S. Mail: Angoon Airport EIS Comments, 1220 SW Morrison, Suite 700, Portland, Oregon 97205.

3. In person: To drop off comments, contact Leslie Grey at (907) 271-5453.

Comments from interested parties on the Draft EIS are encouraged, and may be presented orally at the public hearings. Testimony will be limited to 5 minutes per speaker. The FAA encourages all interested parties to provide comments concerning the scope and content of the Draft EIS. Comments should be as specific as possible and address the analysis of potential environmental impacts and the adequacy of the proposed action or merits of alternatives and the mitigation being considered. Reviewers should organize their participation so that it is meaningful and makes the agency aware of the viewer's interests and concerns using quotations and other specific references to the text of the Draft EIS and related documents. Matters that could have been raised with specificity during the comment period on the Draft EIS may not be considered if they are raised for the first time later in the decision process. This commenting procedure is intended to ensure that substantive comments and concerns are made available to the FAA in a timely manner so that the FAA has an opportunity to address them.

**FOR FURTHER INFORMATION CONTACT:** Leslie Grey, AAL-611, Federal Aviation

Administration, Alaskan Region, Airports Division, 222 W. 7th Avenue, Box #14, Anchorage, AK 99513. Ms. Grey may be contacted during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

**SUPPLEMENTARY INFORMATION:** The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for a new land-based airport and an access road to improve the availability and reliability of transportation services to and from Angoon. The DOT&PF's proposed action is located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument-Wilderness Area). The FAA has proposed additional alternatives to the proposed action, including the no action alternative. The purpose and need is discussed in detail in the Draft EIS.

The proposed project would be comparable to other rural airports in Southeast Alaska, such as those at Kake or Honnah. It would consist of a paved, 3,300-foot-long and 75-foot-wide runway, with future expansion to 4,000 feet long.

Construction of the proposed airport would be completed in two to three construction seasons. The impact categories considered in the Draft EIS include numerous categories as required by FAA Orders 1050.1E and 5050.4B. In addition, subsistence activities and wilderness character are evaluated. Because the DOT&PF's proposed action is located in the Monument-Wilderness Area, the DOT&PF has indicated that it intends to submit an application under ANILCA Title XI to use the lands, using the Draft EIS as supporting documentation.

Additional details regarding the project can be found on the project Web site at [www.angoonairports.com](http://www.angoonairports.com).

Issued in Anchorage, Alaska, on December 31, 2014.

**Byron K. Huffman,**

*Manager, Airports Division, AAL-600.*

[FR Doc. 2015-00023 Filed 1-8-15; 8:45 am]

**BILLING CODE** 4910-13-P

## DEPARTMENT OF TRANSPORTATION

### Federal Railroad Administration

[Docket Number FRA-2014-0091]

#### Petition for Waiver of Compliance

In accordance with Part 211 of Title 49 Code of Federal Regulations (CFR), this document provides the public notice that by a document dated

September 29, 2014, the Eastern Berks Gateway Railroad (EBGR) has petitioned the Federal Railroad Administration (FRA) for a waiver of compliance from certain provisions of the Federal railroad safety regulations contained at 49 CFR 223.11, *Requirements for existing locomotives*. FRA assigned the petition Docket Number FRA-2014-0091. EBGR is headquartered in Boyertown, PA, and is a for-profit subsidiary of the nonprofit Colebrookdale Railroad Restoration Trust. EBGR has petitioned for a permanent waiver of compliance for its Plymouth locomotive, Number 6434, from the requirements of the Railroad Safety Glazing Standards, 49 CFR part 223, for certified glazing in all windows and a minimum of four emergency windows. The locomotive was built in 1964. The locomotive is used for one or two weekly trips over 8.6 miles of track between Boyertown and Pottstown, PA, which serves as a feeder line to the Norfolk Southern Railroad that runs through Pottstown, PA. The line meanders through woods and rock formations. There are six public at-grade highway crossings on the railroad. Two of those crossings have automated flashing lights. The remainder is equipped with cross-bucks. The locomotive is used primarily for passenger excursion trains and for yard switching duties in Boyertown. The maximum speed limit for these operations is 10 mph. EBGR indicates no instance of vandalism or personal injury, and professes financial burden in retrofitting the locomotive to comply with FRA safety glazing standards.

A copy of the petition, as well as any written communications concerning the petition, is available for review online at [www.regulations.gov](http://www.regulations.gov) and in person at the U.S. Department of Transportation's (DOT) Docket Operations Facility, 1200 New Jersey Ave. SE., W12-140, Washington, DC 20590. The Docket Operations Facility is open from 9 a.m. to 5 p.m., Monday through Friday, except Federal Holidays.

Interested parties are invited to participate in these proceedings by submitting written views, data, or comments. FRA does not anticipate scheduling a public hearing in connection with these proceedings since the facts do not appear to warrant a hearing. If any interested party desires an opportunity for oral comment, they should notify FRA, in writing, before the end of the comment period and specify the basis for their request.

All communications concerning these proceedings should identify the appropriate docket number and may be

# Affidavit of Publication

United States of America  
SWCA Environmental Consultants

Ad #: 700009333

## ANGOON AIRPORT DEIS RELEASE AND PUBLIC MEETING ANNOUNCEMENT

The Federal Aviation Administration (FAA) has prepared a Draft Environmental Impact Statement (DEIS) to disclose the potential impacts of a proposed land-based airport on Admiralty Island to serve the City of Angoon, Alaska. Current transportation service to and from Angoon is solely by seaplane and ferry. These options do not provide sufficient availability and reliability in transportation to and from Angoon. A land-based airport will improve the availability and reliability of transportation services to and from Angoon.

The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for the airport and associated access road. The DOT&PF's proposed action is located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument-Wilderness Area). The FAA has proposed additional alternatives to the proposed action, including the no action alternative.

The public comment period starts January 9, 2015, and closes March 11, 2015. The DEIS is available for download at <http://www.angoonairports.com/dels.html>. Information on other ways to access the DEIS is also located at this link or by contacting Leslie Grey, FAA, Alaskan Region, during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

You can submit your comments in any of the following ways:

1. Email them to [comments@angoonairports.com](mailto:comments@angoonairports.com)
2. Send them as a hard copy to Angoon Airport EIS / 1220 SW Morrison, Suite 700 / Portland, Oregon 97205
3. Fax them to (503) 224-1851

The FAA intends to host public information meetings and hearings on the DEIS/810 Evaluation/4(f) Evaluation in early March in Angoon, Juneau, and Washington D.C.

The meetings will be held in March 3, 2015 in Juneau, Alaska, at the Centennial Hall, 101 Egan Dr. from 6:00 PM to 9:00 PM, March 5, 2015 in Angoon, Alaska, at the Angoon Community Association Building, 315 Heendae Rd from 2:00 PM to 7:00 PM, and March 10, 2015 in Washington, D.C. at the Holiday Inn, 550 C St., SW, from 2:00 PM to 5:00 PM.

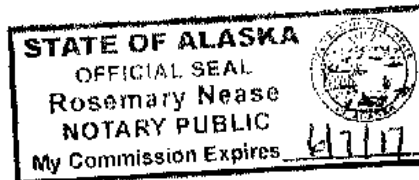
The FAA encourages all interested parties to provide comments concerning the scope and content of the DEIS. Comments should be as specific as possible and address the analysis of potential environmental impacts and the adequacy of the proposed action or merits of alternatives and the mitigation being considered. Reviewers should organize their participation so that it is meaningful and makes the agency aware of the viewer's interests and concerns using quotations and other specific references to the text of the DEIS and related documents. Matters that could have been raised with specificity during the comment period on the DEIS may not be considered if they are raised for the first time later in the decision process. This commenting procedure is intended to ensure that substantive comments and concerns are made available to the FAA in a timely manner so that the FAA has an opportunity to address them.

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I, Stephanie West, first duly sworn, oath, depose, and say that I am the Principle Clerk of the JUNEAU EMPIRE, a newspaper of general circulation, published in the city of Juneau, State of Alaska; that the publication was published in said newspaper and on [www.juneauempire.com](http://www.juneauempire.com), the online edition, on the 9th day of January 2015 and thereafter for 0 additional day(s), the last date of publication being January 9, 2015.

.....  
Subscribed and sworn to before me this 12th day of January 2015.

.....  
Notary Public in and for the State of Alaska.





## ANGOON AIRPORT DRAFT ENVIRONMENTAL IMPACT STATEMENT AND TITLE XI APPLICATION DISCUSSION SUMMARY

January 14, 2015

10:00 a.m. – 11:00 a.m., Alaska

### Attendees:

Darrin Kelly, U.S. Forest Service  
[dpkelly@fs.fed.us](mailto:dpkelly@fs.fed.us)

Chad VanOrmer, U.S. Forest Service  
[cvanormer@fs.fed.us](mailto:cvanormer@fs.fed.us)

Melissa Dinsmore, U.S. Forest Service  
[mdinsmore@fs.fed.us](mailto:mdinsmore@fs.fed.us)

Karen Iwamoto, U.S. Forest Service  
[kiwamoto@fs.fed.us](mailto:kiwamoto@fs.fed.us)

Roger Birk, U.S. Forest Service  
[rbirk@fs.fed.us](mailto:rbirk@fs.fed.us)

Linda Speerstra, U.S. Army Corps of Engineers  
[linda.speerstra@usace.army.mil](mailto:linda.speerstra@usace.army.mil)

Randal Vigil, U.S. Army Corps of Engineers  
[Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil)

Leslie Grey, Federal Aviation Administration  
[Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

Mike Edelmann, Federal Aviation Administration  
[Mike.Edelmann@faa.gov](mailto:Mike.Edelmann@faa.gov)

George Weekley, SWCA Environmental Consultants  
[gweekley@swca.com](mailto:gweekley@swca.com)

Amanda Childs, SWCA Environmental Consultants  
[achilds@swca.com](mailto:achilds@swca.com)

### Background Information: Alaska Department of Transportation and Public Facilities' Reasons for Submitting Application

- The Alaska Department of Transportation and Public Facilities (DOT&PF) identified Airport 3 as their preferred location in the airport master plan with extensive public involvement from Angoon residents.
- As part of the environmental impact statement (EIS) process, the Federal Aviation Administration (FAA) completed supplemental aviation studies of the master plan airport locations and other potential sites. The FAA identified three potential airport locations (3a, 4, and 12a) that sufficiently met the aviation criteria to be considered as viable alternatives. The DOT&PF has adopted Airport 3a as their proposed action, which is a slight variation on Airport 3 in the master plan. After analysis of all alternatives, review of impacts, and review of special purpose laws, the FAA has identified Airport 12a as the preferred alternative (see pages 73–75 of the draft EIS). Additionally, as a result of Department of Transportation Act Section 4(f) requirements, the FAA cannot legally select any other alternative.
- The DOT&PF proposed action remains Alternative 3a. The DOT&PF requested that the draft EIS be published, and public comments received and reviewed before formally deciding whether they are in agreement with the FAA's preferred alternative. The DOT&PF has stated that they intend to rescind the Alaska National Interest Lands Conservation Act (ANILCA) application if the community shows support for 12a.
- Unless new information is uncovered during the comment review period that precludes the selection of 12a, the FAA will proceed with 12a. Should the DOT&PF decide to continue forward with 3a, there will likely be higher level discussions between the FAA and DOT&PF.



### **Adequacy Review: ANILCA Flow Chart**

- Both the U.S. Forest Service (USFS) and the U.S. Army Corps of Engineers (USACE) had questions on what the agencies need to evaluate as part of the ANILCA application adequacy review.
- The FAA and FAA consultants responded that our understanding of ANILCA and Department of the Interior regulations is that they require agencies to evaluate the application on whether there is enough information to continue on with the ANILCA process, not whether there is enough information in the application for the agencies to make a decision on whether or not to provide tentative approval or disapproval of the application proposal (see additional information provided separately regarding the process). Each agency needs to evaluate the draft EIS and supporting documentation using the eight criteria in ANILCA (see Chapter 5 of the draft EIS for these criteria). A decision does not need to be made whether to issue a permit or not.
- It was mentioned that there is insufficient information presented in the draft EIS to issue a Section 404 permit as an example of what the agencies might be looking for as a measure of adequacy. This led to a discussion of the overall ANILCA process. It was clarified that the level of detail for a Section 404 permit is not expected at this stage, and the lack of it at this point does not mean the application is not adequately supported. Discussion then focused on what exactly the expected outcome of the current step (four) as shown on the ANILCA flow chart is (see attached flow chart). The outcome of this step is a determination that the information provided in the draft EIS and supporting information supports the eight ANILCA decision criteria. At this stage, it is not necessary to determine if that information will lead to a recommendation of approval or disapproval. That happens in step 7 following the issuance of the record of decision.
- George Weekley discussed the intent of ANILCA and how it relates to a normal permitting process. ANILCA, in some ways, supersedes the normal permitting process. Regardless of the agencies' tentative approval or disapproval, if the President and Congress approve of the ANILCA application, permits must be issued to the applicant, subject to measures to minimize or mitigate effects.
- Leslie Grey discussed previous review of the EIS. The USFS and USACE have both reviewed the technical reports, the methodology, and the preliminary draft EIS. The FAA has incorporated both agencies' comments into the draft EIS.

### **Review Periods, Schedule and Submittals**

- For ANILCA, each agency (the FAA, USFS, and USACE) will submit a letter separately to the DOT&PF.
- The FAA expects to find the documentation adequate for evaluating the ANILCA application.
  - The FAA will provide the USFS and USACE with an example letter that FAA will be sending to the DOT&PF.
- The review under the National Environmental Policy Act (NEPA) is concurrent with the agencies' ANILCA information-adequacy review. Both are 60 days and start and end at the same time.
- NEPA comments are submitted separately from ANILCA comments, and the NEPA comments will be sent to the FAA.



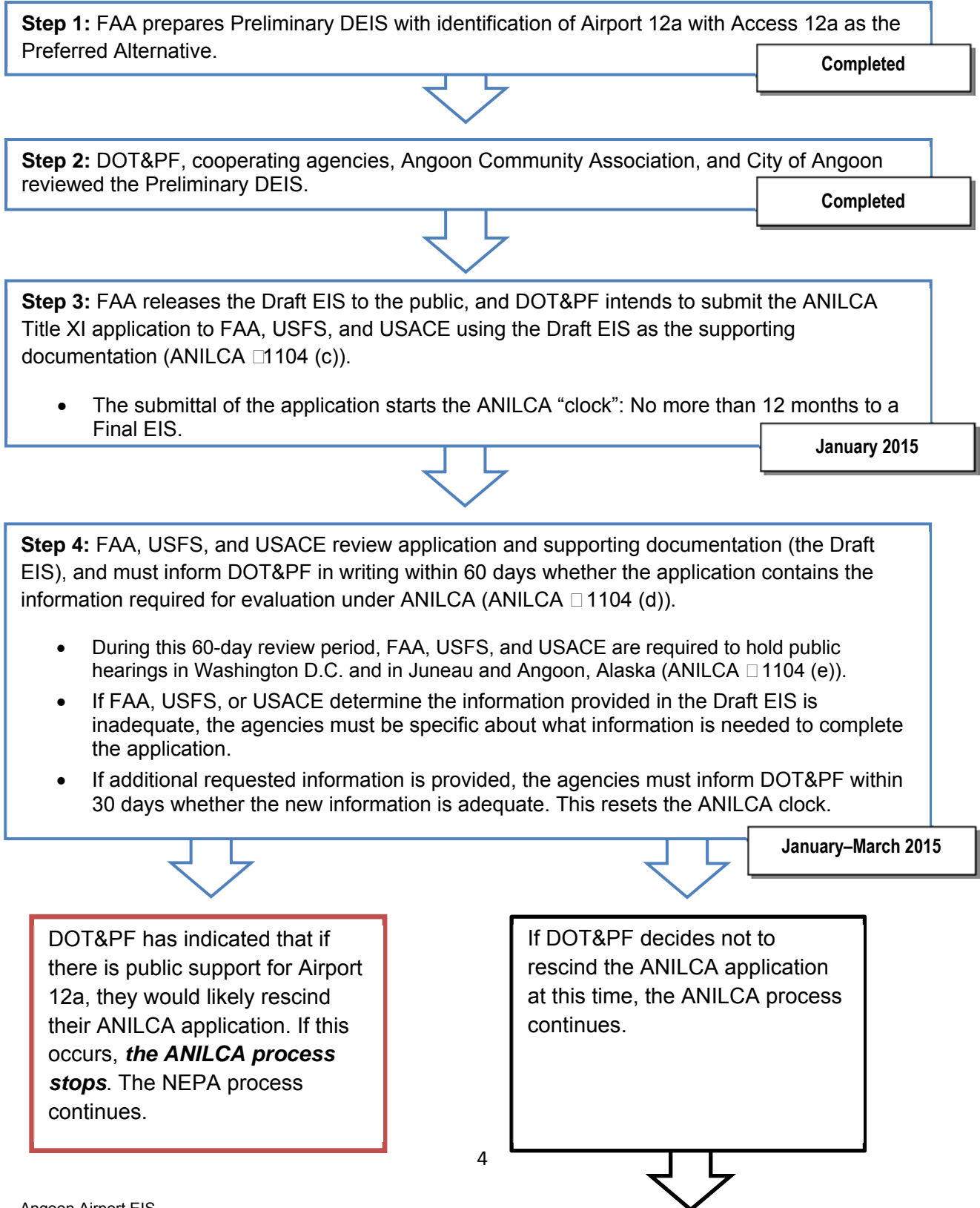


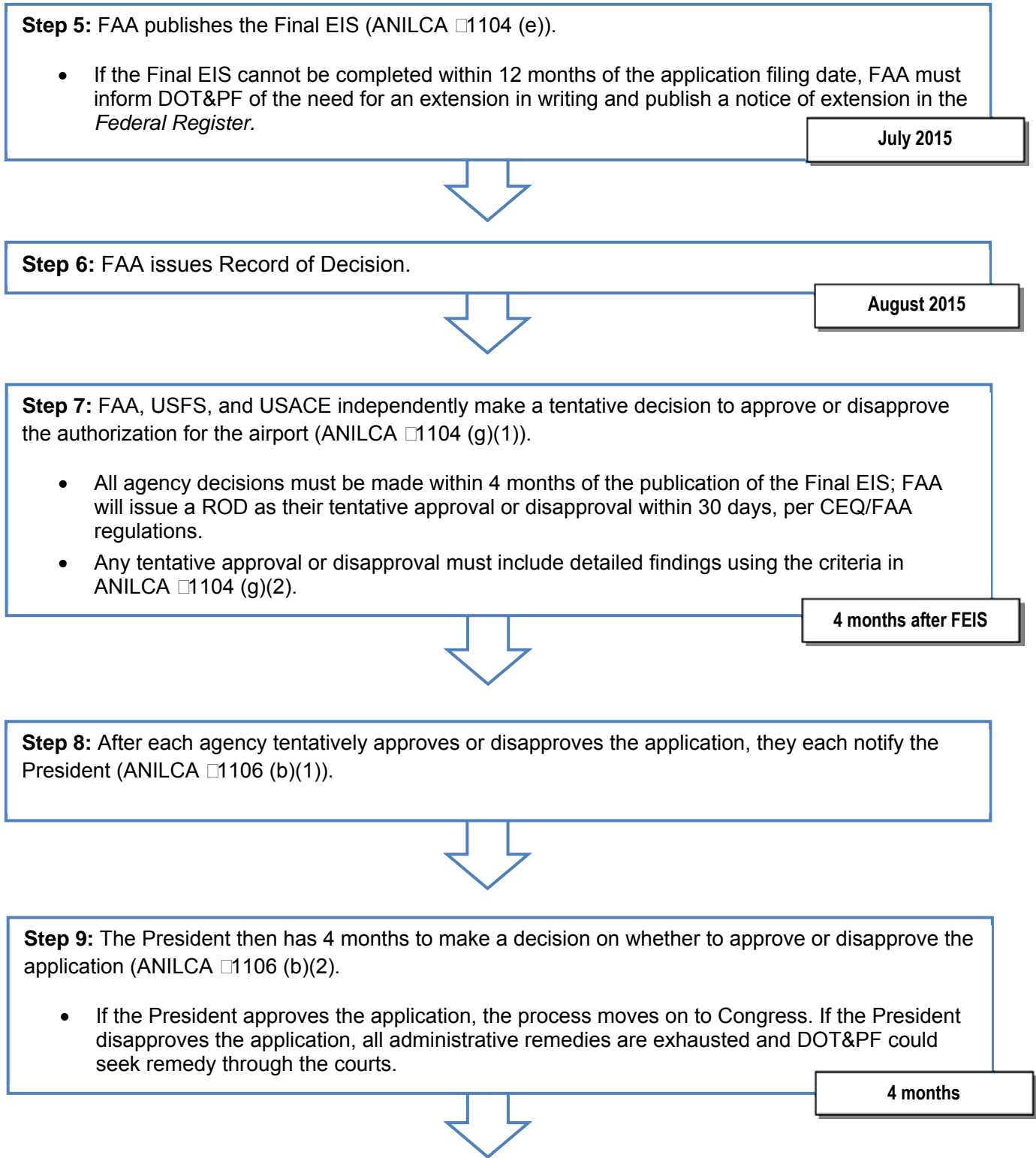
- The schedule for the process will depend on the DOT&PF's decision on if they will rescind the ANILCA application. The current schedule assumes that Airport 12a will remain the preferred alternative, and that DOT&PF will rescind the ANILCA application.

### **NEPA and ANILCA Hearings**

- A question was asked about attendance at the public hearings in Juneau, Angoon, and Washington, D.C. The FAA will send Leslie Grey, Mike Edelman, and members of the FAA consultant team to Angoon and Juneau. For the hearings in Washington, D.C, Leslie Grey, an FAA senior NEPA specialist, and members of the FAA consultant team will attend. All agencies plan to identify agency attendees for all three hearings.
- A subsequent question was asked about whether the hearings would cover both the NEPA public comment meeting and the ANILCA Title XI hearing. The FAA responded that they have not completed the exact details and timeframes of those hearings.
- The USFS had a question on the feasibility of the schedule in the ANILCA process document, which shows July 2015 as the completion day for a final EIS. The FAA responded that this would only realistically happen if the DOT&PF rescinds the ANILCA application as soon as the draft EIS comments are reviewed.
- The USFS summarized the meeting by saying that the agencies will review the application and supporting documents (the draft EIS) for ANILCA adequacy to move the process forward, not whether there is enough information to make a decision, and that the agencies will examine the draft EIS separately for NEPA review.

## Angoon Airport EIS ANILCA Title XI Application Process: Steps and Timeline





**Step 10:** If the President approves the application, he must send the recommendation report to Congress detailing the rationale for approval. Congress then has 120 days to pass a joint resolution validating the President's approval (ANILCA §1106 (c)).

120 days

**Step 11:** If Congress passes the joint resolution, the appropriate federal agencies shall issue appropriate authorizations in accordance with applicable law (ANILCA §1106 (c)(6)).

- If Congress does not pass the joint resolution, then the application is deemed dead and DOT&PF could seek remedy through court.

## NOTICE OF PUBLIC HEARINGS FOR ANGOON AIRPORT EIS

The Federal Aviation Administration (FAA) has prepared a Draft Environmental Impact Statement (DEIS) to disclose the potential impacts of a proposed land-based airport on Admiralty Island to serve the City of Angoon, Alaska.

The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for the airport. The DOT&PF's proposed action is located in the Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument–Wilderness Area). The FAA has proposed additional alternatives to the proposed action, including the no action alternative.

All required resource impact categories have been considered and documented in the DEIS as required by FAA Orders 1050.1E and 5050.4B. In addition, subsistence activities and wilderness character are evaluated. Because the DOT&PF's proposed action is located in the Monument–Wilderness Area, the DOT&PF has submitted an application under the Alaska National Interests Land Conservation Act (ANILCA) Title XI (PL 96-487). The application used the DEIS and other materials as supporting documentation.

Public hearings on the Angoon Airport DEIS, ANILCA Title XI, 810 Evaluation, and 4(f) Evaluation will be held on March 3, 2015 in Juneau, Alaska, at the Centennial Hall, 101 Egan Dr. from 6:00 PM to 9:00 PM, March 5, 2015 in Angoon, Alaska, at the Angoon Community Association Building, 315 Heendae Rd from 2:00 PM to 7:00 PM.

In addition, ANILCA Title XI requires hearings be held in Washington, D.C. This required hearing will be March 10, 2015 in Washington, D.C. at the Holiday Inn, 550 C St., SW, from 2:00 PM to 5:00 PM. The purpose of these hearings is to address the proposed actions, potential economic, social, and environmental and the project's consistency with the goals and objectives of each affected area's land use or planning strategy.

Comments from interested parties are encouraged, and may be presented orally at the public hearings. Testimony will be limited to 3 minutes per speaker.

The public comment period started January 9, 2015 and closes March 11, 2015. However, as dictated by FAA Order 5050.4B the FAA will accept all written public hearing comments submitted until March 20, 2015 (within 10 days of the last public hearing date).

The DEIS is available for download at <http://www.angoonairporteis.com/deis.html>. Information on other ways to access the DEIS is also located at this link or by contacting Leslie Grey, FAA, Alaskan Region, during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).

If you cannot attend the hearing, you can also submit your comments in any of the following ways:

1. Email them to [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com)
2. Send them as a hard copy to Angoon Airport EIS / 1220 SW Morrison, Suite 700 / Portland, Oregon 97205
3. Fax them to (503) 224-1851

FOR FURTHER INFORMATION CONTACT: Leslie Grey, AAL-611, Federal Aviation Administration, Alaskan Region, Airports Division, 222 W. 7<sup>th</sup> Avenue Box #14, Anchorage, AK 99513. Ms. Grey may be contacted during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov).



DEPARTMENT OF THE ARMY  
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
REGULATORY DIVISION  
P.O. BOX 22270  
JUNEAU, ALASKA 99802

JAN 29 2015

Regulatory Division  
POA-2009-1254

Mr. Chuck Correa  
Southcoast Division Director  
Alaska Department of Transportation  
and Public Facilities  
Post Office Box 112506  
Juneau, Alaska 99811

Dear Mr. Correa:

We have received your January 9, 2015, Alaska National Interest Lands Conservation Act (ANILCA), Title XI application for the Alaska Department of Transportation and Public Facilities proposed construction of a public use airport to serve the community of Angoon, Alaska.

The proposed project is located within Section 33, T. 50 S., R. 68 E., Copper River Meridian; USGS Quad Map Sitka B-2; Latitude 57.492° N., Longitude 134.516° W.; Tongass National Forest, Admiralty Island National Monument, Koolznoowoo Wilderness; near Angoon, Alaska. It has been assigned number POA-2009-1254, Favorite Bay, which should be referred to in all correspondence with us.

If you would like us to begin evaluation of your proposal, more information is essential for the application to be considered complete. Please provide the following in accordance with 33 CFR Part 325.1(d):

- a. Plan and section view drawings that specify clearly, with distances in feet, the dimensions of the proposed project ( access roads, fill-pads, parking lots, taxi-ways, runways, air terminal, etc.) showing the placement of fill material in relation to the waters of the United States, including wetlands. Use 8½-inch by 11-inch paper.
- b. A proposed project location map.
- c. The surface area in acres of wetlands and other waters, such as streams, lakes, or tidal waters that would be filled by your proposed project.
- d. The classification and amount of each type of fill material.
- e. Describe the overall activity or project. Give appropriate dimensions of structures such as taxiways, runway safety areas (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Also, identify any structure, including dimensions, to be constructed on the fill.
- f. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the wetlands where the work is being proposed so that they may be notified of the proposed activity.
- g. A complete description of all activities which the applicant plans to undertake which are reasonably related to the same project and for which a permit would be required. For example, a permit application for a marina will include dredging required for access as well as any fill associated with construction of the marina.



Also, in accordance with 33 CFR Part 325.1(d)(7), "For activities involving discharges of dredged or fill material into waters of the U.S., the application must include a statement describing how impacts to waters of the United States are to be avoided and minimized. The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts." Therefore, you are required to provide information regarding your proposed avoidance, minimization, and compensatory mitigation, which will be included in the Corps public notice of your project. Additional information can be obtained from the Alaska District's *Final Mitigation Rule* Public Notice, Number POA-2008-834, which is available for viewing on our website at: <http://www.poa.usace.army.mil/Missions/Regulatory/SpecialPublicNotices.aspx>. The enclosure titled, "*Applicant Proposed Mitigation Statement*" can be used to assist you in this requirement.

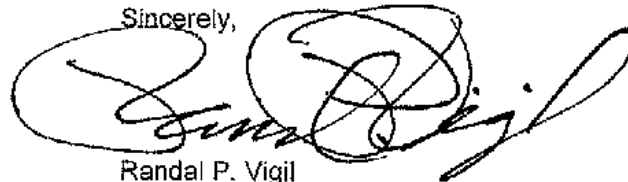
Upon receipt of the requested information we will begin evaluating your application. If we do not receive the information within 30 days of the date of this letter, we will close your file. Closure of the file at such time will not preclude you from reopening the file at a later date.

A preliminary review for compliance with the Environmental Protection Agency's 404 (b)(1) Guidelines indicates that the proposed discharge of dredged or fill material may not contain all appropriate and practicable steps to minimize potential impacts of the discharge on the aquatic ecosystem, nor does it appear to represent the least environmentally damaging practicable alternative. The least environmentally damaging practicable alternative may include construction in uplands or reducing the size of the proposal to the minimum discharge necessary for the project. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. You must provide us a draft 404 (b)(1) Guidelines analysis on the practicability of the alternatives you considered for your proposed project. This information should include the availability of other sites and the use of other project designs which would avoid or minimize project impacts on the aquatic ecosystem. This information must be provided by the public notice expiration date once we've determined your application is complete, and have issued a public notice.

Section 401(a)(1) of the Clean Water Act requires that you obtain a Certificate of Reasonable Assurance or waiver of certification. This is the responsibility of the Alaska Department of Environmental Conservation (ADEC). Once we determine your application to be complete, we will forward copy of your application to the ADEC, which they will accept as an application for a Certificate of Reasonable Assurance. A fee is charged by the ADEC for the 401 certificate. Fee information can be found online at [www.state.ak.us/dec/water/wwdp/online\\_permitting/individual\\_permit\\_fees.htm](http://www.state.ak.us/dec/water/wwdp/online_permitting/individual_permit_fees.htm) or by contacting the ADEC at WQM/401 Certification, 410 Willoughby Avenue, Juneau, Alaska 99801-1795, or by telephone at (907) 465-5321.

Please contact me via email at [Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil), by mail at the address above, by phone at (907) 790-4491, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Randal P. Vigil", written over a circular stamp or seal.

Randal P. Vigil  
Project Manager

CF:

[Verne.Skagerberg@alaska.gov](mailto:Verne.Skagerberg@alaska.gov)  
[Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)  
[DPKelly@fs.fed.us](mailto:DPKelly@fs.fed.us)



## CLARIFICATION ON THE ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA) TITLE XI APPLICATION REVIEW PROCESS

During the January 14, 2015, teleconference between the Federal Aviation Administration (FAA), the U.S. Forest Service, and the U.S. Army Corps of Engineers, a major point of discussion was the purpose and intent of the Alaska National Interest Lands Conservation Act (ANILCA) Title XI application review.

As clarified during the call, the purpose of the ANILCA application review is *not* to determine whether the ANILCA application and supporting documents contain all the information needed for agencies to make a tentative decision to approve or disapprove the ANILCA application. Instead, **the purpose of the ANILCA application review is to ensure that the ANILCA process is ready to continue to the next steps by virtue of there being enough information to prepare supporting documentation (such as technical reports, background information, or the environmental impact statement "EIS" itself).** The information outlined below supports that rationale.

The ANILCA Title XI application process is intended to streamline the federal permitting process by following a certain sequence wherein 1) the ANILCA application is submitted, 2) National Environmental Policy Act (NEPA) documents are prepared, 3) public comment is solicited, and 4) tentative decisions are rendered, all within specified timeframes.

Although the initial intent of ANILCA is that the application would be filed before the NEPA process begins, the realities of NEPA compliance today make the ANILCA process sequence and timelines nearly impossible to meet. With this in mind, in the early stages of the Angoon Airport EIS, the Alaska Department of Transportation and Public Facilities (DOT&PF) delayed filing an ANILCA application until a draft EIS was either in the final stages or fully prepared. This would allow more time for the agencies to meet the ANILCA timelines (1 year from ANILCA application submittal; see ANILCA 1104(e) below) to publish a final EIS.

ANILCA, itself, and Department of the Interior regulations guiding the ANILCA Title XI process demonstrate that the intent behind the ANILCA application review is that the review should focus on ensuring that there is enough information to prepare a NEPA document, which, in the sequence outlined above, would not yet have begun.

ANILCA Section 1104(c–e) outlines the following linear process in the filing of the application, review, and development of an EIS under NEPA:

### **(c) Filing**

Each applicant for the approval of any transportation or utility system shall file on the same day an application with each appropriate Federal agency. The applicant shall utilize the consolidated form prescribed under subsection (b) of this section for the type of transportation or utility system concerned.

### **(d) Agency notice**

(1) Within sixty days after the receipt of an application filed pursuant to subsection (c) of this section, the head of each Federal agency with whom the application was filed shall inform the applicant in writing that, on its face—

- (A) the application appears to contain the information required by this subchapter and applicable law insofar as that agency is concerned; or
- (B) the application does not contain such information.



(2) Any notice provided under paragraph (1)(B) shall specify what additional information the applicant must provide. If the applicant provides additional information, the head of the Federal agency must inform the applicant in writing, within thirty days after receipt of such information, whether the information is sufficient.

**(e) Environmental impact statement**

The draft of any environmental impact statement required under the National Environmental Policy Act of 1969 [42 USC 4321 et seq.] in connection with any application filed under this section shall be completed, within nine months from the date of filing, by the head of the Federal agency assigned lead responsibility for the statement. Any such statement shall be jointly prepared by all Federal agencies with which the application was filed under subsection (c) of this section. The final environmental impact statement shall be completed within one year from the date of such filing. Such nine-month and one-year periods may be extended for good cause by the Federal agency head assigned lead responsibility for the preparation of such statement if he determines that additional time is necessary for such preparation, notifies the applicant in writing of such determination, and publishes notice of such determination, together with the reasons therefor, in the Federal Register. ...The Federal agency assigned lead responsibility shall, in conjunction with such other Federal agencies before which the application is pending, hold public hearings in the District of Columbia and an appropriate location in the State on each draft joint environmental impact statement and the views expressed therein shall be considered by all Federal agencies concerned before publication of the final joint environmental impact statement.

Additional congressional intent can be gleaned from the preamble of the Department of the Interior regulations (43 Code of Federal Regulations [CFR] Part 36; 36 CFR Part 13; and 50 CFR Part 36) to clarify the ANILCA Title XI application review process. The Department of Interior preamble states as follows:

**Section 36.5 Application Review**

Interior has considerable experience in processing applications for similar types of systems as those covered under Title XI. Interior has learned that applications which supply inadequate information far outnumber those applications which are complete when initially filed. Failure to supply adequate information jeopardizes the applicant's ability to proceed with the project. **The agency may be unable to prepare an Environmental Impact Statement (EIS) or may produce an inadequate EIS, leading to disapproval of the application. The proposed regulations are intended to avoid this result.** Therefore, no change has been made in the regulations.

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
FEDERAL AVIATION ADMINISTRATION  
ALASKAN REGION, AIRPORTS DIVISION  
&**

**U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE, ALASKA REGION**

This **MEMORANDUM OF UNDERSTANDING (MOU)** is hereby entered into by and between the Federal Aviation Administration (FAA) and the USDA Forest Service (Forest Service).

## **I. INTRODUCTION**

The Alaska Department of Transportation and Public Facilities (DOT&PF) has proposed to construct and operate a land-based commercial service airport near the City of Angoon, Alaska on Admiralty Island (Project). The airport would accommodate small, wheeled aircraft and would include a single runway with an apron comparable to other rural airports in Southeast Alaska, such as the airports at Kake or Hoonah. A new access road for the airport would need to be constructed. The location proposed by the DOT&PF is called Airport 3a. The components of the Proposed Action are summarized below.

### **The Proposed Action is a land-based airport consisting of the following components:**

- **Runway:** Paved; 3,300 feet long and 75 feet wide, with future expansion to 4,000 feet long\*
- **Runway safety areas:** 150 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- **Object free area:** 500 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- **Runway protection zone:** Standard visual approach dimensions of 500 × 1,000 × 700 feet
- **Single, perpendicular taxiway:** Paved
- **Aircraft apron:** Paved
- **Navigational aid:** Rotating beacon
- **Visual approach aid:** Precision approach path indicator
- **Runway lights:** Pilot-controlled, medium-intensity lights
- **Terminal space:** Sufficient area for a future terminal or passenger shelter
- **Lease lots:** Five 12,500-square-foot spaces
- **Electrical control building:** Near future terminal site
- **Perimeter fence:** For security and wildlife control
- **Passenger parking lot:** Paved, near future terminal site
- **Support facilities:** Weather station, communication, etc.
- **Access road:** Two, paved, 9-foot-wide lanes and 1-foot shoulders with right-of-way sized for future expansion to two 10-foot lanes and 5-foot shoulders\*
- **Overhead utility lines:** Power and telephone lines located within the access road corridor

\*Future expansion would be subject to additional environmental review when proposed for construction.

Like many communities in Southeast Alaska, Angoon has no road connections outside the local area because the ocean and terrain surrounding Angoon make construction and maintenance of roads and bridges to other communities impractical and prohibitively expensive. Seaplane service to and from Angoon is available approximately 44% of the hours in any given year. This percentage of time is determined by weather, lighting conditions, and water conditions in Favorite Bay. The ferry service provides a relatively low-cost travel option that can usually

accommodate passenger demand but is unlikely to improve the availability and reliability of transportation to and from Angoon due to infrequent schedules and travel time.

A land-based airport would meet Angoon's unmet transportation needs by improving aviation availability and reliability. A land-based airport would have, or would allow for, the following:

- Runway lighting, allowing a pilot to safely land at night or in low light situations
- The development of an instrument approach procedure using a fixed threshold that would allow pilots to navigate to and land at the Angoon Airport during instrument flight rules weather conditions

A land-based airport with runway lights, an instrument approach procedure, and a fixed threshold would improve the availability of aviation service to Angoon, allowing flights to occur 89%–94% of the total hours in a given year. This more than doubles the 44% of hours per year that seaplane service is currently available.

The FAA is the lead federal agency with statutory authority over airports and airways in the United States. The FAA administers the Airport Improvement Program, through which the DOT&PF has applied for approval of an airport layout plan for the proposed Angoon Airport and a grant to fund design and construction. Before the FAA can decide whether to provide the requested funding or approval for the airport layout plan, the FAA is required by the National Environmental Policy Act of 1969 (NEPA) to evaluate and publicly disclose the potential social and environmental effects of building and operating the proposed airport. The FAA is also responsible for ensuring that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment (49 U.S.C. 47101(a)(6)).

The Forest Service manages the land—Admiralty Island National Monument and Kootznoowoo Wilderness Area (referred to as the Monument–Wilderness Area)—on which the DOT&PF's Proposed Action and one of the other airport alternatives are located. For this reason, the Forest Service must issue a decision under NEPA whether to approve or disapprove the Project if an alternative in the Monument–Wilderness Area is selected.

The FAA has identified five alternatives (three airport locations and associated access roads), including the Proposed Action. These alternatives are:

- Airport 3a with Access 2 (the Proposed Action)
- Airport 3a with Access 3
- Airport 4 with Access 2
- Airport 4 with Access 3
- Airport 12a with Access 12a (the Preferred Alternative)

A brief summary of alternatives is provided below. The FAA has identified Airport 12a with Access 12a as the Preferred Alternative.

#### **Airport 3a with Access 2 (Proposed Action)**

Airport 3a with Access 2 would be located on lands owned or managed by the Forest Service; Kootznoowoo, Inc. (the local village Alaska Native corporation); and Sealaska Corporation (the



regional Alaska Native corporation, which manages the subsurface estate). The airport would be located on the north side of Favorite Bay within the boundaries of the Monument–Wilderness Area. Access 2 would begin at the existing Bureau of Indian Affairs (BIA) Road, and travel around the southeastern end of Favorite Bay within 1,000 feet of the shoreline. It would require the construction of a bridge across Favorite Creek. Because this alternative would be located in the Monument–Wilderness Area, it would require a permit under Title XI of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA).

### **Airport 3a with Access 3**

The access road would be the only difference between this alternative and Airport 3a with Access 2; the location and details for the airport would be the same. As with Access 2, Access 3 would begin at the existing BIA Road, but would stay farther inland from the Favorite Bay shoreline. The bridge crossing at Favorite Creek would be located farther upstream than the bridge crossing for Access 2. Because this alternative would be located in the Monument–Wilderness Area, it would require an ANILCA Title XI permit.

### **Airport 4 with Access 2**

Airport 4 with Access 2 would be located on the east side of Favorite Bay on lands owned or managed by the Forest Service; Kootznoowoo, Inc.; and Sealaska Corporation in the Monument–Wilderness Area. Access 2 would begin at the existing BIA Road and travel around the eastern end of Favorite Bay within 1,000 feet of the shoreline. A bridge crossing at Favorite Creek—the same bridge location as for Airport 3a with Access 2—would be required. Because this alternative would be located in the Monument–Wilderness Area, it would require an ANILCA Title XI permit.

### **Airport 4 with Access 3**

The access road would be the only difference between this alternative and Airport 4 with Access 2. The location and details for the airport location would be the same as under Airport 4 with Access 2. As with Access 2, Access 3 would also begin at the existing BIA Road, but it would stay farther inland from the Favorite Bay shoreline. The bridge crossing at Favorite Creek would be located farther upstream than the bridge crossing for Access 2, and the road would then go northwest to the proposed Airport 4 location. Because this alternative would be located within the Monument–Wilderness Area, it would require an ANILCA Title XI permit.

### **Airport 12a with Access 12a (Preferred Alternative)**

Airport 12a with Access 12a would be located on lands owned or managed by private landowners; Kootznoowoo, Inc.; and the City of Angoon. Both the airport and access road would be on the Angoon peninsula southeast of the community of Angoon; no part of this alternative would be located on Monument–Wilderness Area lands. Access 12a would begin at the existing BIA Road and travel directly to the proposed airport location.

## **II. PURPOSE**

This MOU provides the framework under which the FAA and the Forest Service will continue to cooperate in the preparation and review of an Environmental Impact Statement (EIS) to meet the requirements of the NEPA and Title XI of ANILCA for the Project. Collectively, the FAA and the Forest Service are referred to as the “Parties.” The purpose of this MOU is to establish an



understanding between the Parties regarding their respective roles and responsibilities and the conditions and procedures to be followed to comply with NEPA and ANILCA. As such, this MOU defines the roles and responsibilities of the FAA as the Lead Agency and the Forest Service as the Cooperating Agency in the preparation of the EIS for the Project to meet the requirements of Title XI of ANILCA.

### **III. AUTHORITY:**

1. Public Law 91-190, 42 U.S.C 4321–4347, *National Environmental Policy Act of 1969 (NEPA)*
2. Public Law 96-487, *Alaska National Interest Lands Conservation Act of 1980 (ANILCA)*

Each Party, in the performance of its obligations under this MOU, will follow laws, which apply to both Parties, and policies that apply to each Party individually. In addition to NEPA and ANILCA, those laws and policies include, but are not limited to:

- a. FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions;*
- b. FAA Order 1050.1E, *Policies and Procedures for Considering Environmental Impacts;*
- c. Forest Service Handbook (FSH) 1909.15, *USFS Environmental Policies and Procedures Handbook;*
- d. 36 C.F.R. 220, *National Environmental Policy Act (NEPA) Compliance;*
- e. Public Law 88-577, *Wilderness Act of 1964;*
- f. 40 C.F.R 1500, *Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA);* and
- g. Public Law 94-579, *Federal Land Policy and Management Act of 1976 (FLPMA).*

### **IV. FAA RESPONSIBILITIES – NEPA PROCESS**

The FAA, as the Lead Agency for the NEPA process, shall:

1. Be at all times the Lead Agency retaining full responsibility for the content and findings of the Draft Environmental Impact Statement (DEIS) and the Final Environmental Impact Statement (FEIS), and the FAA Record of Decision.
2. Ensure that the DEIS and FEIS include the information needed to address the federal compliance requirements of its Cooperating Agency, the Forest Service.
3. Assume primary responsibility for preparation of the DEIS and FEIS to meet the compliance requirements of NEPA and Title XI of ANILCA.

4. Request that the Forest Service review the DEIS and, if an alternative in the Monument–Wilderness Area is selected, the FEIS, request comments on alternatives, affected environment, and environmental consequences related to its jurisdiction and expertise.
5. Ensure full access to FAA expertise, data, information, analyses, and comments so that the Forest Service may effectively complete its responsibilities under federal law and this MOU.
6. Use the comments and information provided by the Forest Service as a Cooperating Agency, and its expertise as the land management agency responsible for the Monument–Wilderness, to the maximum extent authorized by law while still meeting the FAA’s regulatory requirements.
7. Retain ultimate responsibility to identify and prepare the Project purpose and need, range of reasonable alternatives retained for detailed analysis in the EIS, the selection of the Preferred Alternative, the conclusions of the environmental analysis, the Record of Decision, and required mitigation measures. This does not preclude the right of the Forest Service or other Cooperating Agencies as may be identified to submit comments or independent recommendations with respect to these matters. Similarly, the FAA will incorporate these comments to the maximum extent authorized by law while still meeting the FAA’s regulatory requirements, the Project purpose and need, and the requirements of NEPA.
8. Provide copies of all documents necessary for the Forest Service to complete its EIS review, including technical reports concerning resources under Forest Service jurisdiction or expertise, the preliminary (administrative) DEIS, public DEIS, public FEIS, and all comments and information necessary for the EIS and its conclusions. If an alternative is selected on Monument–Wilderness Area lands, the FAA will also provide a preliminary draft FEIS to the Forest Service.
9. Meet with the Forest Service regarding any concerns related to effects, the range of alternatives, and the proposed mitigation measures to be analyzed in the EIS.
10. Include in the EIS an analysis of the FAA’s Preferred Alternative and a reasonable range of alternatives sufficient to meet NEPA and the requirements of Title XI of ANILCA.
11. Revise, to the extent authorized by law, the drafts of the DEIS and FEIS in response to comments from the Forest Service.
12. In consultation with the Forest Service and other state and federal agencies, hold public workshops, information meetings, and public hearings as required by Title XI of ANILCA, subsistence hearings as may be required under Title VIII of ANILCA, and other pertinent permitting processes.
13. Ensure that the Forest Service receives copies of all public and agency comments received during development of the DEIS, as well as public comments on the public DEIS and FEIS as they relate to Forest Service jurisdiction and expertise. The FAA shall

provide the initial identification and classification of these comments to facilitate the Forest Service's review and response to those comments.

14. Ensure that the DEIS and FEIS identify the Forest Service as a Cooperating Agency and that the introductory section of these documents describes the role and authority of the Forest Service in the Project.
15. Provide the Forest Service 30 days for review of the preliminary draft of the DEIS and, if an alternative is selected on Monument–Wilderness Area lands, provide 30 days for review of the draft FEIS. The DEIS will be available for public review and comment for at least 45 days, as required by 40 C.F.R. 1506.10(c).
16. Consult with the Forest Service regarding legal and management policy requirements regarding the Monument–Wilderness Area.
17. Provide the Forest Service the opportunity to review technical reports documenting analysis of aviation and operational matters, such as selection of design aircraft for practicability analysis, alternative runway alignments, safety area designs, and sighting of airport facilities.
18. Retain sole responsibility for determining which alternative is selected as the FAA Preferred Alternative. Use any environmental analysis, alternative proposals, and comments of the Forest Service to the maximum extent provided by law while still meeting Project purpose and need and all applicable FAA regulations.
19. Direct and administer all contract actions with the FAA's NEPA Contractor (SWCA) for preparation of the EIS. Any work requested by the Forest Service beyond that included in SWCA's scope of services must be approved by the FAA prior to implementation.

## **V. FAA RESPONSIBILITIES – TITLE XI OF ANILCA**

At this time, the FAA has identified Alternative 12a with Access 12a as the Preferred Alternative. Because this alternative does not involve Monument–Wilderness Area lands, no ANILCA application will be filed. If, following agency and public review of the EIS, the FAA selects an alternative within the wilderness area, an application would need to be filed. With respect to Title XI of ANILCA, the FAA shall:

1. Be at all times the Lead Agency for the Angoon Airport EIS and one of the federal agencies with decision-making responsibility for authorizing the Project as provided in Title XI of ANILCA.
2. Collaborate with the Forest Service to implement the NEPA process so that it provides an analysis to support the Parties' responsibilities under Title XI of ANILCA.
3. Process the application filed with the FAA by the DOT&PF for the Project.

4. Review and determine the accuracy of the information in the Title XI application and inform the DOT&PF in writing within 60 days of any information gaps or data inadequacies.
5. If more information is submitted, inform the DOT&PF within 30 days regarding the adequacy of the new information.
6. Collaborate with the Forest Service to ensure consistency between the Title XI provisions and the EIS analysis.
7. Complete a DEIS within 9 months and an FEIS within 12 months of the DOT&PF ANILCA application. Per ANILCA Title XI, if the timelines need to be extended, the FAA will inform DOT&PF and the Forest Service, in writing, and will publish a notice of determination for timeline extensions and reasons for the extension in the Federal Register.
8. Hold public hearings in Washington, D.C., and at appropriate locations in the State of Alaska, consistent with Title XI of ANILCA.
9. Within four months after publication of the FEIS, decide whether the FAA approves or disapproves the application and identify the reasons and findings supporting the FAA's position. In making its decision, the FAA shall make detailed findings as prescribed by Section 1104(g)(2) of ANILCA.
10. Promptly submit the recommendation, with detailed findings supporting the decision, to the President of the United States, as prescribed by Section 1106(b) of ANILCA.

## **VI. FOREST SERVICE RESPONSIBILITIES – NEPA PROCESS**

As a Cooperating Agency in the NEPA process, the Forest Service shall:

1. Share data, information, and expertise to assist in the analysis of potential project impacts on resources within its jurisdictional authority or for which it has special expertise.
2. Participate in the NEPA process at the earliest possible opportunity, including providing comment regarding the project purpose and need, development of alternatives, public and agency scoping, and the environmental impact analysis.
3. Assist as needed in the FAA's government-to-government tribal consultation for the EIS process. Additionally, the Forest Service may initiate its own government-to-government tribal consultation process for specific project decisions under Forest Service jurisdiction.
4. Review and comment on any additional resource technical reports for resources within its jurisdictional authority or for which it has special expertise (if any further reports are produced). Submit these comments within 30 days of the receipt of the reports and analyses.

5. Assist the FAA in developing mitigation measures for impacts to resources within the Forest Service's jurisdiction or special expertise.
6. Prepare and submit comments for inclusion in the public DEIS within 30 days of receipt of the preliminary DEIS. The Forest Service may also prepare and submit comments for inclusion in the FEIS within 45 days of receipt of the public DEIS.
7. Assist the FAA in developing responses to comments received on the DEIS and FEIS pertaining to resources within the Forest Service's jurisdiction or expertise.
8. Provide guidance and specific direction to the FAA concerning process or analysis necessary for the EIS to fulfill the Forest Service's internal decision-making process regarding any authorizations within its jurisdiction, including Title XI of ANILCA.
9. Prepare and submit the Forest Service's Record of Decision if an alternative is selected on Monument–Wilderness Area lands.
10. Prepare, if needed, a Forest Plan amendment for the Transportation Utility System Land Use Designation, which will meet the needs of the Project.

## **VII. FOREST SERVICE RESPONSIBILITIES – TITLE XI OF ANILCA**

As discussed under section V, the FAA has identified Alternative 12a with Access 12a as the Preferred Alternative. Because this alternative does not involve Monument–Wilderness Area lands, no ANILCA application will be filed at this time. If an alternative on Monument–Wilderness lands is selected in the FEIS, an application will be filed. In a respect to compliance with Title XI of ANILCA, the Forest Service shall:

1. Be a Cooperating Agency for the Angoon Airport EIS and one of the federal agencies with decision-making responsibilities for authorizing the Project as provided in Title XI of ANILCA.
2. Collaborate with the FAA to implement the NEPA process so that it provides an analysis to support the Parties' responsibilities under Title XI of ANILCA.
3. Review and determine the accuracy of the information submitted by the DOT&PF in its application. Coordinate with the FAA and inform the DOT&PF in writing within 60 days of any information gaps or data inadequacies.
4. If more information is submitted, coordinate with the FAA and inform the DOT&PF within 30 days regarding the adequacy of the new information.
5. Collaborate with the FAA to ensure consistency between the Parties with respect to processing the Title XI application and the NEPA process.
6. Cooperate with the FAA to facilitate completion of a DEIS within 9 months and an FEIS within 12 months of the DOT&PF's application.

7. Assist the FAA as necessary in preparation for public hearings in Washington, D.C., and other locations consistent with Title XI of ANILCA.
8. Within four months after publication of the FEIS, decide whether the Forest Service tentatively approves or disapproves the application and identify the reasons and findings supporting the Forest Service's position. In making its decision, the Forest Service shall make detailed findings as prescribed by Section 1104(g)(2) of ANILCA.
9. Submit its decision, with detailed findings as prescribed by Section 1104(g)(2) of ANILCA supporting that decision, to the President of the United States.
10. If the Project is approved by the President and Congress as provided in Title XI of ANILCA, issue an appropriate authorization in accordance with Title V of the Federal Land Policy and Management Act of 1976 or other applicable law.

**VIII. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES THAT:**

1. **THE FAA AND THE FOREST SERVICE MUTUALLY AGREE TO:** The Parties agree to participate in this EIS process in good faith and make every effort to resolve any perceived areas of conflict, to fully explore issues before coming to conclusions, and to commit to working collaboratively to ensure an efficient and accurate EIS process. The Parties will make every effort to effectively communicate throughout the process and employ innovative problem-solving approaches to resolve any differences related to EIS process, analysis, or other issues. Appoint an agency point of contact person annually (by January 1) through the life of this MOU.
2. **VOIDANCE OF FINANCIAL CONFLICTS OF INTEREST.** The Parties agree not to employ the services of any consultant, counsel, or representative having a financial interest in the outcome of the proposed project.
3. **NON-FUND OBLIGATING DOCUMENT.** Nothing in this MOU shall obligate either the Forest Service or the FAA to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property among the various agencies and offices of the Forest Service and the FAA will require execution of separate agreements and be contingent upon the availability of appropriated funds. Such activities must be independently authorized by appropriate statutory authority. This MOU does not provide such authority. Negotiation, execution, and administration of each such agreement must comply with all applicable statutes and regulations.
4. **EFFECTIVE DATE.** This MOU shall be effective upon the date of final signature and will remain effective unless modified as provided for elsewhere in this MOU.
5. **PERIODIC REVIEW.** Each year, the Parties shall evaluate the effectiveness of this MOU and determine the need for modification or continuation.



6. EFFECT ON OTHER AUTHORITIES. Nothing in this agreement alternates, amends, or affects in any way the statutory or regulatory authorities of the Forest Service or the FAA.
7. MODIFICATION. Modifications within the scope of the MOU shall be made by mutual consent of the Parties, by the issuance of a written modification, signed and dated by the Parties, prior to any changes being performed.
8. TERMINATION. This MOU shall terminate on 02/28/2016. By mutual consent of the Parties, in writing, the MOU may terminate in whole or in part, at any time before the date of termination.
9. RESPONSIBILITIES OF PARTIES. The Forest Service and the FAA and their respective agencies and offices shall handle their respective activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each party shall carry out its separate activities in a coordinated and mutually beneficial manner.
10. AUTHORIZED REPRESENTATIVES: By their signatures below, the representatives of the FAA and Forest Service certify that they are authorized to act on behalf of their respective agencies for all matters related to this MOU.

#### **PRINCIPAL CONTACTS**


FEDERAL AVIATION ADMINISTRATION, ALASKAN REGION, AIRPORTS DIVISION  
Leslie Gray, Project Manager  
222 West 7th Avenue, Box #14  
Anchorage, AK 99513-7587  
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FAX: 907-271-2851  
[Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

FOREST SERVICE, ALASKA REGION  
Darrin Kelly, Special Uses Permit Administrator  
Tongass National Forest, Admiralty National Monument  
8510 Mendenhall Loop Road  
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**APPROVED BY:**

  
\_\_\_\_\_  
Byron K. Huffman  
Division Manager  
Federal Aviation Administration  
Alaska Region, Airports Division

2/18/15  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Beth Pendleton  
Regional Forester  
Alaska Region  
USDA Forest Service

October 31, 2014  
\_\_\_\_\_  
Date:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF  
ECOSYSTEMS, TRIBAL AND  
PUBLIC AFFAIRS

March 10, 2015

Ms. Leslie A. Grey  
Environmental Protection Specialist AAL-614  
Federal Aviation Administration  
Alaskan Region, Airports Division  
222 W. 7<sup>th</sup> Avenue, #14  
Anchorage, Alaska 99513-7587

Dear Ms. Grey:

We have reviewed the Federal Aviation Administration Draft Environmental Impact Statement and Section 4(f) Evaluation for the Angoon Airport (EPA Project # 08-057-FAA) in Angoon, Alaska. Our review was conducted in accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act. Based on our review, we have assigned a rating of EC-1 (Environmental Concerns-Adequate Information) to the preferred alternative. For your reference, a copy of the rating system we used to conduct our review is enclosed.

We believe that the selection of the preferred alternative (Alternative 12a with 12a Access) is environmentally preferable to the other airport locations and access roads in nearly all resource categories. In addition to avoiding designated Wilderness, it requires substantially less waterbody crossings, including no crossing of Favorite Creek. This alternative would result in less fill, less impervious surface, less terrain disturbance, and fewer culverts, stream diversions, truck trips and barge trips. We also note that it is the least costly alternative and is similar to other alternatives in instrument approach capability, minimums for visibility, and year-round availability.

We note that although the Draft EIS concludes that none of the action alternatives would result in "unacceptable adverse impacts to non-wetland waters of the U.S. per Clean Water Act Section 404(b)(1) guidelines," only the Least Environmentally Damaging Practicable Alternative may be permitted by the U.S. Army Corps of Engineers. Based on the analysis in the EIS, there is substantial difference in impacts to aquatic resources between the preferred alternative and the other action alternatives, with the preferred alternative resulting in substantially fewer impacts to aquatic resources. We believe that overall, the preferred alternative is environmentally preferable because of the reasons listed above and because the preferred alternative will likely be the LEDPA, or will more closely resemble the LEDPA, compared to the other action alternatives. We support the selection of this alternative by the FAA in the Final EIS and Record of Decision.

We also believe the Draft EIS does a satisfactory job of analyzing a range of reasonable alternatives for a land-based airport in or near the community of Angoon. It is clear that your agency went through an extensive alternative analysis screening process and involved many stakeholders in this process. In addition, the document and electronic version (as an interactive Adobe .pdf file) is very reader friendly and useful to interested stakeholders, particularly the sidebar boxes, hyperlinks and navigation buttons.

We do have concerns, however, regarding the impact that the preferred alternative has on the amount and accessibility of Alaska Native Claims Settlement Act village corporation and private land, including native allotments, which are in close vicinity to the community. These lands are currently used for a variety of purposes, including subsistence activities. There is a trend in Alaska for private and corporation lands that are accessible to owners and shareholders to be utilized for public infrastructure projects. While these projects often provide benefits to residents, such as safer and more reliable air service, there is often a trade-off or loss of other uses. The loss of easily accessible subsistence areas is particularly detrimental for low-income and disabled residents. It is not clear if this was fully evaluated in the EIS. We recommend additional work to identify appropriate mitigation for these losses and monitoring to ensure that the mitigation being implemented is effective.

We are also concerned that, in comparison to the other action alternatives, the preferred alternative requires substantially more vegetation removal, resulting in a much more concentrated stream geomorphic effect and substantial loss of natural stream function for Stream 10. We recommend that the FAA work closely with the Alaska Department of Transportation and Public Facilities and other stakeholders to determine if any additional avoidance or minimization can be included in the project design. For impacts that cannot be avoided or reduced, appropriate mitigation must be identified. For impacts that cannot be mitigated, compensation should be applied. We recommend that a robust draft compensation plan be included in the Final EIS.

Finally, we have two specific recommendations that we hope will provide more clarity for the reader. First, in the Executive Summary and Chapter 1, the access route for Alternative 3a is not identified. We recommend that this be corrected. Second, while we recognize that information relating to Alaska National Interest Lands Conservation Act is very thorough, we believe it is important that the EIS also clearly articulate that agencies must also comply with other applicable laws and regulations. We recommend that this be clarified in the Final EIS.

Thank you for the opportunity to review this Draft EIS. We look forward to participating in discussions related to mitigation for project impacts as the project moves forward. If you have questions about our comments, please contact me at (206) 553-1601 or by electronic mail at [reichgott.christine@epa.gov](mailto:reichgott.christine@epa.gov), or you may contact Jennifer Curtis of my staff in Anchorage at (907) 271-6324 or by electronic mail at [curtis.jennifer@epa.gov](mailto:curtis.jennifer@epa.gov).

Sincerely,



Christine B. Reichgott, Manager  
Environmental Review and Sediment Management Unit

Enclosure:

1. U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

**U.S. Environmental Protection Agency Rating System for  
Draft Environmental Impact Statements  
Definitions and Follow-Up Action\***

**Environmental Impact of the Action**

**LO – Lack of Objections**

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC – Environmental Concerns**

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

**EO – Environmental Objections**

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU – Environmentally Unsatisfactory**

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

**Adequacy of the Impact Statement**

**Category 1 – Adequate**

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2 – Insufficient Information**

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

**Category 3 – Inadequate**

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.







THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

## Department of Transportation and Public Facilities

Southcoast Region  
Planning

PO Box 112506  
Juneau, Alaska 99811-2506  
Phone: 907-465-4477  
Fax: 907-465-2016

March 20, 2015

Ms. Leslie Grey  
FAA Alaska Region Airports Division  
222 West 7<sup>th</sup> Ave. #14  
Anchorage, AK 99513

Dear Ms. Grey:

On January 9, 2015, the FAA published the Angoon Airport Draft Environmental Impact Statement (DEIS) for public review and comment. Concurrently, the State of Alaska tendered an application to construct an airport and access road on and across Admiralty Island National Monument and Kootznoowoo Wilderness Area in accordance with the provisions of Title XI of the Alaska National Interest Lands Conservation Act (ANILCA). The DEIS was appended to the application as it had been intended to provide all of the information and analysis required for consideration of our proposed action.

We provided oral and written comments concerning the DEIS at the recent public hearing in Washington, D.C. which was held pursuant to the requirements of ANILCA. This letter provides additional and amplifying comments concerning the DEIS and the status of the ANILCA Title XI process which it supports. As we explained at the hearing, and expand upon herein, we believe the document to be deficient in many respects regarding both NEPA and the ANILCA process. It is our hope that these deficiencies can be overcome in the final document, and that the ultimate determination of where to build the airport for Angoon is supported by a well-rounded, clear, objective, and defensible analysis. Many of the comments we provided on the preliminary document remain unresolved in the DEIS; however, here we will only address those concerns that we believe to be of the utmost importance in bringing this to a successful conclusion.

First and foremost of our concerns is that our early agreement to allow the NEPA process to advance to the DEIS stage before tendering an ANILCA Title XI application seems to have resulted in an inversion of the proper decision making sequence. This is most readily apparent in the U.S. Forest Service's response to our application. That letter makes it quite clear that the Forest Service, as a Cooperating Agency, believed that the FAA's determination of a non-monument/wilderness preliminary preferred alternative on the basis of an arguably faulty §4(f) assessment essentially pre-empted our filing, or would result in our rescinding that application.

That is directly counter to the requirements of ANILCA's §1104(a). Our determination to proceed with a Title XI application has never been in question. Our indicating that it might eventually be rescinded has always been inextricably tied to an unequivocal change in Angoon's position on the alternatives. Not having seen evidence that a change has occurred in their official view, we have no basis upon which to change ours.

Our proposed action by its very nature made ANILCA an inevitable and overarching consideration for this project, and by the explicit language in §1104, it precludes other applicable law from having any effect prior to its provisions having been exhausted. Although the DEIS undertakes to address the considerations required under §1104, the treatment of those concerns is somewhat cursory in general – largely making reference to other sections in the document – but significantly deficient regarding a few critical factors. Avoiding redundancy through reference helps to keep an already overlarge document from becoming more unwieldy; however, the approach used in this instance makes the ANILCA process appear to be an afterthought while leaving a weary reviewer with the impression that all of the issues have been comprehensively addressed elsewhere. That is not the case with regard to socioeconomic impacts, environmental justice, nor – most importantly – the prudence of FAA's preferred alternative.

The socioeconomic analysis of the alternatives is inadequate, largely because it takes an urban America view of the impacts despite the FAA's assertions to the contrary. Most of the analysis addresses the current socioeconomic status of the community and changes that are foreseeable from the various action alternatives. Much of section 4.12 deals with the minor and insignificant impacts on sales tax and the additional temporary construction jobs. For the uninformed reader, the statements in section 4.12.3.3.1. Relocation of Residents lead to the conclusion that the impact of the preferred alternative is rather negligible. The ultimate sentence in the section says, "However, there are vacant homes in Angoon's town core that displaced residents could choose to purchase." The fact that a substantial portion of the town's commercial and residential potential is eliminated by the preferred alternative is glossed over with an analysis more appropriate for a suburban community whose future growth potential is less constrained by geography.

Environmental justice considerations are given a very narrow treatment that seems a hunt for the easy and least problematic assessment of the facts. A more appropriate characterization of the situation would clearly identify the circumstances of a mostly native, largely impoverished community which stands to lose much of its long-term economic development potential because that is preferable to the national interest in preserving an exceedingly small portion of an exceedingly large wilderness – a portion that is on the boundary of the wilderness, essentially adjacent to the community, and likely visited by an exceedingly small number of people not from that community (though the document doesn't tell us that number). That view of the situation is not the entire story, nor does it make any particular conclusion inevitable, but it is a valid perspective that is buried in the narrative of the document. Angoon's situation is not analogous to that of the typical rural American town, and the document ought not to approach the environmental justice analysis as though it were.

Socioeconomic analysis and environmental justice are inseparable, yet the DEIS analysis of environmental justice does not include socioeconomics among the evaluated resources. This is contrary to DOT Order 5610.2(a) which requires the analysis of social and economic impacts to populations like Angoon's. On the other hand it discusses, at some length, resources like

wilderness which are not specifically identified in the Order yet have little to do with environmental justice per se.

The combination of the socioeconomic and environmental justice analysis, if approached as they ought to be, would lead one to a conclusion that Alternative 12a may not be a prudent alternative to our proposed action. But there are other factors that need to be considered in that regard. We have argued before that the FAA's analysis regarding the §4(f) impacts of its preferred alternative is not compelling. The FAA's determinations regarding park and recreational uses, historical and cultural resources, and archeological potential for Alternative 12a are incorrect in our view.

The arguments used to dismiss §4(f) implications, either current or potential, on lands that were conveyed under ANCSA §14(c)(3) for the city's use as parks, are not consistent with our application of the law. Our practice in preparing NEPA documents would be to consider those properties that are identified as platted park land on figure 4f1 in the DEIS as §4(f) properties even though there is not a formal management plan.

Our experience with the distribution of cultural resources around village sites informs our position that the field work and analysis concerning the potential impact of the preferred alternative is significantly understated. We stand by our earlier comments on the Preliminary DEIS regarding the inadequacy of the cultural resource surveys that have been conducted thus far. SHPO has also raised concerns to FAA that the boundary of SIT-00169 had not been sufficiently defined and that it may be more extensive than what's reported in the current survey. FAA has not adequately researched the associations of site SIT-00169 relative to important historical persons or events and, therefore, has not offered an opinion on the eligibility of the site relative to A and B of the National Register Criteria. The archaeological testing should have been designed to delineate the boundary of SIT-00169 as was done on Site SIT-00302 (Alternative 3) which was a multi-component site similar to SIT-00169. Current archeological and ethnographical literature strongly suggests that site SIT-00169 had a prehistoric as well as historic component. The archaeological field work on SIT-00169 did not test the site, nor delineate the boundaries of the potential impacted site in relation to the projected construction footprint. Although it has obvious surface features including several pit features, the only testing was done in the purported Direct APE. This work was random with no consideration to the basic survey criteria of consistent testing covering a designated grid. The DEIS lacks discussion on potential cultural materials discovered between the site and the direct impact area, all of which figure predominantly in current Alaskan archaeological research. Ethnographic evidence references this area as an early occupation site before Killisnoo Island Village and the village of Angoon well beyond just an historic "wide place in the beach". Although the village is alluded to as only a minor historic Tlingit village, the prehistoric Killisnoo Harbor Village has the potential for as yet undiscovered information on the early lifeways and cultural utilization of the Killisnoo area. Intact cultural resources, typified by tribal native burials, including potential Shamans or other leadership personalities, could be impacted by Alternative 12a, thereby warranting a more intensive cultural evaluation in this area.

The combination of these concerns leads us to our long-standing conclusion that Alternative 12a does indeed contain §4(f) resources – we identified them in our early planning documents. That does not preclude its use for the construction of an airport, but it does mean that it is not

automatically a prudent alternative to our proposed action and that the relative merits of the alternatives need to be weighed in a more balanced fashion.

Each of the items we have addressed is of some significance in its own right; however, the glaring omission from the DEIS, both in relation to NEPA and ANILCA, is a thorough analysis of the prudence of the preferred alternative which takes all of them into account regarding their cumulative effects. ANILCA and §4(f) require a determination of whether there exists a feasible and prudent alternative to the action we've proposed. The §4(f) prudence analysis does not exist in the DEIS because of FAA's determination that Alternative 12a has no §4(f) implications – we disagree as explained above. With regard to ANILCA, Chapter 5 of the DEIS makes a summary statement regarding the preferred alternative's feasibility – it is indisputably feasible – but no mention is made concerning its prudence. This is a fatal flaw in the document that must be corrected in order to provide the “. . . detailed findings supported by substantial evidence . . .” required by ANILCA §1104(g)(2). In making a determination of prudence, an approach we have found useful in the absence of its definition in ANILCA, is the one provided in FHWA guidance for §4(f):

An alternative is not prudent if:

1. It compromises the project to a degree that it is unreasonable to proceed in light of the project's stated purpose and need (i.e., the alternative doesn't address the purpose and need of the project);
2. It results in unacceptable safety or operational problems;
3. After reasonable mitigation, it still causes severe social, economic, or environmental impacts; severe disruption to established communities; severe or disproportionate impacts to minority or low-income populations; or severe impacts to environmental resources protected under other Federal statutes;
4. It results in additional construction, maintenance, or operational costs of extraordinary magnitude;
5. It causes other unique problems or unusual factors; or
6. It involves multiple factors as outlined above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

It is our opinion that a thorough, objective analysis of those considerations would lead one to the conclusion that Alternative 12a is not necessarily prudent – but we haven't seen that analysis yet. At the risk of seeming redundant, we emphasize that this determination, supported by substantial evidence, is required for a complete ANILCA process and must, therefore, be included in the final document.

In their letter of March 9, 2015, the U.S. Forest Service identified a number of deficiencies that it found during the adequacy review of our Title XI application. Because it was understood by all concerned that it was our intent to rely on the DEIS as the supporting document for the application, we view the deficiencies that the Forest Service identified as resulting from a misunderstanding among cooperating agencies during the document's preparation. Since the additional information in question properly belongs in the DEIS and we are excluded from participating in its formulation by FAA policy, we ask that the FAA coordinate with the Forest Service to ensure all those concerns are addressed.

The US Army Corps of Engineers expressed similar concerns regarding our ANILCA application in their letters of January 9 and February 11, 2015. Although their difficulties seem to be related more to procedure than content, they also appear to result from misunderstandings



with regard to the role of cooperating agencies in developing the DEIS and reviewing our application at this stage of the ANILCA Title XI process. Again, we ask the FAA to coordinate with the USACE to help resolve the issues they have identified. Additionally, we ask that this coordination include the FAA's providing both the USACE and the Forest Service with any necessary assurances pertaining thereto such that they are able to give us their determination that our application is complete.

Our objective throughout this lengthy process has been, and remains, to provide Angoon with an airport that meets the community's transportation needs. The sustainability of places like Angoon is largely dependent on people's ability to engage in commerce, cultural exchange, and enjoy access to basic services such as emergency medical care. The people of Angoon have occupied the area for a very long time and, the advent of airplanes and the internet notwithstanding, we assume that they envision doing so for much longer. In order to accommodate their future on the small piece of land they have available, the determination of where we should build their airport must be considered in that light as well as that of the many other things the law requires.

Please contact me or John Barnett, the Southcoast Region's environmental lead for this project, about any concerns you have or if there is anything we can clarify for you.

Sincerely,



Verne R. Skagerberg, MPA  
Aviation Planner

cc: Marc Luiken, Commissioner, ADOT&PF  
John Binder, Deputy Commissioner, ADOT&PF  
Steven Hatter, Deputy Commissioner, ADOT&PF  
Rob Campbell, Director, Southcoast Region  
Mr. Matt Kookesh, Jr., Mayor, City of Angoon  
Byron Huffman, Manager, FAA Airports Division, Alaska Region  
Beth Pendleton, Regional Forester, Alaska Region  
Linda Speerstra, Chief, Southeast Section Sitka Field Office, Alaska Division, USACE  
Darin Kelly, Special Uses Permit Administrator, Admiralty Island National Monument  
Melissa Dinsmore, Special Uses and Energy Program Manager, Tongass National Forest  
Kip Knudson, Office of Governor Bill Walker, Washington, D.C.  
Amanda Childs, SWCA (e-mail)  
Suc Magee, State ANILCA Program Coordinator (e-mail)



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

Department of Transportation and  
Public Facilities

SOUTHCOST REGION

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Fax: (907) 465-2030  
TTY-TDD: (800) 770-8973  
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April 8, 2015

Beth G. Pendleton  
Regional Forester  
U.S. Forest Service Alaska Region  
P.O. Box 21628  
Juneau, Alaska 99802-1628

Dear Ms. Pendleton:

Thank you for your letter of March 9, 2015 explaining the deficiencies the Forest Service believes to exist in our Angoon airport ANILCA Title XI application. We understand your concern that additional field work, Section 106 analysis, and analysis of impacts to Admiralty Island National Monument will be necessary in the final Angoon Airport EIS. However, we believe our application to be complete for this stage of the ANILCA process and ask you to reconsider your finding to the contrary.

ANILCA does not provide a definition of a complete application. In providing essentially all of the information and analysis compiled to date on the project, including information provided by cooperating federal agencies to satisfy the requirements of the National Environmental Policy Act (NEPA) – well over 1,000 pages of documentation – we anticipated that our application would be sufficient to allow us to move forward with the Title XI process. We remain convinced that it is because the logic of ANILCA makes it unarguably so. The purpose of ANILCA was not to append its requirements to NEPA and other applicable law, but to provide for consideration of actions like what we've proposed in an overarching manner. The Title XI process described in the statute begins with the filing of an application, proceeds to the completion of a DEIS within nine months of the filing, a final EIS within one year, and, finally, results in the analysis and determinations required of agencies with whom the application is filed. Since an application is expected to come before the DEIS, it follows that it is anticipated to provide far less information than was included with ours. The Forest Service approach to determining the adequacy of our application requires even more and is inconsistent with the process described in law and with that discussed in meetings with the FAA the week after our application was submitted.



We consulted with the FAA, who would prepare the EIS, and other appropriate agencies concerning the timing for our ANILCA application. The ANILCA process was discussed at meetings with the FAA and Forest Service as early as September 2006. It was confirmed during review of the PDEIS, and was reiterated in meetings between the FAA, USACE, and the Forest Service upon release of the DEIS, that our application would be submitted concurrent with the release of the DEIS. This seemed the best way to avoid conflicts between the required timelines in NEPA and ANILCA, accommodate the lengthy NEPA process, and *provide a fully supported and complete application*. Since the agencies responsible for determining the adequacy of our application were fully aware of this and were also responsible for, or cooperating in the preparation of the document intended to support the application, we felt reasonably certain that the DEIS would be deemed adequate for that purpose.

Putting aside the issue of our application's adequacy, there are obstacles to our providing the additional information you have requested. The Federal Aviation Administration (FAA) does not delegate responsibility for preparing an EIS to any airport sponsor. Unlike the Federal Highway Administration, FAA retains full responsibility for the entire process and requires the project sponsor – the Alaska Department of Transportation & Public Facilities (ADOT&PF) in this case – to remain aloof. We do not disagree that there are information gaps as identified in your letter, but we are unable to fill them because, not only are we not responsible for the content or analysis in the EIS, we are precluded from participating in its development. We can only offer the following comments with regard to the specific information and analysis you have asked us to provide:

1. The DEIS makes it quite clear that the proposed action impacts both the monument and wilderness. The two are concatenated in the document as explained on the first page of the executive summary. As for the analysis of impacts on their respective purposes, that is a proper topic for the DEIS, and we concur that it should be included in the final document, but we are not responsible for that analysis. That and the analysis and determinations required by ANILCA §1104(g)(2) are for the cooperating agencies to accomplish in their consideration of our application, not ours to provide in advance.
2. The DEIS makes it quite clear that our proposed action would have an impact on Mitchell Bay corridor lands. The analysis of those impacts is proper in the DEIS and is the responsibility of the cooperating agencies rather than ADOT&PF as explained previously.
3. We concur with the Forest Service concerns regarding completion of additional Section 106 investigation and analysis. However, this is also within the purview of the cooperating agencies, and we anticipate the necessary work to be completed as part of the EIS.

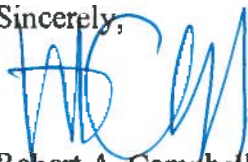
While it is unfortunate that it was unclear to cooperating agencies that it remained our intention to submit a Title XI application, we do not feel that we contributed to that misunderstanding. Both the PDEIS and DEIS did indicate that we had not changed our proposed action, and both included many references to ANILCA and Title XI requirements. Because ANILCA is not subject to NEPA, the FAA's selection of a preliminary preferred alternative different from our proposed action does not eliminate our proposed action from consideration under ANILCA. We do not see the DEIS as in any way precluding our application or even making its submission

unlikely. Furthermore, the circumstances that would lead to our rescinding the application, i.e., Angoon's unequivocal support of the FAA's preferred alternative, were contemplated as a possibility, but not an expected likelihood; a change in the community's views was not made manifest in the public meetings held to receive comments on the DEIS, so we have no reason to change course.

As we explained in our letter of March 20, 2015 in which we provided our comments to FAA regarding the DEIS, it is our hope that all of these issues can be resolved through coordination of the cooperating agencies and that we can proceed with the ANILCA Title XI process as we originally intended. If we can make any further contributions to that effort that are within our role as we've explained it, we will be happy to do so. In any event, we do believe that our Title XI application is as complete as is possible, and as expected, for this stage of the process and we ask that you provide us with your determination that it is so.

Please contact me, Verne Skagerberg who is our project manager, or John Barnett, the Southcoast Region's environmental lead for this project, about any concerns you have or if there is anything we can clarify for you.

Sincerely,



Robert A. Campbell, PE  
Acting Southcoast Regional Director

cc: Marc Luiken, Commissioner, ADOT&PF  
John Binder, Deputy Commissioner, ADOT&PF  
Steven Hatter, Deputy Commissioner, ADOT&PF  
Linda Speerstra, Chief, Southeast Section Sitka Field Office, Alaska Division, USACE  
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Department of Transportation and  
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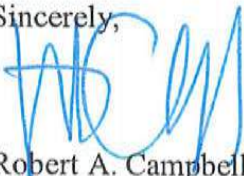
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Please contact me, Verne Skagerberg who is our project manager, or John Barnett, the Southcoast Region's environmental lead for this project, about any concerns you have or if there is anything we can clarify for you.

Sincerely,



Robert A. Campbell, PE  
Acting Southcoast Regional Director

cc: Marc Luiken, Commissioner, ADOT&PF  
John Binder, Deputy Commissioner, ADOT&PF  
Steven Hatter, Deputy Commissioner, ADOT&PF  
Linda Speerstra, Chief, Southeast Section Sitka Field Office, Alaska Division, USACE  
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Leslie Grey, FAA Alaska Region, Airports Division  
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THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

## Department of Transportation and Public Facilities

SOUTHCOAST REGION  
DESIGN & ENGINEERING SERVICES  
Preconstruction

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TTY-TDD: (800) 770-8973  
dot.state.ak.us

May 18, 2015

Re: Angoon Airport Draft Environmental Impact Statement  
Subject: DEIS Substantive Revisions Required

Byron Huffman, Manager  
Airports Division  
Alaskan Region  
222 West 7<sup>th</sup> Avenue #14  
Anchorage, Alaska 99513

Dear Mr. Huffman,

The purpose of this letter is convey to FAA our adamant recommendation that the Angoon Airport Draft Environmental Impact Statement (DEIS) be revised to comply with the informational needs of the US Army Corps of Engineers (USACE) and US Forest Service (USFS), to complete the remaining studies required under ANILCA Title XI, and to rectify the numerous deficiencies in regard to the NEPA process as specifically outlined in the attached Memo prepared by Southcoast Region environmental staff and transmitted to me by the Region's Environmental Manager. The revised DEIS should be re-released to the public and agencies for their review and comment. The Alaska Department of Transportation and Public Facilities Southcoast Region (ADOT&PF) believes that the DEIS contains inadequate, inaccurate, and insufficient information. Although we have addressed our concerns previously in our comments on the Preliminary DEIS and DEIS, they have gone largely unaddressed.

As the sponsor of the proposed action and, ultimately, the constructor, owner, and operator of the airport, we believe it is incumbent on ADOT&PF to do all that we can to ensure an objective and defensible outcome to the NEPA and ANILCA processes. To that end, we strongly recommend that FAA take steps to begin the revision of the DEIS as soon as practicable.

Please contact me or Verne Skagerberg, Project Manager, or John Barnett, the Southcoast Region's environmental lead for this project, if additional clarification is needed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert A. Campbell".

Robert A. Campbell, P.E.  
Acting Southcoast Regional Director

*"Keep Alaska Moving through service and infrastructure."*



enc:

Memo dated May 14, 2015 from John Barnett to Jane Gendron

cc:

Marc Luiken, Commissioner, ADOT&PF

John Binder, Deputy Commissioner, ADOT&PF

Steven Hatter, Deputy Commissioner, ADOT&PF

Leslie Grey, Lead Environmental Program Manager, FAA Alaska Region

Chuck Correa, P.E., DOT&PF, Southeast Region Design and Construction (e-mail only)

Carroll, P.E., DOT&PF, Southeast Region Preconstruction Engineer (e-mail only)

Keith Karpstein, P.E. DOT&PF Southeast Region Design Group Chief (e-mail only)

Jane Gendron, DOT&PF, Southeast Region Environmental Manager (e-mail only)

Beth Pendleton, USDA Forest Service, Alaska Regional Forester

Melissa Dinsmore, Special Uses and Energy Program Manager, Tongass National Forest

Linda Speerstra, USACE, Chief, Southeast Section

Kip Knudson, Director of State/Federal Relations, Office of the Governor

Amanda Childs, SWCA (e-mail only)


Sue Magee, Alaska Department of Natural Resources ANILCA Program Coordinator (e-mail only)

Sean Lynch, Assistant Attorney General, State of Alaska

# MEMORANDUM

# State of Alaska


Department of Transportation & Public Facilities  
Design and Engineering Services – Southcoast Region  
Preconstruction / Design

  
TO: Jane Gendron, Southcoast Region  
Environmental Manager

DATE: May 14, 2015

TELEPHONE NO: 465-4504

FAX NUMBER: 465-4414

  
FROM: John Barnett, Southcoast Region  
Design Group Environmental  
Lead

SUBJECT: Angoon Airport Draft EIS  
Substantive Revisions  
Necessary by FAA

DOT&PF's Southcoast Region environmental specialists have completed a detailed review of FAA's Angoon Airport Draft Environmental Impact Statement (DEIS) released for public and agency comment on January 9<sup>th</sup>, 2015. We have determined that the DEIS is lacking analyses and objectivity and does not adequately or equally describe alternatives which is required by the National Environmental Policy Act (NEPA) implementing regulations. Additionally, some of the processes followed by FAA are not consistent with NEPA regulations. We find that the Angoon Airport DEIS also fails to follow the procedural requirements of ANILCA Title XI which has been an integral aspect of the Angoon Airport proposed action from the beginning. FAA responsibilities in regard to the ANILCA Title XI process are quite clear in the Memorandum of Understanding (MOU) between the FAA and the US Forest Service (USFS) dated February 19, 2009. Section IV of that MOU, specifically sub-paragraph 3; *FAA...shall...assume primary responsibility for preparation of the DEIS and FEIS to meet the compliance requirements of NEPA and Title XI of ANILCA*, and sub-paragraph 11;... *to meet NEPA and the requirements of Title XI of ANILCA*.

Based on DEIS content deficiencies (described below) and failure to follow several NEPA processes, the environmental specialists in the Southcoast Region contend that any decision document issued by FAA based on this document could be found legally insufficient. This is an important project for the Angoon community and Southeast Alaska and delays because of litigation should be avoided. We believe that this document should be revised and re-released to the public and agencies for review prior to completing the NEPA process and issuing a Record of Decision. Following are specific examples and issues that DOT&PF environmental staff have identified with references to applicable NEPA and ANILCA requirements, CEQ regulations, and other Acts and Orders (with *emphasis* and underling added).

DOT&PF received a letter from the United States Army Corps of Engineers (USACE) on April 30, 2015 advising DOT&PF of several deficiencies in the Angoon Airport DEIS that need to be rectified for the USACE to accept the State's ANILCA Title XI Application. The USFS, in their letter of March 9, 2015, also noted the need for additional information to be included in the DEIS. DOT&PF, in a letter to FAA dated March 20, 2015 pointed out additional studies necessary for the State to meet the procedural requirements of ANILCA Title XI. All of these information gaps require a substantial revision of the DEIS and, based on NEPA implementing regulations, necessitates the need for FAA to release a revised DEIS for public and agency review. Specifically, in accordance with 40 CFR 1502.9 (a) ... *If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.*

DOT&PF has also noted other issues that should be addressed during the revision process in order to comply with Section I, paragraph D and Section II, Paragraph A of the MOU between FAA and DOT&PF, as amended November 2, 2013. This section of the MOU establishes FAA's requirements under NEPA, regulations established by the Council on Environmental Quality (CEQ), and appropriate DOT and FAA environmental orders.

The CEQ regulations at 40 CFR 1502.14 (a) clearly state that agencies shall rigorously explore and objectively evaluate all reasonable alternatives. The DEIS does not present a fair and balanced evaluation of all alternatives considered, as required by 40 CFR 1502.14 (b) which states that agencies shall *devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.*

The DEIS does not provide a detailed socio-economic analysis demonstrating the short- and long term impacts of each of the alternatives being considered. Integrating the appropriate social sciences in the evaluation process is a key element within the context of NEPA, as stated at 42 U.S.C. 4331 Section 102. (2) "...all agencies of the Federal Government shall... (A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences..." NEPA further reinforces the need to assess this type of impact at 42 U.S.C. 4331 Section 102 (C) (v) "...any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." This requirement applies not only to the potential irreversible and irretrievable loss of community resources, as noted by recent comment letters submitted to FAA from the City of Angoon, but also the potential loss of resources associated with Admiralty Island National Monument.

The DEIS also fails to adequately discuss or address the conflicts that have developed between the FAA, DOT&PF, and the Angoon community regarding DOT&PF's Proposed Action and FAA's Preferred Alternative. These conflicts have caused considerable consternation among the

agencies as well as confusion for the public. CEQ regulations at 40 CFR 1502.16 (e) states that agencies shall address *possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.*

CEQ regulations at 40 CFR 1506.2(d) direct agencies to *better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.* The “law” in this case is the Alaska National Interest Lands Conservation Act (ANILCA), and the DEIS has failed to demonstrate how FAA would reconcile its “Preferred Alternative” with that law, and instead has used Section 4(f) of the Department of Transportation Act of 1966 as its justification for not supporting the “Proposed Action”. This approach has resulted in misleading and confusing information being disseminated that prevents the public from providing informed comments on the DEIS.

DOT&PF finds that the FAA Section 4(f) Evaluation completed to comply with 49 USC 303 is incomplete with regard to Federal Law for the alternatives considered in the DEIS. FAA’s analysis doesn’t comply with 49 USC 303 (c)(1) which requires, in order for an alternative to be considered, *there is no prudent and feasible alternative to using that land.* While FAA has adequately addressed the relative feasibility of each alternative, it has not addressed whether any of the alternatives are “prudent”. Whether an alternative is feasible and prudent requires more analysis than what is currently presented in the DEIS. A thorough evaluation of short- and long-term socio-economic impacts associated with each alternative is a mandatory element required to determine whether an action is prudent. All alternatives considered in the Angoon Airport DEIS involve resources protected under Section 4(f); Admiralty Island National Monument for the Proposed Action, and two public parks in the City of Angoon for the FAA’s Preferred Alternative. FAA has determined that the two city parks in Angoon that would be impacted by the Preferred Alternative are not subject to Section 4(f). This is contrary to correspondence received from the Angoon officials with jurisdiction over those parks. The Supreme Court has previously upheld the “feasible and prudent” clause (*Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402*). The court recognized the place of cost, directness of route, and community disruption in highway routing, but the existence of the statute “*indicates that protection of parkland was to be given paramount importance.*”

A rigorous evaluation of whether an alternative is prudent is also a requirement of ANILCA Title XI. Chapter 5 in the DEIS is devoted to the requirements of ANILCA and is intended to provide the public with an understanding of ANILCA as well as the decision criteria FAA and cooperating agencies must apply to comply with the ANILCA Process. Of the eight decision-making criteria listed at 1104(g) (2) of ANILCA, FAA has failed to address three of those criteria including criteria (B) *alternative routes and modes of access, including a determination*

*with respect to whether there is any economically feasible and prudent alternative to the routing of the system through or within a conservation system unit, national recreation area, or national conservation area ...; (D) short- and long-term social, economic, and environmental impacts of national, State, or local significance, including impacts on fish and wildlife and their habitat, and on rural, traditional lifestyles; and (E) the short- and long-term public values which may be adversely affected by approval of the transportation or utility system versus the short- and long-term public benefits which may accrue from such approval.*

The DEIS is deficient in its analysis of Section 106 of the Historic Preservation Act. Section 106 requires FAA to take into account the effect of the undertaking on any historic property. None of the alternatives considered have been thoroughly evaluated for hidden or buried cultural resources. The DEIS includes information suggesting that up to 118 acres of lands that would be impacted by the Proposed Action and 128 acres of lands that could be impacted by the Preferred Alternative have a high probability of discovery of buried or hidden cultural resources. Based on our review of the cultural resource work completed to-date, neither of these areas has been adequately evaluated for their potential to impact obscure or buried cultural resources per the intent of Section 106.

Of particular concern in the DEIS is FAA's use of photographs of the various alternatives that are simply inaccurate. As an example, the top left photograph on page 633 imply to the reader that the Proposed Action would directly impact a lake within the wilderness (caption is "General area of Airport 3a). Since there are no lakes in the footprint of the Proposed Action, we feel the photo creates a false and misleading impression as to the nature of the current site conditions. It is the role of FAA to provide true and accurate information that give the decision-maker and the public a true picture of potential impacts from an undertaking. What is also disturbing is that although there are numerous photographs of the various alternatives sited in the Wilderness, there are limited photos of the area selected as FAA's Preferred Alternative, an area that also possesses scenic beauty with prominent wetlands, vegetation, and open water. By using misleading photographs to favor the Preferred Alternative, FAA has failed to comply with 40 CFR 1502.14 (b) as previously cited in this memorandum.

We should also point out Executive Order 12898, signed on February 11, 1994, which requires Federal agencies to achieve Environmental Justice (EJ) by identifying and addressing disproportionately high and adverse human health and environmental effects, including interrelated social and economic effects of their activities on minority populations. Angoon has two EJ populations, a minority population and a low-income population. The DEIS analysis of possible disproportionate impacts of FAA's Preferred Alternative relative to the Proposed Action is simplistic, less than comprehensive, and clearly biased. The Environmental Protection Agency Office of Environmental Justice defines EJ as: *"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group*

*should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”* The DEIS only evaluates five resource categories under EJ, wilderness resources, wetlands, and light emissions, subsistence and cultural resources rather than a thorough evaluation of long-term socio-economic impacts on Angoon’s EJ populations. The DEIS must conduct a comprehensive analysis that includes *the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community.*

Although we have previously pointed out the excessive size and complexity of the format for the Angoon Airport DEIS as being problematic, we feel it appropriate to reiterate that concern. CEQ regulation 40 CFR 1502.7 clearly states that environmental impact statements of unusual scope or complexity *shall normally be less than 300 pages.* However, CEQ regulations aside, the size and format of the document make it very difficult to follow for professionals who are experienced in such matters – we can only surmise how burdensome is the task of the general public in reviewing it.

In summary, we believe the Angoon Airport DEIS to be inadequate for the purposes of ANILCA Title XI, and indefensible under NEPA. Please notify FAA of our concerns at your earliest convenience.





U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Alaskan Region  
Airports Division  
222 West 7th Ave #14  
Anchorage, Alaska 99513

July 14, 2015

Hon. Marc Luiken, Commissioner  
Alaska Department of Transportation & Public Facilities  
3132 Channel Drive #300  
Juneau, Alaska 99801-7898

RE: Follow-up to recent communications with Alaska Department of Transportation & Public Facilities, Subject: Angoon Airport Draft Environmental Impact Statement

Dear Commissioner Luiken,

The Federal Aviation Administration (FAA) has reviewed the Alaska Department of Transportation & Public Facilities' (ADOT&PF) recent requests.

Based on information received during the public review of the Angoon Airport Draft Environmental Impact Statement (EIS), the FAA will reevaluate whether the platted city parks are Section 4(f) properties under the Department of Transportation Act. Additionally, the FAA will move forward with a final EIS, including prudence determinations for all alternatives and responses to National Environmental Policy Act-related comments from the U.S. Army Corps of Engineers, the U.S. Forest Service, and the general public..

The FAA has met statutory and regulatory requirements under the National Environmental Policy Act and the Alaska National Interest Lands Conservation Act (ANILCA) and has made a good faith effort to provide an EIS that supports your ANILCA application. The FAA will not complete the additional cultural and wetland information requested by the U.S. Army Corps of Engineers and U.S. Forest Service for the ADOT&PF's ANILCA application adequacy. This is the obligation of the ANILCA applicant.

The FAA plans to publish a final EIS next spring. I look forward to your agency's continued cooperation as we work together to help meet the aviation transportation needs of the Angoon community.

Byron K. Huffman  
Manager Airports Division

cc:

John Binder, Deputy Commissioner, ADOT&PF  
Steven Hatter, Deputy Commissioner, ADOT&PF  
Robert Campbell, Acting Southcoast Regional Director, ADOT&PF  
Verne Skagerberg, Southcoast Region Transportation Planner, ADOT&PF  
Leslie Grey, Lead Environmental Program Manager, FAA Alaska Region  
Chuck Correa, P.E., Southcoast Region Design and Construction, ADOT&PF

Pat Carroll, P.E., Southcoast Region Preconstruction Engineer, ADOT&PF  
Keith Karpstein, P.E., Southcoast Region Design Group Chief, ADOT&PF  
Jane Gendron, Southcoast Region Environmental Manager, ADOT&PF  
John Barnett, Southcoast Region Environmental Coordinator, ADOT&PF  
Beth Pendleton, Alaska Regional Forester, U.S. Forest Service  
Melissa Dinsmore, Special Uses and Energy Program Manager, Tongass National Forest  
Darren Kelly, Special Uses Permit Administrator, Tongass National Forest  
Chad VanOrmer, Monument District Ranger, Tongass National Forest  
Roger Birk, Alaska Regional Special Uses Coordinator, U.S. Forest Service  
Linda Speerstra, Chief, Southeast Section, U.S. Army Corps of Engineers  
Randy Vigil, Project Manager, U.S. Army Corps of Engineers  
Kip Knudson, Director of State/Federal Relations, Office of the Governor  
Amanda Childs, SWCA Environmental Consultants  
Sue Magee, ANILCA Program Coordinator, Alaska Department of Natural Resources  
Sean Lynch, Assistant Attorney General, State of Alaska



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Alaskan Region  
Airports Division  
222 West 7th Ave #14  
Anchorage, Alaska 99513

July 16, 2015

Hon. Matthew Kookesh, Jr. Mayor  
City of Angoon  
700 Aandeinaat Street  
Angoon, Alaska 99820

RE: Status of the Angoon Airport Environmental Impact Statement

Dear Mayor Kookesh,

The Federal Aviation Administration (FAA) has been in correspondence with the Alaska Department of Transportation & Public Facilities' (ADOT&PF) regarding the Angoon Draft Environmental Impact Statement (EIS) and their Alaska National Interest Lands Act (ANILCA) application.

Based on information received from the City of Angoon during the public review of the Angoon Airport Draft EIS, the FAA will reevaluate whether the platted city parks are Section 4(f) properties under the Department of Transportation Act. Additionally, the FAA will move forward with a final EIS, including prudence determinations for all alternatives and responses to National Environmental Policy Act-related comments from Federal, State and local agencies and the general public.

The FAA has met statutory and regulatory requirements under the National Environmental Policy Act and the ANILCA and has made a good faith effort to provide an EIS that supports the ADOT&PF ANILCA application. The FAA will not complete the additional cultural and wetland information requested by the U.S. Army Corps of Engineers and U.S. Forest Service for the ADOT&PF's ANILCA application adequacy. This is the obligation of the ANILCA applicant.

The FAA plans to publish a final EIS next spring. We are looking forward to working together to help meet the aviation transportation needs of the City of Angoon.

Byron K. Huffman  
Manager Airports Division

cc:

John Binder, Deputy Commissioner, ADOT&PF  
Steven Hatter, Deputy Commissioner, ADOT&PF  
Robert Campbell, Acting Southcoast Regional Director, ADOT&PF  
Verne Skagerberg, Southcoast Region Transportation Planner, ADOT&PF  
Leslie Grey, Lead Environmental Program Manager, FAA Alaska Region  
Chuck Correa, P.E., Southcoast Region Design and Construction, ADOT&PF  
Pat Carroll, P.E., Southcoast Region Preconstruction Engineer, ADOT&PF

Keith Karpstein, P.E., Southcoast Region Design Group Chief, ADOT&PF  
Jane Gendron, Southcoast Region Environmental Manager, ADOT&PF  
John Barnett, Southcoast Region Environmental Coordinator, ADOT&PF  
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Darren Kelly, Special Uses Permit Administrator, Tongass National Forest  
Chad VanOrmer, Monument District Ranger, Tongass National Forest  
Roger Birk, Alaska Regional Special Uses Coordinator, U.S. Forest Service  
Linda Speerstra, Chief, Southeast Section, U.S. Army Corps of Engineers  
Randy Vigil, Project Manager, U.S. Army Corps of Engineers  
Kip Knudson, Director of State/Federal Relations, Office of the Governor  
Amanda Childs, SWCA Environmental Consultants  
Sue Magee, ANILCA Program Coordinator, Alaska Department of Natural Resources  
Sean Lynch, Assistant Attorney General, State of Alaska

**From:** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)  
**To:** [rjack.agntribe@gmail.com](mailto:rjack.agntribe@gmail.com); [juanitasilva81@yahoo.com](mailto:juanitasilva81@yahoo.com)  
**Cc:** [Amanda Childs](mailto:Amanda.Childs@faa.gov); [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov); [verne.skagerberg@alaska.gov](mailto:verne.skagerberg@alaska.gov); [cvanormer@fs.fed.us](mailto:cvanormer@fs.fed.us); [dpkelly@fs.fed.us](mailto:dpkelly@fs.fed.us); [randal.p.vigil@usace.army.mil](mailto:randal.p.vigil@usace.army.mil)  
**Subject:** Angoon Airport EIS status letter  
**Date:** Monday, July 20, 2015 3:38:25 PM  
**Attachments:** [Angoon Status ACA 07-20-15.pdf](#)

---

Good Afternoon Raynelle and Juanita,

Attached is a letter from FAA to the Tribe regarding the status of the Angoon Airport EIS. I would appreciate it if you would please provide a copy of the letter to your Mr. Wally Frank, Tribal President, as I don't have an address for him. A hard copy will be sent via USPS.

***Leslie Grey***

Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453

**From:** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)  
**To:** [apasdu@hotmail.com](mailto:apasdu@hotmail.com); [sharonlove65@gmail.com](mailto:sharonlove65@gmail.com)  
**Cc:** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov); [Amanda\\_Childs](mailto:Amanda_Childs); [verne.skagerberg@alaska.gov](mailto:verne.skagerberg@alaska.gov); [cvanormer@fs.fed.us](mailto:cvanormer@fs.fed.us); [dpkelly@fs.fed.us](mailto:dpkelly@fs.fed.us); [randal.p.vigil@usace.army.mil](mailto:randal.p.vigil@usace.army.mil)  
**Subject:** Angoon Airport EIS status letter  
**Date:** Monday, July 20, 2015 3:33:06 PM  
**Attachments:** [Angoon\\_Status\\_Kootznoowoo\\_07-20-15.pdf](#)

---

Harold,

Please see attached letter for the Angoon Airport EIS project status.

***Leslie Grey***

Environmental Program Manager

FAA Airports, Alaskan Region

907.271.5453





U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Alaskan Region  
Airports Division  
222 West 7th Ave #14  
Anchorage, Alaska 99513

July 20, 2015

Wally Frank, Sr.  
Angoon Community Association  
P.O. Box 328  
Angoon, Alaska 99820

RE: Status of the Angoon Airport Environmental Impact Statement

Dear Mr. Frank,

The Federal Aviation Administration (FAA) has been in correspondence with the Alaska Department of Transportation & Public Facilities' (ADOT&PF) regarding the Angoon Draft Environmental Impact Statement (EIS) and their ANILCA application.

Based on information received from the City of Angoon during the public review of the Angoon Airport Draft Environmental Impact Statement (EIS), the FAA will reevaluate whether the platted city parks are Section 4(f) properties under the Department of Transportation Act. Additionally, the FAA will move forward with a final EIS, including responses to National Environmental Policy Act-related comments from Federal agencies, State and local agencies, and the general public.

The FAA has met statutory and regulatory requirements under the National Environmental Policy Act and the Alaska National Interest Lands Conservation Act (ANILCA) and has made a good faith effort to provide an EIS that supports the ADOT&PF ANILCA application. The FAA will not complete the additional cultural and wetland information requested by the U.S. Army Corps of Engineers and U.S. Forest Service for the ADOT&PF's ANILCA application adequacy. This is the obligation of the ANILCA applicant.

The FAA plans to publish a final EIS next spring. We are looking forward to working together to help meet the aviation transportation needs of Angoon. Please feel free to contact me if you have any questions or concerns.

Leslie Grey  
FAA Alaskan Region Airports Division  
Angoon Airport EIS Project Manager

cc:

Verne Skagerberg, Southcoast Region Transportation Planner, ADOT&PF  
Darren Kelly, Special Uses Permit Administrator, Tongass National Forest  
Chad VanOrmer, Monument District Ranger, Tongass National Forest  
Randy Vigil, Project Manager, U.S. Army Corps of Engineers  
Raynelle Jack, ACA  
Amanda Childs, SWCA Environmental Consultants



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Alaskan Region  
Airports Division  
222 West 7th Ave #14  
Anchorage, Alaska 99513

July 20, 2015

Harold Frank  
Kootznoowoo, Inc.  
8585 Old Dairy Rd, Ste 104  
Juneau, Alaska 99801

RE: Status of the Angoon Airport Environmental Impact Statement

Dear Mr. Frank,

The Federal Aviation Administration (FAA) has been in correspondence with the Alaska Department of Transportation & Public Facilities' (ADOT&PF) regarding the Angoon Draft Environmental Impact Statement (EIS) and their ANILCA application.

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Leslie Grey  
FAA Alaskan Region Airports Division  
Angoon Airport EIS Project Manager

cc:

Verne Skagerberg, Southcoast Region Transportation Planner, ADOT&PF  
Darren Kelly, Special Uses Permit Administrator, Tongass National Forest  
Chad VanOrmer, Monument District Ranger, Tongass National Forest  
Randy Vigil, Project Manager, U.S. Army Corps of Engineers  
Sharon Love, Interim General Manager  
Amanda Childs, SWCA Environmental Consultants

# Angoon Airport EIS Website Pages [www.angoonairporteis.com](http://www.angoonairporteis.com) ©2011

Project website pages, 2015.

## Home Page

<http://www.angoonairporteis.com/>

The screenshot shows a web browser window with the address bar displaying <http://www.angoonairporteis.com/>. The page features a dark red background. At the top, there is a banner with the text "ANGOON AIRPORT Environmental Impact Statement" and the FAA logo. Below the banner is a photograph of a cockpit view through a rain-streaked windshield, showing a red flag on a pole in the distance. A blue "Enter" button with a red arrow is overlaid on the bottom right of the photo. Below the photo, there are two columns of text. The left column is titled "PROJECT CONTACT:" and lists Leslie Grey, FAA Project Manager, with the email [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com) and a link for mailing address. The right column is titled "What's New:" and lists three items: "DEIS Comments", "Public Hearing Announcement", and "The Angoon Airport Draft Environmental Impact Statement (DEIS) is available!". Below the "What's New:" section is a Facebook "Like" button showing "114 people like this" and a link to "Sign Up to see what your friends like". At the bottom of the page, there is a search bar, a copyright notice "© 2011 SWCA, Inc.", and links for "Home" and "Contact Us".


## Contact Us Page

<http://www.angoonairporteis.com/contact.html>

http://angoonairporteis.com/contact.html


Angoon Airport EIS

Convert Select



# ANGOON AIRPORT

Environmental Impact Statement



**Welcome**

[Message from FAA](#)

**Draft EIS**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

**Links**

If you have any questions about the proposed project or EIS, please contact us:

Leslie Grey - AAL 614  
FAA Project Manager  
Angoon Airport EIS  
222 West 7th Avenue, Box #14  
Anchorage, AK 99513-7507  
Phone: 907-271-5453  
FAX: 907-271-2851

To submit a comment, please send an email to [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com).

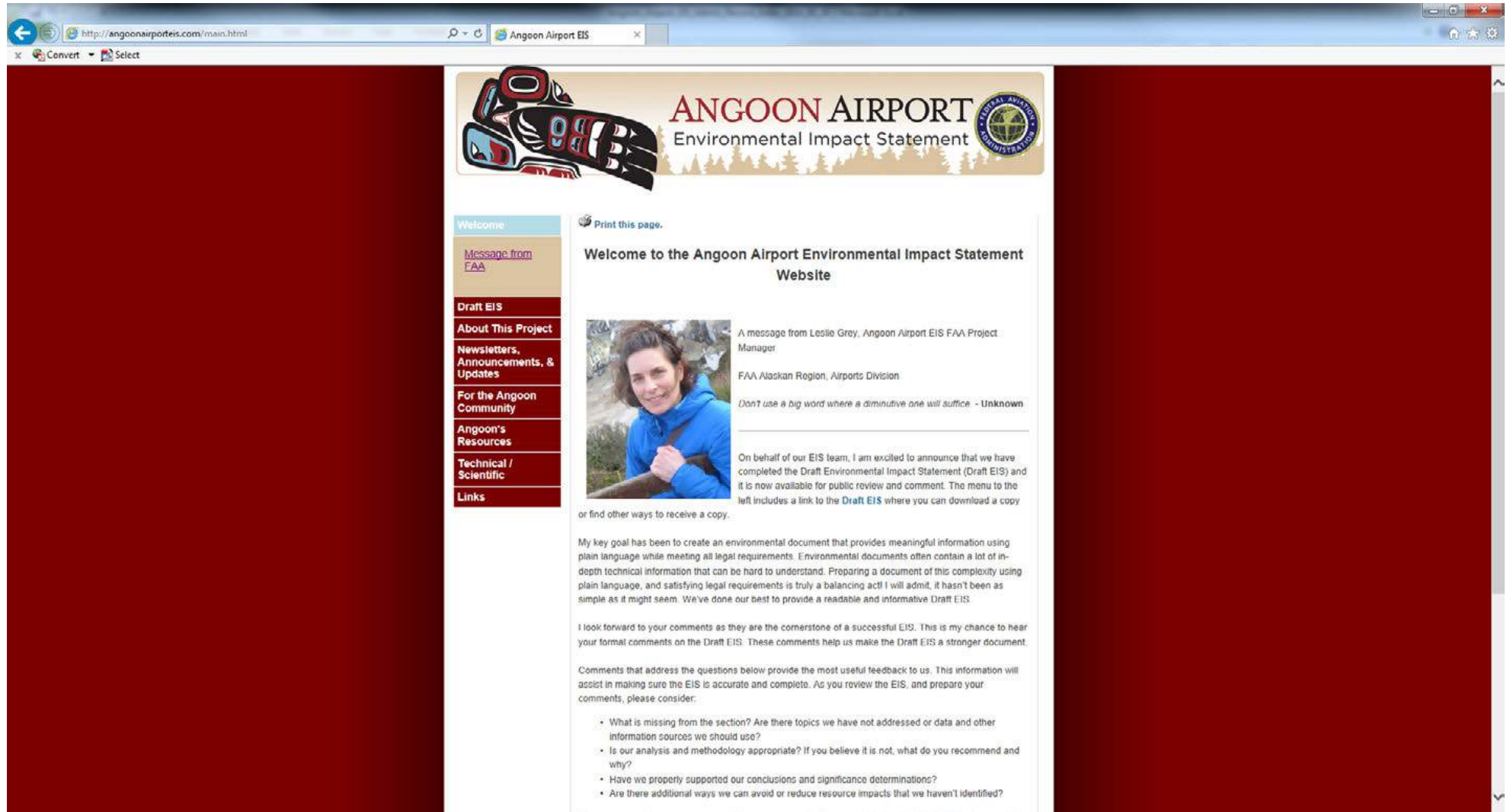
To subscribe to the project mailing list, please fill out the form [here](#).

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## Main Navigation Page

<http://www.angoonairporteis.com/main.html>





The screenshot shows a web browser window with the address bar displaying "http://www.angoonairporteis.com/main.html". The page features a header with a stylized logo of a Totem Pole and the text "ANGOON AIRPORT Environmental Impact Statement" next to the FAA logo. A left-hand navigation menu includes links for "Welcome", "Message from FAA", "Draft EIS", "About This Project", "Newsletters, Announcements, & Updates", "For the Angoon Community", "Angoon's Resources", "Technical / Scientific", and "Links". The main content area is titled "Welcome to the Angoon Airport Environmental Impact Statement Website" and includes a "Print this page." link. A message from Leslie Grey, FAA Project Manager, is displayed, accompanied by a photo of her. The message states that the Draft Environmental Impact Statement (Draft EIS) is now available for public review and comment. It also includes a list of questions for public feedback, such as "What is missing from the section?" and "Are there additional ways we can avoid or reduce resource impacts that we haven't identified?"

http://www.angoonairporteis.com/main.html

Angoon Airport EIS

Convert Select

 **ANGOON AIRPORT**  
Environmental Impact Statement 

Welcome

[Message from FAA](#)

[Draft EIS](#)

[About This Project](#)

[Newsletters, Announcements, & Updates](#)

[For the Angoon Community](#)


[Angoon's Resources](#)

[Technical / Scientific](#)

[Links](#)

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### Welcome to the Angoon Airport Environmental Impact Statement Website

 A message from Leslie Grey, Angoon Airport EIS FAA Project Manager  
FAA Alaskan Region, Airports Division  
*Don't use a big word where a diminutive one will suffice - Unknown*

On behalf of our EIS team, I am excited to announce that we have completed the Draft Environmental Impact Statement (Draft EIS) and it is now available for public review and comment. The menu to the left includes a link to the [Draft EIS](#) where you can download a copy or find other ways to receive a copy.

My key goal has been to create an environmental document that provides meaningful information using plain language while meeting all legal requirements. Environmental documents often contain a lot of in-depth technical information that can be hard to understand. Preparing a document of this complexity using plain language, and satisfying legal requirements is truly a balancing act! I will admit, it hasn't been as simple as it might seem. We've done our best to provide a readable and informative Draft EIS.

I look forward to your comments as they are the cornerstone of a successful EIS. This is my chance to hear your formal comments on the Draft EIS. These comments help us make the Draft EIS a stronger document.

Comments that address the questions below provide the most useful feedback to us. This information will assist in making sure the EIS is accurate and complete. As you review the EIS, and prepare your comments, please consider:

- What is missing from the section? Are there topics we have not addressed or data and other information sources we should use?
- Is our analysis and methodology appropriate? If you believe it is not, what do you recommend and why?
- Have we properly supported our conclusions and significance determinations?
- Are there additional ways we can avoid or reduce resource impacts that we haven't identified?

## Draft EIS Pages

<http://www.angoonairporteis.com/deis.html>

[http://www.angoonairporteis.com/deis\\_comments.html](http://www.angoonairporteis.com/deis_comments.html)

**Welcome**

**Draft EIS**

**DEIS Documents**

**DEIS Comments**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

**Links**

### Download the DEIS

There are three files for the DEIS, one file for the main DEIS and two files for appendices. If you do not have high-speed internet connection, a low-resolution version has also been provided. To download the DEIS, right click on the link below, select "save link as" or "save target as" and save to your computer.

- High Resolution DEIS (142 mb)
- Draft EIS - Appendix A-H (29 mb)
- Draft EIS - Appendix I-S (46 mb)
- Low Resolution DEIS (47 mb)

*Note: The document is a hyperlinked, interactive Adobe Systems Portable Document Format (PDF) format, best viewed in Adobe Acrobat. A free version of Adobe Reader is available [here](#).*

If you're not able to download the DEIS, CDs are available through the following methods:

- Email your CD request to [comments@angoonairporteis.com](mailto:comments@angoonairporteis.com)
- Call Leslie Grey at (907) 271-5453 with your CD request
- Pick up a CD at one of the following locations. Public hard copies are also available for viewing at these locations.
  - Juneau Public Library
    - Downtown Branch: 292 Marine Way, Juneau





# ANGOON AIRPORT

## Environmental Impact Statement



### Welcome

### Draft EIS

### DEIS Documents

### DEIS Comments

### About This Project

### Newsletters, Announcements, & Updates

### For the Angoon Community

### Angoon's Resources

### Technical / Scientific

### Links

### DEIS Comments

Hello everyone,

The last couple of months has been a whirlwind of activity for the FAA EIS team. We held meetings in Juneau and Angoon, Alaska, and Washington D.C. for joint official hearings on the draft EIS and DOT&PF's Title XI ANILCA application. We all enjoyed meeting with everyone and hearing your comments and concerns on the project.

Since that time, the comment period for the draft EIS and the ANILCA Title XI application has closed. The FAA is reviewing all comments received on the draft EIS. All comments received will be responded to, and those responses will be available in the final EIS.

Normal practice for the FAA is to release the comments received and responses to these comments together in the final EIS. However, in this specific situation because the DOT&PF used the draft EIS as supporting documentation for their Title XI application, some of the comments received on the draft EIS relate to the application as well. Therefore the FAA has decided to release all comments received on the draft EIS at this time.

For anyone interested in seeing the comments received, as well as the testimony from the public hearings you **MUST** download them by right-clicking on the link below, select "save link as" or "save target as" and save to your computer. [if you do not download, the file will not work.](#)

### [Angoon Airport DEIS Comments](#)

The majority of comments received were sent via email, with many of them including an attachment to the email. When you go to those emails, you will have to open the attachment to see the actual submittal. Note that anything that is "blue" is a live link. To be able to see the actual letter submitted by this commenter, you will need to double click on the blue attachment text. Please keep in mind that sometimes there will be multiple attachments, often they are simply agency logos or website links. You will only need to click on an attachment that is either a pdf or word document.

The comments are being provided for informational purposes only. As noted above, the comment period has ended and FAA will not be accepting any further comments on the draft EIS.

As always, don't hesitate to reach out to me at 907-271-5453 or [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov) if you have any questions or concerns about the Angoon Airport EIS project.

Best regards,

Leslie Grey

## About This Project Pages

[http://www.angoonairporteis.com/what\\_is\\_this\\_project.html](http://www.angoonairporteis.com/what_is_this_project.html)

**Welcome**

**Draft EIS**

**About This Project**

[What is This Project?](#)

[About Angoon](#)

[About the Proposed Airport](#)

[What is an EIS?](#)

[FAA's Roles and Responsibilities](#)

[How are Decisions Made?](#)

[When Will the Airport be Built?](#)

[How Can I be Involved?](#)

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**


**Technical / Scientific**

**Links**

Print this page.


### What is this project?

The purpose of this website is to provide information about the Environmental Impact Statement (EIS) the Federal Aviation Administration (FAA) is preparing for a proposed new land-based airport and airport access road for the community of Angoon in Southeast Alaska. Currently, the only methods of transportation to and from the community are via floatplanes, and The Alaska Marine Highway System (ferry).



The Alaska Department of Transportation and Public Facilities (DOT&PF) proposed the airport project, and you will see them referred to in different areas of this website as the project sponsor. The DOT&PF would own, maintain, and operate the airport if one is built.

The FAA has the responsibility for preparing the EIS associated with this proposed airport. The FAA is referred to as the **lead federal agency** for the EIS. The DOT&PF has requested both funding and approval for the proposed airport from the FAA.



There are three **alternative locations** for the proposed airport and access roads, and all are considered in the EIS. Two locations are on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznoowoo Wilderness Area, and one is on privately held lands.

Search

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**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**  
**Draft EIS**  
**About This Project**  
[What is This Project?](#)  
[About Angoon](#)  
[About the Proposed Airport](#)  
[What is an FIS?](#)  
[FAA's Roles and Responsibilities](#)  
[How are Decisions Made?](#)  
[When Will the Airport be Built?](#)  
[How Can I be Involved?](#)  
**Newsletters, Announcements, & Updates**  
**For the Angoon Community**  
**Angoon's Resources**  
**Technical / Scientific**  
**Links**

The community of Angoon is the only permanent settlement on Admiralty Island, a large island located about 55 miles from Alaska's capital, Juneau, and about 700 miles southeast of Anchorage, Alaska's largest city and home to many state agency offices. Angoon is an incorporated city with a democratically elected city government. It has no land-based airport, nor any roads to any other communities. Residents and travelers can reach Angoon only by floatplane, boat, or the Alaska State Marine Highway ferry system. The 2010 Census count for Angoon was 459, and most residents are Alaska Natives. The community is small and has few commercial services. The economy is based on commercial fishing and hunting and local government employment, and many residents live a primarily subsistence lifestyle. The Angoon Community Association is the federally recognized tribal government in Angoon.

The community is located on a peninsula surrounded on the north and west by Chatham Strait and on the east by Favorite Bay. Beyond Favorite Bay, and to the south of the peninsula, Angoon is surrounded by the nearly one-million-acre Admiralty Island National Monument and Kootznoowoo Wilderness Area. This means that private, state, or municipal lands on which to build an airport are extremely limited. The environment is characterized as temperate rainforest.



**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**

**Draft EIS**

**About This Project**

- [What Is This Project?](#)
- [About Angoon](#)
- [About the Proposed Airport](#)
- [What is an EIS?](#)
- [FAA's Roles and Responsibilities](#)
- [How are Decisions Made?](#)
- [When Will the Airport be Built?](#)
- [How Can I be Involved?](#)

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

**Links**

**About the Proposed Airport**

The proposed project is a new land-based airport and airport access road for the community of Angoon in Southeast Alaska. The Alaska Department of Transportation and Public Facilities (DOT&PF) is the project sponsor - the party proposing the project. The DOT&PF would maintain and operate the airport if one is built. The Federal Aviation Administration (FAA) is responsible for the requirements of public use airports and is the lead federal agency responsible for the preparation of the environmental impact statement for the airport. The DOT&PF is requesting both funding and approval for the proposed airport from the FAA. See [Government's Roles and Responsibilities](#) for more information about the FAA's role.

The DOT&PF proposes to construct the airport and a portion of its associated access road on lands managed by the U.S. Forest Service as the Admiralty Island National Monument and Kootznookoo Wilderness Area. Alternative locations for the proposed airport and access roads are also considered in this EIS.

**What are the proposed Airport Alternatives?**

Shown on the map below, three possible airport locations are being considered and will be analyzed in the EIS. These locations may be familiar to you, because they are the same ones discussed in public meetings. These sites were identified through technical studies and public, agency, and tribal input as the three most viable locations from an aviation standpoint. Two of the sites (Alternatives 3a and 4) are located in the Admiralty Island National Monument and Kootznookoo Wilderness Area. The third site (Alternative 12a) is located on the Angoon peninsula. The Airport Alternative 3a location is the Department of Transportation and Public Facilities' (DOT&PF) proposed location.

**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**  
**Draft EIS**  
**About This Project**  
[What is This Project?](#)  
[About Angoon](#)  
[About the Proposed Airport](#)  
[What is an EIS?](#)  
[FAA's Roles and Responsibilities](#)  
[How are Decisions Made?](#)  
[When Will the Airport be Built?](#)  
[How Can I be Involved?](#)  
**Newsletters, Announcements, & Updates**  
**For the Angoon Community**  
**Angoon's Resources**  
**Technical / Scientific**  
**Links**

**What is an environmental impact statement?**

An *environmental impact statement (EIS)*, or EIS, is a document containing an analysis of the anticipated long-term and short-term effects on the natural and human environment from a proposed project, decision, or action. A typical EIS also includes an explanation of why the project or action is needed and what other options or alternatives were considered to meet that need. Most EISes are prepared to comply with the National Environmental Policy Act (NEPA), but some EISes are prepared for other reasons.

The purpose of the EIS process is to inform both the FAA and the public of the impacts of the proposed airport before the decision is made on whether it will be built. An EIS requires the alternatives to the proposed airport site also be analyzed. These alternatives will allow the FAA to look at different options for airport siting or design to minimize impacts or resource conflicts as much as possible. Additionally, the EIS must analyze a No Action Alternative, which is an alternative which would not construct the airport. The potential outcomes of the EIS process could be the FAA choosing any one of the alternative airport sites analyzed in the EIS, or choosing the No Action Alternative, with the consequence that no airport would be constructed. FAA's choice will depend on which alternative best meets the project needs while minimizing impacts to both human and natural resources.

NEPA is an open disclosure process that seeks input from all interested parties. Visit our [Contact Us](#) page to let us know what you think or to sign up for regular project updates. Find out about upcoming community visits from the FAA team and see what members of the Angoon community have already told us.

Scientific studies are a key component of every EIS. Visit [Key Resources We're Studying](#) to find out more about how Angoon's resources are being studied. You can also read the scientific studies themselves by visiting [Technical and Scientific Studies](#).

Search

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**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**  
**Draft EIS**  
**About This Project**  
[What is This Project?](#)  
[About Angoon](#)  
[About the Proposed Airport](#)  
[What is an EIS?](#)  
[FAA's Roles and Responsibilities](#)  
[How are Decisions Made?](#)  
[When Will the Airport be Built?](#)  
[How Can I be Involved?](#)  
**Newsletters, Announcements, & Updates**  
**For the Angoon Community**  
**Angoon's Resources**  
**Technical / Scientific**  
**Links**

**What is the Federal Aviation Administration's role in considering this project?**

The FAA is the lead federal agency with statutory authority over airports and airways in the United States. For the proposed Angoon Airport, the DOT&PF has applied to the FAA for construction funding from the FAA's Airport Improvement Program and for approval of the airport layout plan (ALP) for the proposed airport. Before the FAA can decide whether to provide the requested funding or approval for the airport layout plan, they are required by the National Environmental Policy Act (NEPA), to evaluate and disclose to the public the potential social and environmental effects of building and operating the proposed airport. Additionally, the FAA is responsible for ensuring that airport development projects provide for the protection and enhancement of natural resources and the quality of the environment (49 U.S.C. 47101(a)(6)).

Providing safe and reliable air transportation is the fundamental mission of the FAA, and providing funding for airports that meet this purpose is consistent with FAA policy. Additionally, the U.S. Department of Transportation, of which the FAA is a key agency, established the Essential Air Service program specifically to allow residents of small communities to have reasonable access to the national air transportation system. Finally, the FAA's Strategic Initiative for Rural Airport Improvement, as outlined in the agency's Airports Fiscal Year 2009 Business Plan (FAA 2009), specifically calls for improvements to rural airport systems in Alaska to provide for 24-hour visual flight rules access and to increase access to such airports by essential medical aircraft.







- Welcome
- Draft EIS
- About This Project
  - [What is This Project?](#)
  - [About Angoon](#)
  - [About the Proposed Airport](#)
  - [What is an EIS?](#)
  - [FAA's Roles and Responsibilities](#)
  - [How are Decisions Made?](#)
  - [When Will the Airport be Built?](#)
  - [How Can I be Involved?](#)
- Newsletters, Announcements, & Updates
- For the Angoon Community
- Angoon's Resources
- Technical / Scientific
- Links

**How are Decisions made in the EIS Process?**

Our team often is asked about the roles and EIS-related activities of different agencies and entities. Specifically, how they are involved in the airport project and NEPA process. Often, interested parties ask what other agencies besides FAA have authority and decision-making abilities on the NEPA process. We have explained some of these roles in the graphic below, with more details following. To expand the graphic below and see more information, simply hover your cursor over the image.

| AGENCY:               | FAA                                        | State of Alaska DOT&PF                     | Forest Service                             | City of Angoon                                        | Angoon Community Association           | Kingdomco, Inc.                    |
|-----------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|-------------------------------------------------------|----------------------------------------|------------------------------------|
| ROLE:                 | Lead Agency for EIS and Record of Decision | Project Sponsor                            | Cooperating Agency                         | Stakeholder/Landowner                                 | Federally recognized tribal government | Stakeholder                        |
| WHAT THAT ROLE MEANS: | Sheets preparation, administration, etc.   | Proposed Alternative Site/FAA              | Proposed Alternative Site/FAA              | Provides information on plans for land use            | Represents local tribal government     | Represents local tribal government |
| DECISION MAKING:      | Record of Decision and Record of Decision  | Would own and operate airport construction | Would own and operate airport construction | No decision-making authority in alternative selection | Has input into the EIS process         | Has input into the EIS process     |

**Roles and decision-making responsibilities of agencies and stakeholders in the Angoon Airport EIS**

FAA is the lead agency for the EIS and the Record of Decision. They oversee the preparation of the EIS and approve any Airport Layout Plan selected through the EIS process. The FAA will also recommend approval or disapproval of the ANILCA Title XI application, if the DOT&PF submits one for one of the airport locations in the Monument-Wilderness Area.

The State of Alaska DOT&PF is the project sponsor. They have requested construction funding and approval of the Airport Layout Plan for their proposed airport location (Airport Alternative 3a) from the FAA. The DOT&PF would own, operate, and maintain any airport constructed as a result of the EIS.

The Forest Service is a "cooperating agency" in the EIS. They will have to either adopt (agree with) the FAA's EIS and Record of Decision or issue their own Record of Decision. They also have to recommend approval or disapproval of the ANILCA Title XI application if the State of Alaska DOT&PF submits one for one of the airport locations in the Monument-Wilderness Area.

The City of Angoon is a "stakeholder" in the EIS and a landowner. The City provides information about plans for land use, but the City does not have a role in decisions about the selection of an alternative.

The Angoon Community Association is the federally recognized tribal government, and the FAA must

**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**  
**Draft EIS**  
**About This Project**  
[What is This Project?](#)  
[About Angoon](#)  
[About the Proposed Airport](#)  
[What is an EIS?](#)  
[FAA's Roles and Responsibilities](#)  
[How are Decisions Made?](#)  
[When Will the Airport be Built?](#)  
[How Can I be Involved?](#)  
**Newsletters, Announcements, & Updates**  
**For the Angoon Community**  
**Angoon's Resources**  
**Technical / Scientific**  
**Links**

### When Will the Airport be Built?

This is the question we most often receive from members of the community of Angoon, who often feel that they have been waiting for this airport for more than three decades.

This is a difficult question to answer precisely, but we can report that as of now, we are preparing the Draft EIS, which will be released to the public in mid 2014. If everything stays on schedule, the Final EIS will be complete by the end of 2014. When the Final EIS is complete, if the FAA selects one of the "action" alternatives, the DOT&PF would start work on detailed engineering design, obtaining the required construction permits, and acquiring right-of-way. This effort typically takes one to two years to complete but can sometimes take longer. Construction of the airport would follow and would likely take two or possibly three construction seasons.

One important consideration in the timeline for this project is the fact that the Angoon Project involves a proposal from the State of Alaska DOT&PF to put an airport in a National Monument and Wilderness area. If an alternative in the Monument-Wilderness is selected, an application under ANILCA Title XI must be approved before the design can start. If Alternative 12a on the Angoon peninsula is selected, this design and construction effort can start soon after all land acquisitions and permits are finalized.

**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**

**Draft EIS**

**About This Project**

[What is This Project?](#)

[About Angoon](#)

[About the Proposed Airport](#)

[What is an EIS?](#)

[FAA's Roles and Responsibilities](#)

[How are Decisions Made?](#)

[When Will the Airport be Built?](#)

[How Can I be Involved?](#)

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

**Links**

**Who Can be Involved With the Project?**

NEPA is an open disclosure process that seeks input from all interested parties. This includes agencies with jurisdictional authority or special expertise over resources that could be impacted by the proposed project, local government, non-governmental organizations (NGOs), adjacent landowners, and the interested public.

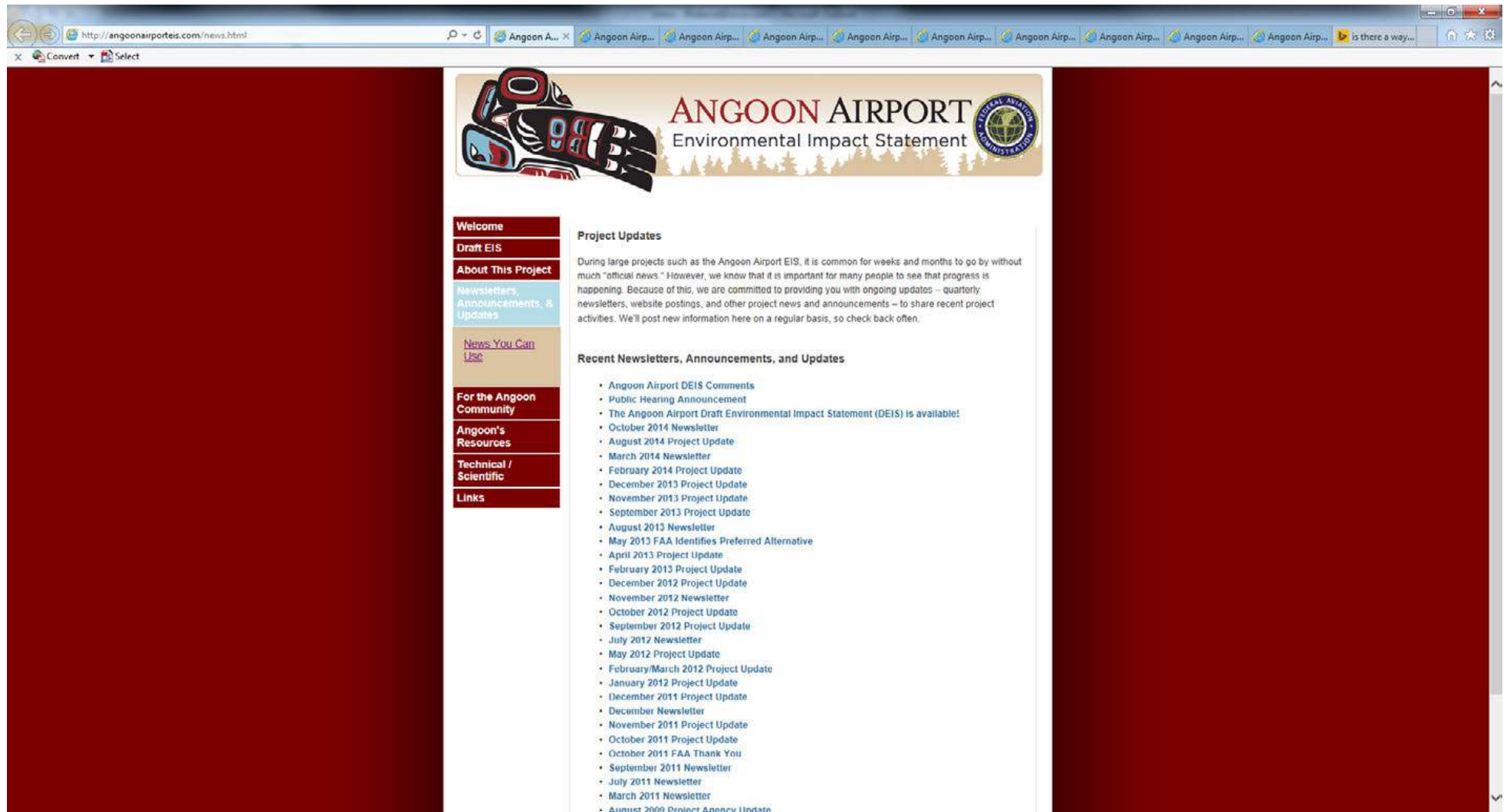
**How Can I Stay Involved?**

Formal opportunities for public comment occur during the scoping process and after the publication of the draft and final EIS documents. However, the FAA will accept public input throughout the entire EIS study and encourages your participation. You can submit comments by sending an email to [comments@angoonairports.com](mailto:comments@angoonairports.com) or contact the project managers via our [Contacts page](#). If you would like to receive project updates, please sign up using our [Subscribe form](#).

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## Newsletters, Announcements, & Updates

<http://www.angoonairporteis.com/news.html>



The screenshot shows a web browser window displaying the Angoon Airport Environmental Impact Statement website. The browser's address bar shows the URL <http://www.angoonairporteis.com/news.html>. The website features a header with the Angoon Airport logo and the text "ANGOON AIRPORT Environmental Impact Statement". A navigation menu on the left includes links for "Welcome", "Draft EIS", "About This Project", "Newsletters, Announcements, & Updates", "News You Can Use", "For the Angoon Community", "Angoon's Resources", "Technical / Scientific", and "Links". The main content area is divided into two sections: "Project Updates" and "Recent Newsletters, Announcements, and Updates".

### Project Updates

During large projects such as the Angoon Airport EIS, it is common for weeks and months to go by without much "official news." However, we know that it is important for many people to see that progress is happening. Because of this, we are committed to providing you with ongoing updates – quarterly newsletters, website postings, and other project news and announcements – to share recent project activities. We'll post new information here on a regular basis, so check back often.

### Recent Newsletters, Announcements, and Updates

- [Angoon Airport DEIS Comments](#)
- [Public Hearing Announcement](#)
- [The Angoon Airport Draft Environmental Impact Statement \(DEIS\) is available!](#)
- [October 2014 Newsletter](#)
- [August 2014 Project Update](#)
- [March 2014 Newsletter](#)
- [February 2014 Project Update](#)
- [December 2013 Project Update](#)
- [November 2013 Project Update](#)
- [September 2013 Project Update](#)
- [August 2013 Newsletter](#)
- [May 2013 FAA Identifies Preferred Alternative](#)
- [April 2013 Project Update](#)
- [February 2013 Project Update](#)
- [December 2012 Project Update](#)
- [November 2012 Newsletter](#)
- [October 2012 Project Update](#)
- [September 2012 Project Update](#)
- [July 2012 Newsletter](#)
- [May 2012 Project Update](#)
- [February/March 2012 Project Update](#)
- [January 2012 Project Update](#)
- [December 2011 Project Update](#)
- [December Newsletter](#)
- [November 2011 Project Update](#)
- [October 2011 Project Update](#)
- [October 2011 FAA Thank You](#)
- [September 2011 Newsletter](#)
- [July 2011 Newsletter](#)
- [March 2011 Newsletter](#)
- [August 2009 Project Agency Update](#)



**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**

**Draft EIS**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

[Community Meetings](#)

[What You've Told Us](#)

[Newsletters, Announcements, & Updates](#)

**Angoon's Resources**

**Technical / Scientific**

**Links**

### Informal Visits to the Angoon Community

In 2011 and 2012, the EIS team made several informal visits to the community. Since there were no formal meetings related to the official EIS process, we decided on these visits to allow us to stay in touch and hear the comments and concerns of the people of Angoon. Frequently, we develop newsletters that are geared specifically towards answering the questions that come up during our visits.

Our community visit announcements and thank-you notes can be seen by clicking on the links below. The newsletters can be found under [Newsletters, Announcement, and Updates](#).

#### Recent Announcements

- [Preferred Alternative Announcement and Community Visit Announcement](#)
- [September 2012 Angoon Visit Announcement](#)
- [June 2012 Community Visit Announcement](#)
- [October 2011 FAA Thank You](#)
- [September 2011 Community Visit Announcement](#)
- [July 2011 Community Visit Announcement](#)
- [June 2011 FAA Thank You](#)
- [May 2011 Community Visit Announcement](#)
- [2011 Community Visit Calendar](#)
- [November 2009 Public Meeting Announcement](#)

**ANGOON AIRPORT**  
Environmental Impact Statement

**Welcome**

**Draft EIS**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

[Community Meetings](#)

[What You've Told Us](#)

[Newsletters, Announcements, & Updates](#)

**Angoon's Resources**

**Technical / Scientific**

**Links**

**Public Scoping Meetings:**

The Federal Aviation Administration (FAA) held agency and public scoping meetings for the Angoon Airport Environmental Impact Statement (EIS) in Anchorage on October 27, 2008, in Juneau on October 29, 2008, and conducted 2 public scoping meetings in Angoon on October 30 and 31, 2008.

[Click here to learn more.](#)

**Summary of Input from Subsistence Interviews with Residents of Angoon, August 2008**

The Federal Aviation Administration (FAA) recognizes the great importance of subsistence resources and uses for residents of the Alaska Native community of Angoon. To better understand what these resources are, and, further, to take those resources and uses into account in the development of airport and access road alternatives, the FAA asked the EIS consultant team to conduct interviews with local subsistence users in August 2008.

[Click here to learn more.](#)

**Video Clips of Interviews with Angoon Airport Stakeholders, 2008**

Interviews with Wally Franks Sr., Buck Lidekugel, Ed Gamble Sr., K.J. Metcalfe, Lenora & Phillip Walker, and Morry Israel can be found at the following link.

[Click here to see the interviews.](#)

Search

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ANGOON AIRPORT  
Environmental Impact Statement

Key Resources We're Studying

In order to complete an environmental impact statement for the proposed land-based airport in Angoon, we needed to design studies and conduct research on the natural and cultural resources of the proposed project areas. The different airport location alternatives must all be considered, and their existing environmental conditions described in detail. Examples of resources we study are wildlife, vegetation, wetlands, fisheries, archaeology, subsistence, socioeconomic, and land use. In 2009 and 2010, we conducted intensive surveys and on-the-ground research in Angoon.

The technical reports that describe these results are available on this website. We also prepared a video presentation for a non-technical audience that describes our studies and results that you can view. Due to the large size of the video file, it cannot be hosted on this website. For a physical copy of the video, please contact us with a formal request. For a quick look at our investigations, pictures and shorter videos of our research can be reached by clicking the link below.

[Click here for pictures and videos of the fieldwork.](#)

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**ANGOON AIRPORT**  
Environmental Impact Statement

Return to Main page

Map Satellite

- Proposed Runway
- Proposed Access Road
- Alternative Runways
- Alternative Access Roads
- Angoon Land Use
- Land Ownership
- Wetlands
- Wind Tower Locations
- Bald Eagle Nests
- Marine Mammal Habitat
- Anadromous Fish Streams
- Essential Fish Habitat
- Subsistence Deer Hunting
- Subsistence Birds
- Subsistence Trapping
- Subsistence Stellerfish
- Subsistence Seal Hunting
- Subsistence Salmon
- Photo Locations

Click here for Google Maps instructions

Search

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**Technical and Scientific Pages**

[http://www.angoonairporteis.com/laws\\_regs.html](http://www.angoonairporteis.com/laws_regs.html)

http://www.angoonairporteis.com/laws\_regs.html

Angoon Airport EIS

Angoon Airport EIS

Angoon Airport EIS

Angoon Airport EIS

is there a way to print out all th...

Convert Select

 **ANGOON AIRPORT**  
Environmental Impact Statement 

**Welcome**

**Draft EIS**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

**Laws and Regulations**

[Airport Planning](#)

[Technical and Scientific Studies](#)

**Links**

**Laws and Regulations Specific to Alaska Airport Projects**

- Council on Environmental Quality NEPA Implementation Regulations
- FAA NEPA Implementation Instructions for Airport Projects
- FAA Order 1050-E - Environmental Impacts: Policies and Procedures
- FAA Environmental Desk Reference for Airport Actions
- Alaska National Interest Lands Conservation Act (ANILCA)
- Alaska Native Claims Settlement Act (ANCSA)

Search

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http://www.angoonairporteis.com/previous\_planning\_docs.html

Angoon Airport EIS

ANGOON AIRPORT  
Environmental Impact Statement

FAA  
FEDERAL AVIATION  
ADMINISTRATION

Convert Select

Welcome

Draft EIS

About This Project

Newsletters, Announcements, & Updates

For the Angoon Community

Angoon's Resources

Technical / Scientific

Laws and Regulations

Airport Planning

Technical and Scientific Studies

Links

Planning Documents for the Angoon Airport

Angoon Airport Reconnaissance Study, 2004  
*(This file is 10 MB)*

Angoon Airport Master Plan Public Review Draft Background Report, 2006

- Background Report
- Background Report Maps *(This file is 12 MB)*

Angoon Airport Master Plan, 2007

- Angoon Airport Master Plan
- Angoon Airport Master Plan Layout Drawings *(This file is 37 MB)*
- Angoon Airport Master Plan Maps *(This file is 9 MB)*

Technical Studies, 2008

- Supplemental Airport Planning Memorandum, Working Paper One, August 2008 - Revised *(This file is 15 MB)*
- Appendices to the Supplemental Airport Planning Memorandum, Working Paper One, August 2008
- Supplemental Airport Planning Memorandum, Working Paper Two, October 2008
- Appendices to the Supplemental Airport Planning Memorandum, Working Paper Two, October 2008 *(This file is 12 MB)*

Search

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Angoon Airport EIS

is there a way to print out all th...

Convert Select

**ANGOON AIRPORT**  
Environmental Impact Statement

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**Welcome**

**Draft EIS**

**About This Project**

**Newsletters, Announcements, & Updates**

**For the Angoon Community**

**Angoon's Resources**

**Technical / Scientific**

Laws and Regulations

Airport Planning

Technical and Scientific Studies

**Links**

**Technical Resource Reports**

The following documents are technical reports that will be companion documents to the Draft and Final EIS reports. They were approved for distribution in September 2011.

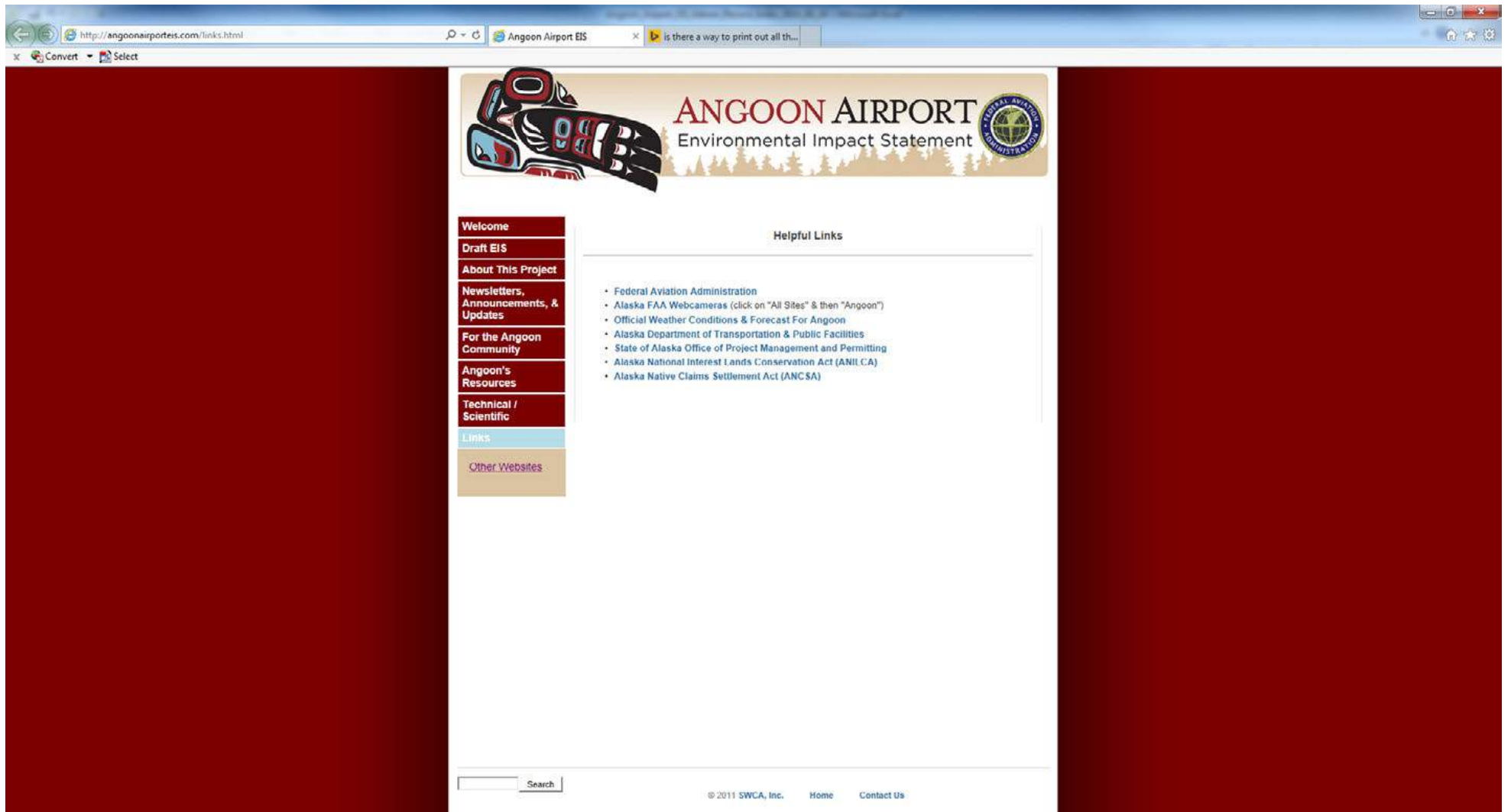
- **Socioeconomics** 6.7 Mb
- **Land Use** 9.85 Mb
- **Aquatics** 3.16 Mb
- **Noise** 1.65 Mb
- **Subsistence** 2.79 Mb
- **Vegetation, Wetlands, and Wildlife** 4.00 Mb
- **Visual** 2.50 Mb
- **Water Resources** 8.62 Mb
- **Cultural Resources** 8.51 Mb

Search

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## Links

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The screenshot shows a web browser window displaying the Angoon Airport EIS website. The browser's address bar shows the URL <http://www.angoonairporteis.com/links.html>. The website header features a logo with a Totem Pole and the text "ANGOON AIRPORT Environmental Impact Statement" alongside the Federal Aviation Administration logo. A left sidebar contains navigation links: Welcome, Draft EIS, About This Project, Newsletters, Announcements, & Updates, For the Angoon Community, Angoon's Resources, Technical / Scientific, Links, and Other Websites. The main content area is titled "Helpful Links" and lists several external resources:

- [Federal Aviation Administration](#)
- [Alaska FAA Webcameras](#) (click on "All Sites" & then "Angoon")
- [Official Weather Conditions & Forecast For Angoon](#)
- [Alaska Department of Transportation & Public Facilities](#)
- [State of Alaska Office of Project Management and Permitting](#)
- [Alaska National Interest Lands Conservation Act \(ANILCA\)](#)
- [Alaska Native Claims Settlement Act \(ANCSA\)](#)

At the bottom of the page, there is a search bar and a footer with the text "© 2011 SWCA, Inc. Home Contact Us".



# Memorandum



**To:** Leslie Grey (FAA)  
**CC:** Amanda Childs (SWCA)  
**From:** Sheri Murray Ellis (Certus)  
**Date:** 8/24/2015  
**Re:** Angoon Airport EIS – Review of Information from Angoon Mayor Regarding Section 4(f)  
Applicability to Platted Parks

---

## Introduction

This memo summarizes pertinent information gathered during our recent meeting with Mayor Matthew Kookesh of Angoon regarding platted park lands in Angoon and the applicability of Section 4(f) to those lands. This meeting was held in response to the mayor's official comments submitted to the FAA regarding the draft EIS. In said comments, the mayor asked what Section 4(f) is and how it applies to the airport project. He also specifically requested additional discussion of the platted park lands. The FAA's purposes in meeting with the mayor were to 1) provide an overview of the law; 2) discuss, in detail, the criteria the FAA must consider in determining whether a resource/property qualifies for Section 4(f) protection as a public park or recreation area; and 3) to request any additional information that the mayor has that is applicable to the Section 4(f) evaluation of the platted park parcels.

As you are aware, thus far in the evaluation conducted for the Angoon Airport EIS, the FAA has determined that Section 4(f) does not apply to lands shown on the available city plat for lands in the area of the Airport 12a alternative as "parks." This plat map comes from the draft ANCSA 14(c) conveyance plan prepared on behalf of Kootznoowoo, Inc., the village native corporation for the Angoon area. The FAA determined Section 4(f) does not apply to these lands for several reasons, including the lack of evidence of the City of Angoon's intentions to manage or develop the lands for public park or recreation purposes and the mayor's previous statements that the land in question is currently primarily used for subsistence activities (e.g., hunting and berry picking). With regards to the intentions to manage or develop the land for public park or recreation purposes, the City of Angoon had been unable to provide any documentation of such intention beyond the draft conveyance plan, which outlines development and uses of the platted park lands for park purposes. The FAA determined that this plan was issued on behalf of Kootznoowoo, Inc. and, lacking documentation of the City's adoption of the plan in whole, does not necessarily reflect the intentions of the City of Angoon.

During our meeting with Mayor Kookesh, he provided information both verbally and in hard copy that is relevant to the Section 4(f) evaluation for the Angoon Airport EIS. Amanda Childs of SWCA

electronically recorded the conversation for the project record. The discussion below summarizes the key findings of our meeting with the mayor.

### Section 4(f) Considerations

As part of our discussion with Mayor Kookesh, I reviewed the four criteria a property must meet to be considered a Section 4(f) resource as a publicly owned recreation area. These criteria are as follows:

- **Criterion 1:** It must be publicly owned
- **Criterion 2:** It must be open to the public
- **Criterion 3:** Its major purpose must be for park or recreation activities
- **Criterion 4:** It must be significant as a park or recreation area

In reviewing these criteria with the mayor relative to the lands in question near the Airport 12a alternative, several key bits of information were obtained:

#### **Criterion 1—It must be publicly owned**

- In contrast to information shared previously by Kootznoowoo, Inc.—the entity responsible for deeding land to the City of Angoon as an ANCSA 14(c)(3) conveyance—the deeds for conveying the land to the City were never finalized. As such, the **land shown on plat maps as city parks is not currently publicly owned** as the FAA previously understood. Rather, it remains in the ownership of Kootznoowoo, Inc., a non-public entity.
  - Mayor Kookesh indicated that the City of Angoon is in the process of revising the 14(c)(3) conveyances with Kootznoowoo, Inc. Once that is completed, the final paperwork will be filed to complete the land transfer. The mayor did not have a time frame for when this would be completed; however, he did indicate he intends to resume work on the effort this winter.
  - Mayor Kookesh indicated that the transfer of lands to the City of Angoon as part of the 14(c)(3) agreement was never finalized due to the failure of the previous mayoral administration to file the necessary paperwork. This statement is supported by land ownership information available through the Alaska Department of Natural Resources for the Angoon Area; the Alaska DNR retains recorder's plat information for the Angoon area—there is no county recorder. I reviewed land ownership transactions available through the DNR website, and although there are several quit-claim deeds from Kootznoowoo, Inc. to the City of Angoon from the last 15 years, none include the parcels in questions as platted parks.
  - It is worth noting that Kootznoowoo, Inc. must transfer land to the City of Angoon for city and public uses. Under ANCSA, this is an obligation of the corporation. The only flexibility in this action is *which* lands are transferred.

**Criterion 2—It must be open to the public**

- For all intents and purposes, the land appears to be managed by default as open to the public. Neither Kootznoowoo, Inc. (the current title holder) nor the City of Angoon (the future title holder) limit access to any of the land platted as park land.

**Criterion 3—Its major purpose must be for park or recreation activities**

- At present, the lands are used for a mixture of subsistence and recreational activity. The mayor, as well as a city council member who joined the meeting, cited instances of individuals using land around the Salt Lagoon (one of the platted park areas) for picnicking purposes and noted that the lack of current picnic facilities is largely what limits use of the area for such purposes.
- The mayor stated that the City of Angoon worked with Kootznoowoo, Inc. to identify the intended parcels and land uses presented in the draft conveyance plan. This statement is supported by written documentation provided by the mayor at the meeting. Copies of these materials are attached.
- In May 2003, the City of Angoon drafted a non-code ordinance (#03-02) authorizing the City of Angoon to acquire lands from Kootznoowoo, Inc. under Section 14(c)(3) of ANCSA. The land in question comprised 832.18 acres and was reflected in the Map of Boundaries developed by the City and the corporation. As near as we can tell, this map is the same as the map previously provided to the FAA. The ordinance acknowledges the draft conveyance plan and the cooperative process in developing it but does not specifically state the City's intent to implement it as written.
  - The FAA could consider the issuance of the ordinance by the City as proof of the City's intent to follow the plan and manage the land in question as public park/recreation land as outlined in the draft conveyance plan.
- On September 24, 2003, the City of Angoon signed a 14(c)(3) Settlement Agreement with Kootznoowoo, Inc. referencing and adopting the parcels to be conveyed and the terms of the conveyances. The copy of the agreement provided by the mayor was not fully executed, as Kootznoowoo, Inc. had not signed it. The mayor was unable to provide a copy of a fully executed agreement.
- Mayor Kookesh stated his desire and intent to develop the land around the Salt Lagoon as a memorial park to Japanese members of the community, both past and present. He did not specifically discuss the development plans but alluded to creating more picnicking facilities. He did not address his intent regarding other lands platted as parks.

**Criterion 4—It must be significant as a park or recreational resource**

- The mayor indicated both verbally during the meeting and in his written comments on the draft EIS that the platted park land—specifically around the Salt Lagoon—is significant to the community of Angoon. He noted that the community currently has no developed parks or picnicking facilities and that the Salt Lagoon area is one of the few areas accessible for such uses.

11/13/15

3130-1R FAA



U.S. Department of Transportation  
**Federal Aviation Administration**

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AAL-614  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

In Reply Refer To: AIP-3-02-0018-0705

October 26 2015

Ms. Judith Bittner  
State Historic Preservation Officer  
Alaska Office of History and Archaeology  
550 W 7th Avenue, Suite 1310  
Anchorage, AK 99501-3565

**No Historic Properties Adversely Affected**  
**Alaska State Historic Preservation Officer**  
Date: 11/13/15 File No.: 3130-1R FAA  
Please review 36 CFR 800.13 / A.S. 41.35.070(d)

**RE: File No. 3131-1R FAA**  
**Angoon Airport Environmental Impact Statement and Cultural Resources Technical Report for the Area of Potential Effects for Airport 12a with Access 12a (Preferred Alternative) Response to SHPO Comments and Finding of Effect**

Dear Ms. Bittner:

In your letter dated April 4, 2014, which was submitted in response to our consultation with your office regarding the above-referenced undertaking, your office requested that the Federal Aviation Administration (FAA) address several key concerns relating to the technical report. The FAA responded with formal determinations of eligibility for four cultural resource sites within the area of potential effects (APE) of the project, and your office concurred with those determinations on June 9, 2014. This letter and the enclosed revised report, *Cultural Resources Technical Report for the Area of Potential Effects for Airport 12a with Access 12a (Preferred Alternative)*, prepared by SWCA Environmental Consultants (SWCA), seek to respond to the remaining concerns in your April 4 letter.

In regards to your question about the location and nature of Beaver Tail Rock (SIT-00781), the site is not located within either the Direct or Indirect APEs for Phase 2 of this undertaking. The site is located approximately 1.5 miles northeast of the southeastern corner of the Phase 2 Direct APE, and as such, was not included in the file search conducted for Phase 2 of these investigations which was restricted to within one mile of the Direct APE. However, Beaver Tail Rock was included in the file search area for the Phase 1 technical report for this undertaking (SWCA 2012).

In response your concerns about the definition of the APE, the FAA has determined the APE has been adequately defined and encompasses the geographic area where effects may occur to historic properties and has included a Direct APE, Noise APE, Visual APE, and has considered the area in which construction-related vibrations may affect historic properties. Other comments provided in your April 4 letter are addressed in the enclosed revised technical report.

**Findings of Effect**

No historic properties are present in the Direct APE or Noise APE; however, three historic properties are present in the Visual APE (SIT-00014, SIT-00056, SIT-00749) and one historic property (SIT-00169) is located in close proximity to the Direct APE where vibration effects may occur. The FAA applied the

Remaining pages contain confidential information related to heritage resources and have been removed.



EPA DEIS COMMENT RESPONSE MEETING NOTES  
NOVEMBER 03, 2015

**Participants:** FAA - Leslie Grey  
SWCA - Amanda Childs  
ESA Vigil-Agrimis - Susan Cunningham  
EPA  Jennifer Curtis  
EPA  Michael Szerlog

**Time:** Tuesday, November 03, 2015; 2:00 PM  3:00PM Alaska.

**Discussion:**

DEIS EPA comments dated 3/10/15, page 2, 1st paragraph:

"Impact the preferred alternative has on the amount and accessibility of ANCSA lands, private and native allotments which are in close proximity to community. These lands are currently used for a variety of purposes including subsistence. There is a trend in Alaska for private and corporation lands that are accessible to owners and shareholders to be utilized for public infrastructure projects. While projects often provide benefits to residents, such as safer and more reliable air service, there is often a trade-off or loss of other uses. The loss of easily accessible subsistence areas is particularly detrimental for low-income and disabled residents. It is not clear if this was fully evaluated in the EIS. We recommend additional work to identify appropriate mitigation for these losses and monitoring to ensure that the mitigation being implemented is effective."

**Alternatives analysis**

- Extensive screening of alternatives, extensive analysis and adequate range of alternatives
- analyzed - 12a was identified as preferred alternative due to laws, not because this location is easier and less costly
- ANCSA selected lands vs Wilderness - based on analysis, 12a (most likely overall LEDPA)  agencies agree
- An airport for Angoon to FAA is at the request of the State and the Community (Kodiak EIS was for a runway requirement)
- FAA has analyzed subsistence and EJ (identified the EJ populations - entire population)

**Methods/Mapping Subsistence**

- Figure SU2 of EIS - Map of Land Mammal and Upland Bird Subsistence Use Areas Most commonly used by Angoon Residents - provided by Angoon residents
- Subsistence study areas mapped from interviews with 18 local resident subsistence users - site
- visits and qualitative information from locals and field studies
- ADF&G data (adequate data/information)

## Significance Thresholds (Adequate analysis)

- FAA nor Forest Service has specific guidance on documenting effects to subsistence resources and uses other than what is outlined in Section 810 of ANILCA and subsequent case law to assist in evaluating subsistence resources and uses effects on all lands -
- Reduction in abundance and availability of subsistence resources
- Reduction in access to subsistence
- Increase in competition for subsistence resources

## Alternative 12a

- What is EPA referring to in a "variety of purposes including subsistence?"
- Subsistence doesn't occur in part of 12a based on subsistence study maps by residents
- 12a Effects to abundance and availability. Acres of habitat altered through veg clearing correspond to a proportional change in abundance and availability. (EIS page 559-560)
  - 8% of land veg use areas eliminated
  - 12a - 5% land mammal and upland bird areas eliminated resulting in a potential decrease of 5% in abundance and availability.
    - Deer prefer newly cleared edges to dense forest (Turek et al. 1998), so veg clearing could result in more availability of deer in newly cleared areas (EIS table SU2, page550)
    - No restrictions on hunting on airport property outside the fenced operational area
- 12a Effects to Access (fenced areas)
  - Figure SU7 -fenced area is 97 acres or 0.5% decrease in access (EIS page 563)
- 12 Effects to Competition
  - Would not increase competition between local and nonlocal -visiting hunters rare and land-based airport not anticipated to encourage more deer hunting due to getting harvest back to homes
- Types of hunting (Appendix 0)
  - Alpine hunt - after frost and veg dies, hunters go to higher ground alpine areas (Hood Bay Mtn.)
  - Muskeg and forest hunt - after first frost, set up in small clearings or muskegs at edge of densely forested areas and wait for deer to enter clearing. May locations to do this. Access locations by combination of boat and walking
  - Beach hunt - throughout year, travel up and down coast line
  - Residents who don't have boats often use motor vehicle and travel the road system
    - 12a area used for deer hunting, primarily from the road
    - Hunting from road still likely with 12a set back away from road

## Environmental Justice

- FAA to consider whether or not any proposed airport effects to natural, social, and cultural resources would result in **disproportionately high and adverse effects for EJ populations**. Cultural resources, light emissions and visual resources, subsistence resources and uses, wetlands, wilderness. Followed FAA environmental regulations.
- Identified resources that would experience a significant negative effect as a result of the proposed project - cultural resources, light emissions and visual resources, subsistence resources and uses, wetlands, wilderness
- Identified EJ populations:
  - For EIS FAA considered entire community classified as a low-income or a minority population or both -
  - assumes the project effects could be experienced more intensely by the population because of their minority and low-income status than would be the case if the population were neither predominantly minority or low income -
  - Assumption is based on the fact that for a small community with limited socioeconomic means a high dependence on local natural resources, even minor



changes to local conditions could ripple across the community and result in substantial community effects.

- EIS defines "disproportionality" as any project effect that would result in a substantial decrease in the community's current ability to access, use, preserve, or otherwise experience local area resources
- Based on EJ findings, Angoon would not experience a disproportionate adverse effect related to subsistence resources and uses
  - Long-term loss of access is 96 acres, 0.5% of subsistence use areas
  - Reductions in access to subsistence use areas would be limited; reductions in abundance and availability of subsistence resources and increases in competition would not be noticeable and low income and minority residents could use alternative subsistence areas located along the road on the peninsula and wilderness area
- No disproportionate adverse effects to low-income or minority residents as a result of the proposed project. For this reason none of the action alternatives would have a significant effect on the EJ population

### **12a Land Acquisitions**

- Private lots would be acquired in compliance with the Uniform Relocation Act

### **FINDINGS**

- EJ - Angoon would not experience a disproportionate adverse effect to low-income or minority residents related to subsistence resources and uses - For this reason, none of the action alternatives would have a significant impact on EJ
- Subsistence - NONE of the airport and access road alternatives would significantly affect subsistence uses in Angoon
  - No major reductions in abundance or availability of subsistence resources because less than 8% of land mammal and upland bird use areas would be affected by any airport and access road combinations
  - 0.5% loss in access - 12a

### **Summary**

- Adequate analysis
- 0.5% loss of access (fenced area)
- .5% loss of habitat (mammals) 8% veg loss
- Hunters can still hunt from road
- 12a environmental LEDPA / agency preferred
- EPA agrees. No mitigation needed for loss of subsistence access



MITIGATION MEETING NOTES  
NOVEMBER 04, 2015

**Participants:** FAA - Leslie Grey  
SWCA - Amanda Childs, Jennifer Rideout  
ESA Vigil-Agrimis - Susan Cunningham  
ADOT - Verne R. Skagerberg, John C. Barnett  
DFG - Nicole Legere, Jackie L.  
NOAA - Linda Shaw, Leanne Handson  
EPA - Jennifer Curtis, Michael Szerlog, Matthew LaCroix  
USFWS - Steve Brockman  
USACE - Randal P. Vigil

**Time:** Wednesday, November 04, 2015; 1:00 PM – 3:00PM (UTC-09:00) Alaska.

**Agenda Items:**

Project Update & Schedule

Identified Impacts Requiring Mitigation

Required Permits

Potential Mitigation Options

**Discussion:**

Welcome and Introductions (Susan Cunningham)

- Brief welcome with introductions for all attendees.

Project Update (Leslie Grey)

- The FAA is moving forward with the EIS, with continued support for 12a as the Preferred Alternative. The FAA also acknowledges that 3a is still considered the Proposed Action.
- Anticipated schedule for a final EIS is tentatively scheduled for April 2016.

Mitigation Discussion—Identified Impacts Requiring Mitigation

- The impacts for 12a are:
  - Alteration of Stream 12a
    - Talked to Nicole and we know we need to provide fish passage

- Have not decided on design (culvert underneath airport –150' long or if stream is rerouted around airport.
    - Advantages and disadvantages of each. ADF&G would prefer to reroute—is it feasible?-
    - The mitigation package developed could be used at any alternative.
  - Wetlands Impacts:
    - Alt. 12a: 78 Wetland acres are filled, 99 Acres would be temporarily impacted
    - Alt. 3a: 112 acres filled, 86 temporarily impacted
    - Alt. 4: 51 acres filled, 43 temporarily impacted
    - At the time of the meeting it was thought that functional assessment had not been completed; however, additional information after the meeting showed that this assessment had been completed.
    - The wetland habitats across all of the alternatives are very similar, so from a functional standpoint, there would not be a large difference between one area and another. The difference is, primarily, in the acreage affected.
    - SE WESPAK Wetlands Functional Assessment is acceptable to EPA.
    - Brief description of the nature of temporary impacts to wetlands (Matt):
      - Most have to do with clearing of vegetation
      - Some vegetation would be allowed to grow back after construction
      - Wetland type may change (e.g. forested to scrub shrub)
      - Would this involve soil disturbance, mechanical land clearing? There would not be any permanent fill or land change for the temporary impacts.
      - The specific nature of the alteration to each alternative, will be described in detail in the EIS. Note: The EIS conservatively assumed that in the affected areas, all of the vegetation would be cleared, but that may not necessarily be the case. This depends on location, height of trees, and maintainability of the change. In some cases, things may be cut over and over versus complete removal. Discussion on some of the impacts becoming permanent due to roads and other structures that need to be built. Discussion followed regarding the alternatives and the nature of permanent versus temporary impacts, and the design approach taken to avoid permanent impacts where possible.
      - Request to see all impacts, including fill and impacts to aquatic resources described in detail in the EIS, so that any loss of function can be identified. Example, forested wetland to scrub shrub would result in a loss in function (which should be quantified using WESPAK, roughly).
    - Brief discussion on the different alternatives represented in the EIS, with support from USFWS (Steve Brockman) on FAA's preferred alternative 12a since overall impacts to streams and wetlands would be lower.
- Mitigation Proposal, Appropriate Mitigation, Screening Criteria
  - Stream 12a
    - Not anadromous, contains resident fish (cutthroat trout)
    - Barrier at the mouth of the stream
    - Wildlife attractance: opening up for fish passage, creates all new issues regarding wildlife attractance around an airport. Examples in Ketchikan stream channel with gulls causing issues at airplane take off, and Dove Creek project.
    - There was a discussion about removal of the fish barrier and providing salmon habitat, but it was decided that although this was a good idea it was dropped do due to the attractance issue.
  - Payment to Mitigation Bank or In-Lieu Fee Program
  - Permittee Responsible Mitigation

- Screening Criteria
  - SeaAlaska Bank has credits that are available. Difficult to speculate on what the ratio may be, but that it is likely higher than 1:1. For restoration efforts, it may be closer to 1:1, but that depends on what is involved. (Randy)
  - Ratio depends on what is being impacted, level of risk, success potential, what is being enhanced, what functions are lost. (Steve)
  - It depends on the bank, fee programs, etc. (Steve)
  - Some of the challenge is that we don't know when the permit will go in, which will affect what is available at that time (Susan)
  - What is important is the understanding of how any form of mitigation will offset the impacts that will occur (Randy)
  - It is important to use WESPAK in the mitigation analysis. This will inform on what needs to be considered.
- Temporary Impact Mitigation Plans
  - Would be good to see mitigation plans for any temporary impacts. This led to a discussion on what is "temporary" (e.g. eel grass to intertidal as a permanent loss).
  - Discussion on considerations when planning mitigation: ensuring that location of mitigation
  - Caution that temporary impacts may become permanent (Linda)
  - Should play an overall role in the mitigation
  - Note the function prior to impact, function during impact, and function after initial impact (long-term).
  - In these cases, habitat type versus hydrology are being impacted (as an example).
  - Bottom Line: it depends on what the change will be, and what the loss from one wetland to another, and what the potential gains will be. Be sure to quantify the loss in some way (temporal, permanent), and those impacts to function can be identified how they will be offset. We can't make any determination until we understand the functional assessment.
    - Quantifying it in a way where we can show percent of function lost (1, 5, 10%), and this will help to understand the significance of these temporary impacts and the resulting functional assessment (Matt).
  - Recommendation to consider invasive species introduction in all mitigation plans (Linda).
- Potential Permittee Responsible Mitigation Proposal Ideas
  - Consult with Angoon community to identify any projects that might be appropriate for mitigation based on the wetland and stream impacts.
  - There is little logging in the area or watershed, but there may be some riparian enhancement that could occur.
  - Derelict boats abandoned in Favorite Bay. Some may or may not have hazardous materials associated with them. Potentially looking at removing those structures to improve habitat for the bay (overall net benefit even though it is freshwater versus estuarine aquatic habitat).
    - Good theory in concept, but it is very difficult due to salvage laws regarding the structure, not necessarily the clean-up.
    - The community has a project going on (rural cap funding?) that looks to address this issue, and it may be a matter of getting funds available to the community to move the project forward.
    - Hazardous materials are a definite advantage with respect to mitigation, but just removing the structures may not provide as much benefit (Steve).
    - It's a good option, but the question is how it translates to mitigation credit (Randy).
    - Suggestion to speak with Walter Jack regarding grants to remove the derelict boats.
    - Not an "only" option, but one portion of many mitigation efforts. The question is whether or not this was a feasible approach.

- Need to know what the benefit of the action will be, and be able to quantify this benefit in a way that translates to number of credits for the effort.
    - If the community has set this as a priority, then it is worth pursuing as a potential option. Having this effort be a part of the community overall effort, if we are able to show that we are addressing watershed health and that it is an overall community need, while it may not produce a lot of credits, it is encouraged that these types of projects are pursued.
  - Consult with the Forest Service on their “shopping list” of projects that could be funded through this mitigation effort.
    - Some examples include Marsh Creek
    - John Barnett noted that there are some contacts that could provide a list of potential projects.
    - Number of projects, such as thinning of red alder are potential thoughts.
    - The focus would be to find something within the current watershed as a priority, but looking at Forest Service projects is an option.
  - Shoreline (unused tide landfills)
    - Proposed removing fill and restoring intertidal wetland
    - Difficult to do based on owner contestation, but is a great opportunity for mitigation restoration.
  - Removing road fills, as well.
    - Check with Forest Service on opportunities.
  - Fish Passage at Stream Crossings
    - Would hesitate to give credit for those opportunities from one Federal agency to another.
    - However, if Forest Service shows a longer schedule (e.g., get a 10 year jump on the initial schedule), this may allow for a great ecological value resulting in credit funding. Temporal gain over a temporal loss.
    - Funding stream under grants from FAA would be something to consider based on providing funds now for something that won't be completed until later.
    - Forest Service will be undergoing a process on how to address structures and a schedule based on current activities in the region. It has the potential to be part of a mitigation package, but may not be the best right now to move forward.
    - If the community has any projects or priorities they have identified, those are the first priority when considering mitigation projects (projects including Forest Service involvement). Preference to consider local preservation/restoration efforts.
- Questions
  - Site Visits (Linda)
    - Discussion on visiting the site due to difficulty in speculating what is possible without seeing the site.
    - Maybe a site visit, FAA will keep folks in the loop.
    - May be worth a visit to see if the community has any potential ideas for mitigation, or to check with Forest Service, or to do more work at looking at stream realignment.
  - 3a Mitigation Options
    - Because the proposed action is still ADOT's choice, they would like to see mitigation options considered for proposed action as well as preferred alternative.
    - This will provide a better comparison between both alternatives to avoid conception that one alternative is better than the other.
  - Invasive Species
    - Has the area been surveyed for invasives?
    - Work has been completed for this consideration, with a finding that the area is pristine with respect to the alternatives (with the exception of minor issues along BIA road).

- Incorporating ADOT's BMPs for invasive management will be helpful when managing invasive impacts.
  - Accurate to say that the area is fairly pristine, and not experiencing any issues with infestations right now.
- Summary
  - Next steps to review functional assessment and share findings with the agencies.
  - Flesh out local projects as options.
  - Convene to discuss local projects as options at a later date.



DEC 4 2015

Department of Transportation and  
Public Facilities



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

OFFICE OF THE COMMISSIONER  
Marc Luiken, Commissioner

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November 30, 2015

Byron K. Huffman  
Manager Airports Division  
FAA Alaskan Region  
222 West 7<sup>th</sup> Ave., #14  
Anchorage, Alaska 99513

Dear Mr. Huffman,

Following our meeting on June 12<sup>th</sup> and your letter of July 14<sup>th</sup> concerning the Angoon Airport EIS, we have engaged in a number of internal discussions and have considered how we might proceed with regard to ANILCA Title XI. This is a critical issue for the State of Alaska. Title XI provides us with the only means of addressing transportation and utility needs where they would otherwise be precluded by the existence of conservation system units. As complex as this project has been, there is a small bundle of issues that should be simple to resolve, and I believe we can work together to do that.

The first issue is one that I will be taking up directly with Col. Brooks at the USACE and Beth Pendleton at the Forest Service. Our staffs have had a good deal of difficulty coming to terms with an ambiguity in Title XI – it does not define a “complete application,” but it does require federal agencies to determine whether an application is complete. Your response to our Title XI application was that it was complete for purposes of moving ahead with the process; the USACE found that it was not because they expected a §404 permit application with all the typical information in the typical format; and the USFS said it was incomplete because it did not include sufficient information concerning our proposed action. I hope to reach consensus with the Corps and Forest Service on what constitutes a complete application so that they can consider our application in accordance with Title XI.

The next problem we need to address has to do with our respective responsibilities for providing information to meet NEPA and ANILCA requirements. In your letter of July 14<sup>th</sup>, you stated that the FAA would not do the additional work to provide information requested by the Corps and the Forest Service because doing so was our responsibility. Given that the EIS has been intended from the outset to be the supporting document for the ANILCA Title XI process, and given that ADOT&PF is precluded by FAA policy from participating in the development of the EIS, I find it difficult to follow the logic of that assertion. Title XI is reasonably clear regarding the responsibility of federal agencies to acquire the requisite information to support their analysis

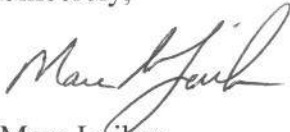
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and findings and the additional information in question is proper for inclusion in the EIS given our proposed action. I would appreciate knowing more about the basis for your determination that providing the additional information is our responsibility.

Finally, I am concerned about the FAA's contention that answering the outstanding questions pertaining to our Title XI application will require substantial additional funding and delay the project for a period of up to two years. The vast majority of information the USACE requested is in the documents already provided – the DEIS and its appendices. Some additional work is required to answer the Forest Service's questions, but if we're able to come to terms concerning the issue of a "complete" application, some of that additional work may not be necessary. Again, I would appreciate knowing more about the need for additional millions of dollars and years of time in order to accomplish an adequate Title XI review.

Thank you for taking the time to talk through some of these issues in June. I hope that with a little more work, we can find a way to remove any obstacles to the successful completion of the Title XI process. Our goal is to meet the transportation needs of Alaskans by following the law that was put in place for precisely that purpose. I look forward to working with you to accomplish that goal.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Luiken". The signature is fluid and cursive, with the first name "Marc" being more prominent than the last name "Luiken".

Marc Luiken  
Commissioner

cc: Jim Whittaker, State of Alaska, Chief of Staff  
Marcia Davis, State of Alaska, Deputy Chief of Staff  
Paulette Schuerch, State of Alaska, Tribal Liaison



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## Department of Transportation and Public Facilities

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Marc Luiken, Commissioner

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dot.state.ak.us

November 30, 2015

Beth G. Pendleton  
Regional Forester  
U.S. Forest Service Alaska Region  
P.O. Box 21628  
Juneau, Alaska 99802-1628

Dear Ms. Pendleton:

It has been quite some time since we received your last correspondence concerning the Angoon Airport project and our ANILCA Title XI application. This summer has been a busy and challenging time for our department, but we have had a number of conversations internally and with FAA concerning Angoon, and I want to bring you up to date on the status of the project from our perspective.

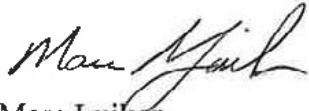
In your last letter, you agreed that the challenges associated with our Title XI application could be overcome and that you would continue to consider it as active. I appreciate that you have taken that position because we do intend to see the ANILCA process through to its conclusion. We feel very strongly that the intent of Title XI should not be frustrated by the administrative ambiguities that we've discovered.

As we've continued to work through issues, it has become apparent that the FAA and ADOT&PF don't share the same view of how much additional time and effort may be necessary to fill in all of the blanks and move toward completion of the Title XI process. We believe that our original agreement – that the EIS should be sufficient in all respects to meet the ANILCA requirements – is still valid. We intend to work with FAA to resolve our differences concerning the additional work, and then move ahead to a successful completion of both the Title XI and the NEPA process. We also intend to resolve some of the procedural difficulties we've encountered so that Title XI remains a viable path to meeting Alaska's transportation needs.

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As you said in your letter, this is a complicated project. I appreciate your patience and help as we move toward the goal of providing Angoon with an airport.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Luiken". The signature is fluid and cursive, written over a light blue horizontal line.

Marc Luiken  
Commissioner

cc: Jim Whittaker, State of Alaska, Chief of Staff  
Marcia Davis, State of Alaska, Deputy Chief of Staff  
Paulette Schuerch, State of Alaska, Tribal Liaison



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November 30, 2015

Col. Michael Brooks  
Alaska District Commander  
U.S. Army Corps of Engineers  
P.O. Box 6898  
JBER, Alaska 99506-0898

Dear Colonel Brooks,

You may be aware that the Alaska Department of Transportation and Public Facilities has been engaged in a lengthy planning and environmental process associated with our effort to build an airport for the community of Angoon, Alaska. Angoon is a Tlingit village of about 400, the only permanent settlement on Admiralty Island, and the largest community in the state without an airport. Unfortunately, we have run into some difficulty moving this project forward as a result of our attempting to do something that hasn't been done before and some related statutory ambiguity. I am writing to ask your assistance in resolving part of the problem we've encountered, but I need to provide some background first.

As a result of an extensive planning effort, we proposed to build an airport on a site within the Admiralty Island National Monument and the Kootznoowoo Wilderness, an action that is permissible under the provisions of Title XI of the Alaska National Interest Lands Conservation Act (ANILCA). As you may imagine, the combination of the Title XI and NEPA requirements concerning this proposed action results in a very complex process. Title XI is an overarching statute that is similar in some respects, but not subject to NEPA. It requires agencies with regulatory responsibilities to conduct an analysis of the proposed action and prepare a tentative approval or disapproval based, in part, on a Final EIS.

With the cooperation of the USACE and the US Forest Service, the Federal Aviation Administration produced a Draft Environmental Impact Statement in January 2015. In accordance with the approach that we had negotiated with those agencies, we simultaneously tendered an application for an ANILCA Title XI permit citing the DEIS and our previous planning documentation as supporting material. Some confusion ensued because the FAA had determined that it would identify a preferred alternative in the DEIS that was different from our proposed action and would therefore obviate the Title XI process. We disagree with that conclusion for a number of reasons, but primarily because Title XI is not subject to NEPA.

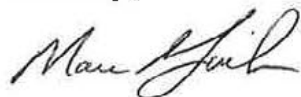
*"Keep Alaska Moving through service and infrastructure."*

While that issue alone could drive a lengthy discussion, the situation that first needs resolving is procedural and a bit vexing, and it is this for which I ask your help.

Upon receipt of an application under Title XI, an agency is required to inform the applicant within 60 days whether, “. . . on its face . . . the application appears to contain the information required by this title and applicable law insofar as that agency is concerned.” There is a degree of ambiguity in that requirement, and it has caused an administrative impasse between our staffs. On your side of the issue, your project manager and council take the position that the Corp’s only authority and responsibility regarding our application is to issue or deny a §404 fill permit and that the information required is that which would be provided in a conventional §404 application. Our view is that the Title XI process, to the extent that it is included in the statute, calls for the completion of an EIS within nine months *after* the filing of a Title XI application so the information provided in a normal §404 application would not typically be available until much later. The conundrum then is this: the USACE will not accept our Title XI application as being complete until we provide all of the standard information for a §404 permit, but that information – including a determination of the alternative for which we will need permits – will not be available at the time we would normally file the Title XI application. Ergo, Title XI is not an available avenue.

The explicit intent of Title XI is to provide a mechanism for the consideration of transportation and utility systems in and across conservation system units in Alaska. It seems highly unlikely that the law was crafted with the intent of allowing a procedural ambiguity to forestall our access to its provisions. I would like to discuss this matter further with you in hopes that we can find a way forward which would enable both our agencies to meet our obligations.

Sincerely,



Marc Luiken  
Commissioner

cc: Jim Whittaker, State of Alaska, Chief of Staff  
Marcia Davis, State of Alaska, Deputy Chief of Staff  
Paulette Schuerch, State of Alaska, Tribal Liaison



---

**From:** Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]

**Sent:** Monday, December 07, 2015 8:17 AM

**To:** Amanda Childs

**Cc:** Mike.Edelmann@faa.gov

**Subject:** FW: ADOTPF Correspondence - Angoon

---

**From:** Warden, Kristi (FAA)

**Sent:** Friday, December 04, 2015 4:12 PM

**To:** Grey, Leslie (FAA)

**Subject:** ADOTPF Correspondence - Angoon

Leslie –

We received the attached correspondence from Marc Luiken regarding Angoon late today in the office. Forwarding to you for your review. I just emailed a copy to Byron. We will confer on our response next week.

---

**Kristi A. Warden**

Acting Division Manager  
Alaskan Region Airports Division

**Telephone: 907-271-5443**

Fax: 907-271-2851

222 West 7<sup>th</sup> Avenue, MS #14  
Anchorage, AK 99513-7587



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Alaskan Region Airports Division  
AAL-614  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

December 22, 2015

Verne R Skagerberg  
Alaska Department of Transportation and Public Facilities  
PO Box 112506  
MS-2506  
Juneau, AK 99811-2506

Re: Angoon Airport ANILCA Title XI Extension

Verne,

ANILCA Section 1104(e), requires that a final environmental impact statement (EIS) be completed within one year of the filing of a Title XI application. However, Section 1104(e) also states that "Such...period(s) may be extended for good cause by the Federal agency head assigned lead responsibility for the preparation of such statement if he determines that additional time is necessary for such preparation, notifies the applicant in writing of such determination and publishes notice of such determination, together with the reasons therefore, in the Federal Register".

The Alaska Department of Transportation and Public Facilities (DOT&PF) submitted an application with the release of the Draft EIS on January 9, 2015. Due to complexities of the project, the FAA has determined that additional time beyond the one year is necessary to complete the final EIS. I will be filing a notice in the Federal Register prior to January 9, 2016. This letter serves as the notification to DOT&PF as the sponsor regarding the extension. I have also enclosed a copy of the Notice of Extension for the Federal Register.

Please let me know if you have any questions.

Sincerely,

Leslie A. Grey  
FAA – Alaskan Region Airports Division  
Angoon Airport EIS Project Manager

Enclosure

cc: Chad VanOrmer, USFS  
Shane King, USFS  
Randy Vigil, USACE  
Amanda Childs, SWCA



Federal Aviation  
Administration

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**Memorandum**

Date: December 23, 2015

To: Assistant Chief Counsel, Regulations Division, AGC-200

From: Leslie Grey – AAL-611, Environmental Program Manager *LAG*

Subject: ACTION: Notice for Publication in Federal Register Notice – *Notice of Extension as Required by ANILCA Title XI.*

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Please have the attached notice published in the Federal Register for a **publication of January 9, 2015.**

Please advise us of the expected date by calling or emailing Leslie Grey at 907-271-5453 or [leslie.grey@faa.gov](mailto:leslie.grey@faa.gov)

[4910-13]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**Notice of Extension for the Final Environmental Impact Statement for the Proposed  
Airport, Angoon, Alaska**

**AGENCY:** Federal Aviation Administration (FAA)

**ACTION:** Notice of Extension as Required by ANILCA Title XI

**SUMMARY:** The Alaska Department of Transportation and Public Facilities filed a Title XI ANILCA application with the FAA, U.S. Forest Service, and U.S. Army Corps of Engineers on January 9, 2015. ANILCA Section 1104(e), states that “the final environmental impact statement shall be completed within one year from the date of such filing. Such nine-month and one-year periods may be extended for good cause by the Federal agency head assigned lead responsibility for the preparation of such statement if he determines that additional time is necessary for such preparation, notifies the applicant in writing of such determination and publishes notice of such determination, together with the reasons therefore, in the Federal Register”. Due to complexities of the project, the FAA has determined that additional time is necessary to complete the final environmental impact statement.

**FOR FURTHER INFORMATION CONTACT:** Leslie Grey, AAL-611, Federal Aviation Administration, Alaskan Region, Airports Division, 222 W. 7<sup>th</sup> Avenue Box #14, Anchorage, AK 99513. Ms. Grey may be contacted during business hours at (907) 271-5453 (telephone) and (907) 271-2851 (fax), or by email at Leslie.Grey@faa.gov.

**SUPPLEMENTARY INFORMATION:**

Additional details regarding the project can be found on the project website at [www.angoonairporteis.com](http://www.angoonairporteis.com).

Issued in Anchorage, Alaska, on December 23, 2015.

A handwritten signature in black ink, appearing to read "Byron K. Huffman". The signature is stylized and cursive.

Byron K. Huffman,  
Manager, Airports Division, AAL-600.



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Airports Division  
Alaskan Region Airports Division  
222 West 7<sup>th</sup> Ave #14  
Anchorage, AK 99513

December 23, 2015

Mr. Oliver Potts, Director  
Office of the Federal Register  
800 North Capitol Street  
Washington, DC 20408

Dear Mr. Potts,

This is to certify that the attached CD for the, *Notice of Extension as Required by ANILCA Title XI* is a true copy of the original signed document.

Sincerely,

A handwritten signature in cursive script that reads "Leslie A. Grey".

Leslie A. Grey  
Environmental Program Manager  
FAA Alaskan Region Airports Division  
907-271-5453

Enclosure: CD – *Federal Register Notice of Extension as Required by ANILCA Title XI*



## Jennifer Rideout

---

**From:** Jamie C. M. Young  
**Sent:** Wednesday, December 23, 2015 2:06 PM  
**To:** King, Shane -FS  
**Cc:** Amanda Childs; Chad VanOrmer (cvanormer@fs.fed.us); Leslie Grey (Leslie.Grey@faa.gov); Jennifer Rideout; Allen Stutz  
**Subject:** RE: Angoon Airport EIS: ownership clarification near Kanalku Bay  
**Attachments:** 101-1989-89-37RS.TIFF

Thank you, Shane, for confirming this for us.

Enjoy the holidays! Sincerely, Jamie

---

**From:** King, Shane -FS [mailto:shaneking@fs.fed.us]  
**Sent:** Wednesday, December 23, 2015 11:21 AM  
**To:** Jamie C. M. Young  
**Subject:** RE: Angoon Airport EIS: ownership clarification near Kanalku Bay

Jamie,

Good morning. I spoke with Kootznoowoo representative, Harold Frank, this morning regarding the property in question. According to him, Kootznoowoo considers this parcel to be privately owned by their corporation. It was not designated as corridor lands due to the restrictive nature of that clause.

Shane

---

**From:** Jamie C. M. Young [mailto:jyoung@swca.com]  
**Sent:** Tuesday, December 22, 2015 11:29 AM  
**To:** King, Shane -FS  
**Cc:** VanOrmer, Chad M -FS; [achilds@swca.com](mailto:achilds@swca.com); Leslie Grey ([Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov))  
**Subject:** RE: Angoon Airport EIS: ownership clarification near Kanalku Bay

Thanks VERY much for your help with this, Shane!

Can you please confirm whether the parcel is privately held by Kootznoowoo, Inc., or it is part of the "Kootznoowoo, Inc. Corridor Lands"?

Thank you, Jamie

---

**From:** King, Shane -FS [mailto:shaneking@fs.fed.us]  
**Sent:** Tuesday, December 22, 2015 9:58 AM  
**To:** Jamie C. M. Young  
**Subject:** RE: Angoon Airport EIS: ownership clarification near Kanalku Bay

Jamie,

Good morning. After a bit more research we determined that Kootznoowoo does own the parcel in question. I've included a copy of the most recent survey (Juneau Plat 89-37RS) that was conducted in July, 1989. Owner designation is indicated on the survey diagram.

Shane

---

**From:** Jamie C. M. Young [mailto:jyoung@swca.com]  
**Sent:** Friday, December 18, 2015 2:26 PM

**To:** King, Shane -FS

**Cc:** VanOrmer, Chad M -FS; [achilds@swca.com](mailto:achilds@swca.com); Leslie Grey ([Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov))

**Subject:** Angoon Airport EIS: ownership clarification near Kanalku Bay

Shane, I just spoke with you. Attached is a PDF and I put a comment box where we're looking for ownership clarification. Thanks for any help you can provide! Sincerely, Jamie

**Jamie C. M. Young**

Project Manager / Natural Resources Specialist

**SWCA Environmental Consultants**

4435 E. Canvasback Ave.

Post Falls, ID 83854

P 208.262.9323 ☐ 907.821.0404 ☐F 503.224.1851



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## Jennifer Rideout

---

**From:** Amanda Childs  
**Sent:** Monday, January 04, 2016 3:18 PM  
**To:** Jennifer Rideout  
**Subject:** FW: Angoon EIS status

**From:** Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]  
**Sent:** Wednesday, December 30, 2015 11:20 AM  
**To:** alclhoward99@yahoo.com  
**Cc:** Leslie.Grey@faa.gov; Amanda Childs  
**Subject:** Angoon EIS status

Albert,

I just tried to call your office to return your call from yesterday. If you would like to discuss the below information more, please don't hesitate to call. I will be in today and tomorrow.

The status is essentially the same as the last time I called. FAA's preferred alternative remains Alternative 12a. FAA is working on preparation of the Final environmental impact statement (EIS) document which includes responses to comments received on the Draft EIS as well as revisions to the body of the document. There are always a number of reviews that the document has to go through by FAA Head Quarters and legal Counsel. These reviews take quite a bit of time, similar as it did for the Draft EIS. Additionally, the mitigation plan is currently being developed. Once the plan is mitigation plan is completed, we will be including this required information in the Final EIS. FAA's intended schedule is to publish the FEIS in late spring.

**Leslie Grey**  
Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453

**Angoon Airport**  
**Agency Meeting Notes**  
**January 5, 2016**

**Attendees (\*via phone)**

Leslie Grey, FAA  
Verne Skagerberg, ADOT&PF  
John Barnett, ADOT&PF  
Steve Brockmann, USFWS  
Jackie Timothy, ADFG  
\*Matt LaCroix, EPA  
\*Jennifer Curtis, EPA  
Randy Vigil, Corps  
Susan Cunningham, ESA Vigil-Agrimis  
\*Amanda Childs, SWCA

**Purpose:** The purpose of the meeting was to discuss potential mitigation options that were identified for the loss of freshwater wetlands and impacts to streams that can be included in the Final Environmental Impact Statement (FEIS) for the Angoon Airport. At the meeting, the options will be discussed with the goal of developing the mitigation to be included in the FEIS.

Susan Cunningham explained to the group how we came up with the current options being presented today. Mitigation discussions started with a meeting in November 2015 with these same agencies. Linda Shaw, Steve Brockmann, and Susan Cunningham went to Angoon in December and took a site visit to Airport 12a. Susan also spent time talking with community members to identify projects that could serve as permittee-responsible mitigation projects. In general it has been expressed that agencies would prefer a permittee responsible mitigation. It is likely that the mitigation package will include a combination of permittee responsible mitigation, in lieu fee or mitigation banking.

It was noted that FAA has identified Airport 12a as the preferred alternative so we are focusing on developing mitigation for Airport 12a. However, DOT&PF still has Airport 3a as their proposed action. There is a desire to come up with a mitigation package that could be applied to any alternative.

During the site visit, it was determined that one minimization option is to reroute the access road for Airport 12a to avoid the headwaters of stream 12a. We are currently looking at how feasible this would be. It is also being determined how feasible it would be to realign the entire stream and make it fish passable. The project is currently at 30% design. The EIS analyzes rerouting the stream entirely as worst case scenario. The group discussed re-routing or culverting the existing

Stream 12a at Airport 12a. ADFG noted that they would require re-routing of the stream. Others noted that re-routing the stream would be minimization, not mitigation. However, we would be increasing habitat by re-routing the stream.

## **Minimization Measures and Environmental Commitments**

### **Mitigation Option 1 – Remove Derelict Boats**

Susan explained the options, status of boats, walked through the power point (attached to these notes). There are quite a few boats out there. Removal of these boats could be considered as short term mitigation. The community of Angoon did receive a small grant to clean up these boats. They used the grant to to remove the engines from the boats and to pull them above the high tide line. The grant has been expended.

The group discussed how some of the boats could be viewed as having an impact but that some of them have become habitat. In addition, concerns were raised that removing the boats could create more impacts, but it was recognized that this would be short term. The majority of the group expressed that they like the boat removal idea. NOAA mentioned that there are tools for habitat equivalency to determine credit. A way to do this was completed for the Sitka project.

### **Mitigation Option 2 – Improve fish passage at culvert crossing on Aukta Road (~Mile 1.46)**

The existing road (BIA road) has a new culvert but looks partially perched. An option could be to improve fish passage at that crossing. This would have direct correlation to offset fish impacts. This one hinges on what are we going to do with Stream 12a. It was mutually agreed by all that the project should not fix a problem that another Federal agencies is responsible for.

### **Mitigation Option 3 – Improve Fisheries**

#### *Kanalku Lake*

Susan explained that the lake is underutilized. There is a partial fish block. The USFS has money from subsistence board to improve passage. Two years ago they did blasting to try to improve fish passage. Last year's monitoring results showed it was not improved. Jackie provided an update to this and explained to the group that USFS did studies, testing and determined methods. They determined that it was a partial barrier, that the lake has plenty of habitat. If the fish can get there the population can do well. ADFG and USFS went out several years ago in August and did blasting to improve passage over the falls. Last year both agencies went out to gather data and see if blasting improved passage. Because it was such a low flow year, they did not get the information needed to determine if it was successful. It would be good to wait to see if the blasting works. ADFG indicated that their understanding is that USFS does not like to have permanent structures in wilderness. It was further noted that ANILCA specifically allows for fish ladders in wilderness.

ADFG explained that there is not enough information to determine if the work at Kanalku is sufficient or if further work needs to be completed. There hasn't been high enough water year, but hopefully there will be this summer.

#### *Lake Florence*

The agencies liked the potential opportunities at Lake Florence want further information about potential restoration or enhancement.

### **Mitigation Option 4 – Make Payment to Mitigation Bank or In Lieu Fee Program**

Susan explained that there are three mitigation banks or in lieu fee programs currently available (shown in PowerPoint attached to these notes). Randy Vigil noted that there are a couple others in development but not yet completed. Susan confirmed that she talked with Sealaska and there are 200 credits currently available and potentially more. John Barnett indicated that DOT&PF does not like to use the conservation fund, they prefer to keep in more local and don't like to do in lieu fee, preferring permittee responsible mitigation. John said that DOT&PF would go to SealTrust over the conservation fund.

### **Mitigation Discussion**

Susan shared the WESPAK-SE Functions assessment. and Susan pointed out that the WESPAC has been updated, so it is different from the PowerPoint that was sent to the group in the meeting invite.

Discussion was had regarding the fact that there doesn't seem to be a perfect mitigation project to offset the Angoon Airport impacts.

Susan asked the group what further options we should be considering, such as what value the boats would have and how to work them into the plan. Additional mitigation ideas were raised:

- Restoring old roads on Admiralty Island
- Old mines in Hawk inlet (the Empire mine)
- Landslides in old logged areas on Admiralty Island that could be cleaned up to improve fish passage
- Continue to look at Kanalku Lake, but discuss with USFS.
- Look further at Lake Florence opportunities
- See what projects the Forest Service has

Additional discussion:

Concerns were raised that potential options raised result in this project attempting to fix issues raised from other projects. USFWS noted that the corporations are only required to fix fish passage issues.



The group discussed addressing upland restoration to offset impacts to wetlands. The USACE noted that a connection would have to be made to relate upland to the impacts that would occur from this project. A WESPAC analysis could show that connection or other habitat suitability models. But there is value to restoring uplands.

Concerns were raised on how to ensure permittees are doing what they are supposed to. Susan explained that we would have a legal survey, the lands would be put into an easement that would be monitored for a set number of years. The easement would be turned over to someone like SealTrust to ensure it gets completed.



## Jennifer Rideout

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**From:** Angoon Airport EIS <maillist@angoonairporteis.com>  
**Sent:** Tuesday, January 12, 2016 3:59 PM  
**To:** Angoon Airport EIS  
**Subject:** Angoon Airport EIS News & Announcements



### Angoon Airport EIS News, Announcements, & Updates (01/12/2016)

(Test announcement, please review)

FAA is pleased to announce that we have posted the January Project Update to our Angoon Airport project website. We invite you to visit the site at [www.angoonairporteis.com](http://www.angoonairporteis.com). You can view the update by clicking on the link below:

[January Project Update](#)

Please visit our web page at [www.angoonairporteis.com](http://www.angoonairporteis.com) and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

As always, please feel free to call me at (907) 271-5453 or e-mail me at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov) with your concerns, questions, or comments.

Sincerely,  
Leslie

Angoon Airport EIS Project Manager



**Leslie Grey**, Federal Aviation Administration  
Alaskan Region Airports Division  
222 West 7th Avenue, Box #14  
Anchorage, Alaska 99513-7587

**Phone.** 907-271-5453 **Fax.** 907-271-2851  
**Email.** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

Click [HERE](#) to subscribe to e-mail announcements if you are not currently on the distribution list or to modify your subscription information.

To unsubscribe, click [HERE](#).

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\* Please do not reply directly to this e-mail. This is an unmonitored mailbox and you will not receive a response.

## Jennifer Rideout

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**From:** Leslie.Grey@faa.gov  
**Sent:** Wednesday, January 13, 2016 11:58 AM  
**To:** rjack.agntribe@gmail.com  
**Cc:** Amanda Childs; Leslie.Grey@faa.gov  
**Subject:** Angoon Airport EIS Cultural Report available

Good morning Wally,

***Raynell, I'm sending this email to you, as I don't have an email for Wally. I would appreciate it if you can make sure he gets this message. I appreciate it!***

I wanted to send an email to let you know that the finalized cultural report and supporting appendices have been uploaded to the project website at the following link:

[http://www.angoonairporteis.com/Documents/Public\\_Angoon\\_Cultural\\_Technician\\_Report\\_Airport12a\\_01-12-2016\\_FINAL\\_REDACTED.pdf](http://www.angoonairporteis.com/Documents/Public_Angoon_Cultural_Technician_Report_Airport12a_01-12-2016_FINAL_REDACTED.pdf)

I know how important this resource issues is to you so I wanted to make sure you knew this was completed. I also wanted to let you know that this report and FAA's findings of effect were sent to the Alaska State Historic Preservation Office (SHPO). The FAA determined that there would be no adverse effects to cultural resources for Airport 12a with Access 12a (the preferred alternative). The SHPO concurred with these findings. Please share this information with any other members you feel would be interested.

As a general project update, we continue to work with the Alaska DOT&PF, the Forest Service, the Army Corps of Engineers, and other agencies to finish up the final EIS. Due to the complexities of the project, the FAA filed a notice in the federal register requesting an extension to the ANILCA timelines. You can find that notice here:

<https://federalregister.gov/a/2016-92>

I will provide a more detailed update soon. I hope you are all having a wonderful new year! Please feel free to let me know if you have any questions.

Thank you, Leslie

**Leslie Grey**

Environmental Program Manager

FAA Airports, Alaskan Region

907.271.5453

## Jennifer Rideout

---

**From:** Leslie.Grey@faa.gov  
**Sent:** Wednesday, January 13, 2016 11:33 AM  
**To:** alclhoward99@yahoo.com  
**Cc:** Amanda Childs; Leslie.Grey@faa.gov  
**Subject:** Angoon Airport EIS Cultural Report available

Good morning Mayor Howard,

I wanted to send an email to let you know that the finalized cultural report and supporting appendices have been uploaded to the project website at the following link:

[http://www.angoonairporteis.com/Documents/Public\\_Angoon\\_Cultural\\_Technician\\_Report\\_Airport12a\\_01-12-2016\\_FINAL\\_REDACTED.pdf](http://www.angoonairporteis.com/Documents/Public_Angoon_Cultural_Technician_Report_Airport12a_01-12-2016_FINAL_REDACTED.pdf)

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<https://federalregister.gov/a/2016-92>

I will provide a more detailed update soon. I hope you are all having a wonderful new year! Please feel free to let me know if you have any questions.

Thank you, Leslie

**Leslie Grey**

Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453

## Jennifer Rideout

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**From:** Leslie.Grey@faa.gov  
**Sent:** Wednesday, January 13, 2016 11:35 AM  
**To:** sharonlove65@gmail.com  
**Cc:** Amanda Childs; Leslie.Grey@faa.gov  
**Subject:** Angoon Airport EIS Cultural Report available

Good morning Sharon,

I wanted to send an email to let you know that the finalized cultural report and supporting appendices have been uploaded to the project website at the following link:

[http://www.angoonairporteis.com/Documents/Public\\_Angoon\\_Cultural\\_Technician\\_Report\\_Airport12a\\_01-12-2016\\_FINAL\\_REDACTED.pdf](http://www.angoonairporteis.com/Documents/Public_Angoon_Cultural_Technician_Report_Airport12a_01-12-2016_FINAL_REDACTED.pdf)

I know how important this resource issues is so I wanted to make sure you knew this was completed. I also wanted to let you know that this report and FAA's findings of effect were sent to the Alaska State Historic Preservation Office (SHPO). The FAA determined that there would be no adverse effects to cultural resources for Airport 12a with Access 12a (the preferred alternative). The SHPO concurred with these findings. Please share this information with any other members you feel would be interested.

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<https://federalregister.gov/a/2016-92>

I will provide a more detailed update soon. I hope you are all having a wonderful new year! Please feel free to let me know if you have any questions.

Thank you, Leslie

**Leslie Grey**

Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453





THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of Transportation and  
Public Facilities**

SOUTHCOAST REGION  
Regional Director's Office

6860 Glacier Highway  
PO Box 112506  
Juneau, Alaska 99801-2506  
Main: (907) 465-1763  
Toll free: (800) 575-4540  
Fax: (907) 465-2016  
TTY-TDD: (800) 770-8973  
dot.state.ak.us

February 22, 2016

Randy Vigil  
Juneau Field Office, Alaska District, U.S. Army Corps of Engineers  
Regulatory Division  
P.O. Box 22270  
Juneau, Alaska 99802

Re: POA-2009-1254, Favorite Bay  
Subject: ANILCA Title XI Application

Dear Mr. Vigil,

On January 9, 2015 the Department of Transportation and Public Facilities, Southcoast Region (DOT&PF), submitted an Alaska National Interest Lands Conservation Act (ANILCA) Title XI application using Standard Form 299 as outlined under ANILCA Sections 1104 and 1106(a)(1) for transportation and utility system and facilities on federal lands. On January 29, 2015 you requested DOT&PF provide additional information regarding our Proposed Action, Alternative 3a, as described in the Draft Environmental Impact Statement (DEIS) developed by the Federal Aviation Administration (FAA) in cooperation with your agency and the US Forest Service (USFS).

This letter provides the information the U.S. Army Corps of Engineers (USACE) has determined would be necessary for our SF-299 ANILCA Application to be considered complete for the purposes of allowing FAA to complete the ANILCA process and finalize the EIS. In the event that FAA and the cooperating agencies recommend DOT&PF's Proposed Action as the Preferred Alternative rather than Alternative 12a, we would provide a formal Section 404/10 Permit Application for your consideration and public notice at that time.

We believe that the following addresses the specific information you requested in your letter of January 29<sup>th</sup>.

- a. *Plan and section view drawings that specify clearly, with distances in feet, the dimensions of the proposed project (access roads, fill-pads, parking lots, taxi-ways, runways, air terminal, etc.) showing the placement of fill material in relation to the waters of the United States, including wetlands. Use 8.5-inch by 11-inch paper.*

Please see the enclosed drawing set which includes Location and Vicinity maps (Sheets 1 and 2),

*"Keep Alaska Moving through service and infrastructure."*

Wetlands (Sheet 3), Other Waters of the U.S. (Sheet 4), Sheet Layout Plan (Sheet 5), Road and Airport Plan and Profile views (Sheets 6 through Sheet 15), and Typical Sections (Sheets 18 through Sheet 20).

*b. A proposed project location map.*

The Project Location Map is on Sheets 1 and 2 of the enclosed drawing set.

*c. The surface area in acres of wetlands and other waters, such as streams, lakes, or tidal waters that would be filled by your proposed project.*

Wetlands that would be impacted by fill from the Proposed Action would include 112 acres of primarily bog forest wetlands (see enclosed Sheet 3). The fill would result in a conversion of parts or all of those wetlands to uplands and resulting in the loss of all functions and services. The access road construction would involve temporary and permanent bridges over Favorite Creek, but neither bridge would require terrain disturbance in wetlands. In addition, vegetation clearing would cause wetland alteration by changing the wetland's vegetation communities and therefore potentially changing its functions and services. The Proposed Action would result in alteration of an additional 86 acres of primarily bog forest and bog woodland wetlands.

| <b>Direct effects to wetland habitats</b> |                   |                     |            |                   |
|-------------------------------------------|-------------------|---------------------|------------|-------------------|
|                                           | <u>Bog Forest</u> | <u>Bog Woodland</u> | <u>Fen</u> | <u>Salt Marsh</u> |
| Wetland fill (acres)                      | 108               | 2                   | 1          | 1                 |
| Wetland alteration (acres)                | 71                | 13                  | 1          | 1                 |

Other waters of the U.S. impacted by the Proposed Action include several streams, creeks and lakes and are summarized below and are shown on the enclosed Sheet 4.

| <b>Acres of stream habitat removal</b>    |      |
|-------------------------------------------|------|
| Long term*                                | 0.3  |
| Temporary                                 | 0.6  |
| <b>Stream habitat alteration</b>          |      |
| Acres of riparian management area removal | 148  |
| Permanent bridge (number of piers)        | 2    |
| Temporary bridge (number of piers)        | 3-10 |

In addition, 29 culverts in waters of the U.S. would be installed for the access road and are further described below.

*d. The classification and amount of each type of fill material.*

Material required for airport and road construction would consist of embankment fill, subbase course, crushed aggregate base course, and an asphalt paving surface course. Embankment fill

would predominately come from excavation from existing quarries or usable excavation during construction. Material from rock excavations would be obtained from blasting or ripping rock or boulders. Subbase course is classified as material that consists of hard durable particles or fragments of granular aggregates that are mixed with fine sand, stone dust, or similar building material. Crushed aggregate base course and asphalt paving surface course must be clean, sound, durable particles or crushed stone or gravel. They would be free of organics, silt, or clay coatings. They would also meet specifications for wear and durability.

| Estimated Materials Required for Alternative 3a (Proposed Action)                                                     |                                  |                                       |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------|
| Fill Material                                                                                                         | Airport Quantities (cubic yards) | Access Road* Quantities (cubic yards) |
| Asphalt Paving                                                                                                        | 7,000                            | 3,300                                 |
| Aggregate Base Course                                                                                                 | 10,500                           | 7,600                                 |
| Subbase Course                                                                                                        | 52,100                           | 38,000                                |
| Fill                                                                                                                  | 154,900                          | 254,100                               |
| Cut                                                                                                                   | 190,600                          | 280,600                               |
| Rip Rap                                                                                                               |                                  | 630                                   |
| *The actual alignment will be adjusted during design and all efforts would be made to minimize the project footprint. |                                  |                                       |

*e. Describe the overall activity or project. Give appropriate dimensions of structures such as taxiways, runway safety areas (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Also, identify any structure, including dimensions, to be constructed on the fill.*

The Alaska Department of Transportation and Public Facilities (DOT&PF) has requested funding and approval from the FAA for a new airport and an associated access road in Angoon, Alaska. Current transportation service to and from Angoon is solely by seaplane and ferry. These options do not provide sufficient availability and reliability in transportation to and from Angoon. A land-based airport will improve the availability and reliability of aviation transportation services to and from Angoon. The DOT&PF would maintain and operate the airport once it is built.

The FAA is responsible for the requirements of public use airports and is the lead federal agency responsible for the preparation of the Angoon Airport Environmental Impact Statement. The Draft Environmental Impact Statement (DEIS) has been provided to the USACE as a Cooperating Agency. The land-based airport would accommodate small, wheeled aircraft, and would include a single runway with an apron comparable to other non-certificated rural airports in Southeast Alaska. The location proposed by the DOT&PF is referred to as Airport Alternative 3a, the Proposed Action and is the subject of an ANILCA Application previously submitted to your office. The components of the proposed action are summarized below.

Components of the proposed action

- Paved runway; 3,300 feet long and 75 feet wide
- Pilot-controlled, medium-intensity lights runway lights
- Runway safety areas: 150 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- Lease lots: 62,500 square feet available for leasing
- Object free area: 500 feet wide, centered on runway centerline, extending 300 feet beyond each runway end
- Electrical control building and generator

- Perimeter fence
- Passenger parking lot, paved, near future terminal site
- Support facilities: weather station, communication, wind cones, etc.
- Single, perpendicular paved taxiway
- Access road: 4.4 mile access road with two paved 9-foot-wide lanes and 1-foot shoulders
- Paved aircraft apron
- Rotating beacon navigational aid
- Overhead utility lines: Power and telephone lines located within the access road corridor
- Precision approach path indicator

The Proposed Action would be in the Monument–Wilderness Area, which is managed by the U.S. Forest Service and Kootznoowoo, Inc., the local Alaska Native Corporation.

*f. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the wetlands where the work is being proposed so that they may be notified of the proposed activity.*

The Proposed Action would require land acquisition, rights-of-way, permits, and/or leases of 210 acres of U.S. Forest Service lands and 81 acres of Kootznoowoo, Inc. lands.

USDA Forest Service  
 P.O. Box 21628  
 Juneau, AK 99802-1628

Kootznoowoo, Inc.  
 8585 Old Dairy Road, Stc 104  
 Juneau, AK 99801

*g. A complete description of all activities which the applicant plans to undertake which are reasonably related to the same project and for which a permit would be required. For example, a permit application for a marina will include dredging required for access as well as any fill associated with construction of the marina.*

The Proposed Action would require excavation and fill as described above, as well as generate other impacts, both permanent and temporary. The airport and associated access road would be new construction. This would involve disturbing the terrain; removing or felling trees; excavating and disposing of peat and unusable material from the proposed site; and placing fill as embankment, subbase, crushed aggregate base course, and asphalt pavement.

| Alternative 3a (Proposed Action)<br>Estimated Disturbed Area |                         |                                   |                         |                                                               |
|--------------------------------------------------------------|-------------------------|-----------------------------------|-------------------------|---------------------------------------------------------------|
|                                                              | Tree Removal<br>(acres) | Terrain<br>Disturbance<br>(acres) | Tree Felling<br>(acres) | Temporary Use<br>Area, at Favorite<br>Creek bridge<br>(acres) |
| Airport                                                      | 54.8                    | 74.6                              | 64.9                    |                                                               |
| Access Road                                                  | 17.1                    | 30.5                              |                         | 7.0                                                           |

The proposed access road is approximately 4.4 miles in length, and would require a minimum of 27 culverts. Culverts up to 72 inches in diameter will be necessary to convey the 100-year peak flow at roadway crossings. In addition to the drainage crossings shown below, it is assumed that 2 additional 36-inch culverts will be necessary at undetermined locations along the roadway to address minor drainage crossings. A 640-foot swale will be necessary to convey runoff around the proposed runway at Airport Alternative 3A. The swale would convey a drainage from the southeast corner of the runway toward the northeast and then into a stream east of the runway.

| Access Road Culverts |                |         |                |
|----------------------|----------------|---------|----------------|
| Station              | Diameter (in.) | Station | Diameter (in.) |
| 501+50               | 36             | 643+50  | 36             |
| 513+00               | 36             | 645+50  | 36             |
| 517+50               | 48             | 647+00  | 36             |
| 526+00               | 60             | 654+50  | 36             |
| 533+50               | 36             | 663+50  | 36             |
| 547+00               | 48             | 668+50  | 36             |
| 549+50               | 36             | 689+00  | 36             |
| 554+50               | 72             | 707+50  | 48             |
| 572+50               | 36             | 714+50  | 36             |
| 597+00               | 36             | 718+00  | 36             |
| 601+00               | 48             | 726+50  | 36             |
| 607+00               | 36             | 734+00  | 36             |
| 629+00               | 72             |         |                |

The access road would also require a bridge over Favorite Creek. The bridge would be approximately 650 feet long. The bridge would be constructed of precast concrete bulb tee girders with 140 foot spans and would rest on steel H piles or steel pipe piles with concrete piers and batter piles (see attached Sheet 18). It would have two piers within the stream channel and ordinary high water line, but all other piers would be well outside the ordinary high water line. A temporary bridge would also be constructed over Favorite Creek. This temporary bridge would be used to move equipment back and forth, facilitate construction of the permanent bridge over the creek, and as a haul route. The temporary bridge would result in temporary impacts within the active stream channel and ordinary high water. No permanent foundations would be required. A temporary access would be constructed to allow equipment to get down to the stream bed so piles could be driven at support locations. The temporary bridge would not be removed until all hauling is complete, near the end of the project.

Once the airport is constructed lease lots would be available for lease for the purpose of constructing aircraft hangars, passenger terminals, and other uses. The lessee's would be responsible for any construction activities and any required permits on their respective lease lots.

*In addition you noted that "For activities involving discharges of dredged or fill material into waters of the U.S., the application must include a statement describing how impacts to waters of the United States are to be avoided and minimized. The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts."*

Avoidance measures have included the following:

- Avoid vegetation clearing in forest or woodland habitats during the migratory bird and raptor breeding season (April 15 through July 15). If construction were to occur during this time period, clearance surveys would be conducted, and active nests would be avoided.

- DOT&PF would time construction to minimize effects to aquatic species; for example, do not conduct construction activities in streams during typical salmon migratory or spawning periods (between June 1 and August 15).
- During the design phase of this project, materials sources would be tested for acid rock drainage (ARD) potential, and during construction the areas of terrain disturbance for the runways would be tested. If the potential for ARD was identified, precautions would be taken that include not using that particular source rock as fill or for surfacing. It is important to keep rock with the potential for ARD away from the water table. If materials sources are shown to have potential for ARD they would not be used near water.
- During the design process DOT&PF would avoid impacts to sensitive receiving waters, including wetlands, to the extent practicable.

Minimization efforts would include the following measures:

- Limit facilities to only those needed: The FAA scrutinized the DOT&PF's proposed action and included only those facilities they independently determined would be necessary to meet the project purpose and need. This would reduce the project footprint and overall amount of disturbance.
- Limit the fill footprint to the extent practicable by steepening embankment slopes where feasible.
- Although exact airport locations and runway orientations are dictated by aviation standards, the locations of facilities such as the apron and taxiway at each airport site were established to require the least amount of excavation and placement of fill material to minimize impacts to waters of the U.S.
- Re-use excavated materials to the extent practicable to reduce the amount of additional fill material needed from new or existing sources and to reduce waste disposal site areas.
- Appropriately design and place culverts, water retention areas, and bridge piers: Proper design and placement of water-control structures and bridge piers would allow for passage of water, large wood, and fish while minimizing runoff and erosion.

### Mitigation Efforts

The Proposed Action, airport and access road would impact 198 acres of wetlands. DOT&PF will develop appropriate and practicable steps during the design to first avoid and then minimize adverse impacts to the aquatic ecosystem. The compensatory mitigation regulations state that when compensatory mitigation is necessary to offset unavoidable impacts to aquatic resources, the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. DOT&PF is currently working with the resource agencies to develop appropriate compensatory mitigation that would be sufficient to replace the lost aquatic resource functions. The compensatory mitigation is likely to include a variety of actions or activities to ensure the sufficient replacement of lost aquatic resource functions. The compensatory mitigation effort for this project would include a payment to a mitigation bank (Sealaska Corporation Mitigation Bank) or in-lieu fee program (Southeast Alaska Land Trust); or permittee-responsible mitigation such as removal of derelict boats in Favorite Bay, removal of mining tailings at Empire Mine (Hawk Inlet) or restoration of wetlands around Florence Lake; or a combination of both in-lieu fee payments and permittee responsible projects.



You also stated in your letter "*A preliminary review for compliance with the Environmental Protection Agency's 404 (b)(1) Guidelines ...nor does it appear to represent the least environmentally damaging practicable alternative.*"

The Angoon Airport DEIS considers a number of different alternatives and availability of other sites that would be considered practicable after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. Although the Proposed Action described in the ANILCA Application may not be the least environmentally damaging alternative, it may be the least damaging "practicable" alternative under Title XI of ANILCA that best meets the purpose and need. FAA's Record of Decision (ROD) identifying both the Preferred Alternative as well as the least environmentally damaging practicable alternative will not be completed until after completion of the Final Environmental Impact Statement (FEIS).

We believe that the forgoing provides sufficient information upon which to base a determination that our application is complete for the purpose of advancing the ANILCA Title XI process and completing the Angoon Airport EIS.

If you have any other questions or concerns, please do not hesitate to contact me at (907) 465-1763, or via email at [mike.coffey@alaska.gov](mailto:mike.coffey@alaska.gov). You may also contact John Barnett, DOT&PF Angoon Airport Project Environmental Coordinator, at (907) 465-4504 or via email at [john.barnett@alaska.gov](mailto:john.barnett@alaska.gov).

Sincerely,



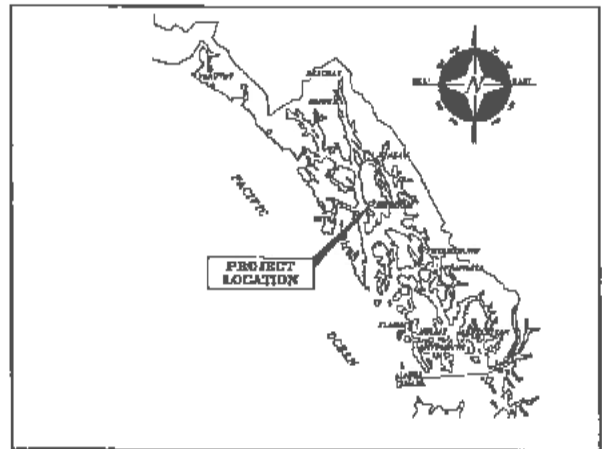
Michael J. Coffey  
Southcoast Region Director

cc:

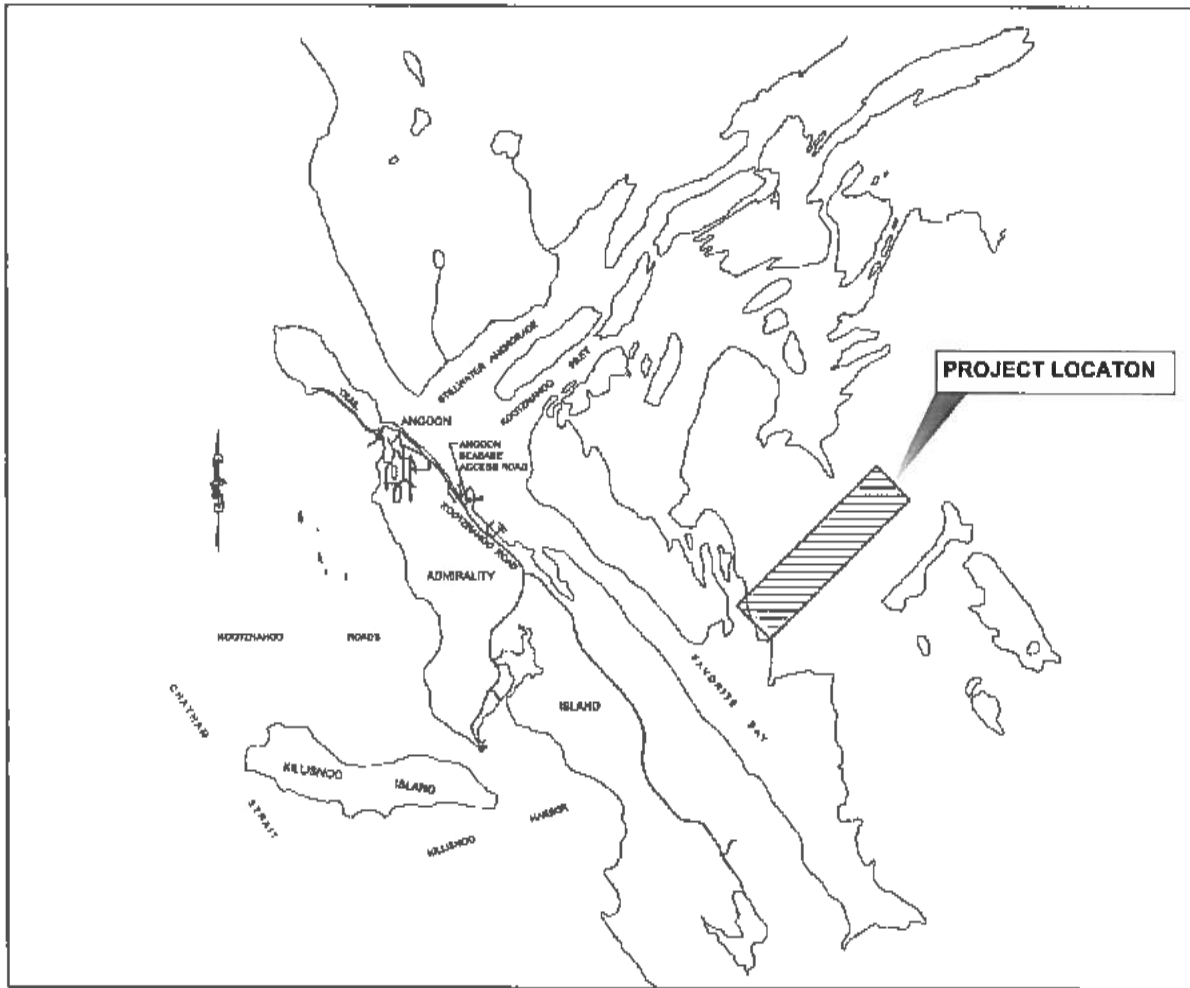
David Hobbie, USACE Alaska District's Regulatory Division, Chief  
Marc Luiken, C.M., Commissioner, Alaska DOT&PF  
Leslie Grey, FAA Alaska Region, Airports Division  
Kristi Warden, Deputy Manager, FAA Alaska Region, Airports Division



**KEY MAP**



**LOCATION MAP**

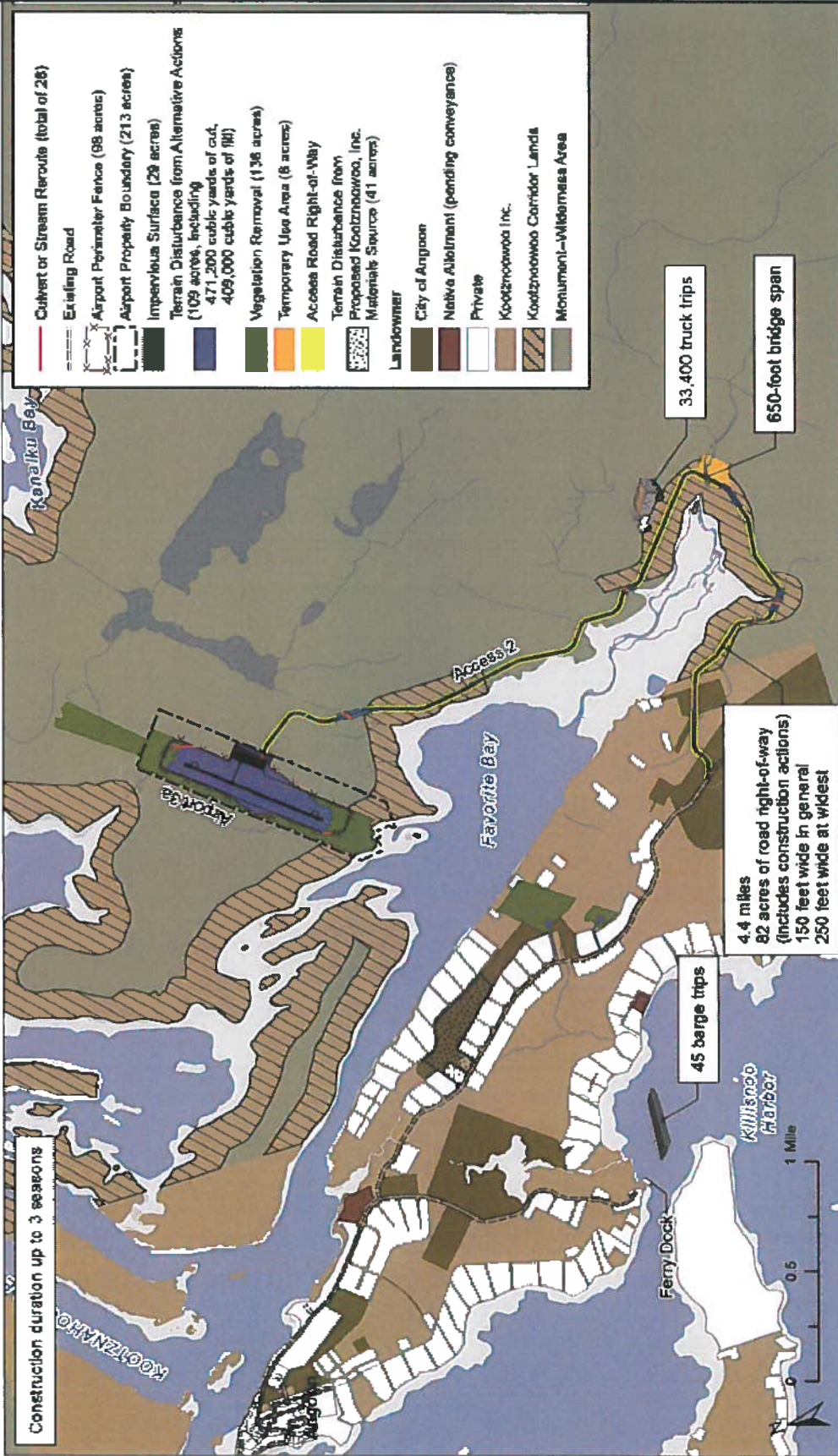


**VICINITY MAP**

**WATER BODIES:**  
FAVORITE BAY

**KEY AND REGIONAL MAPS**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHEAST REGION

ANGOON AIRPORT AMLCA APPLICATION  
PROJECT NO. 68940  
AT, ANGOON, ALASKA  
LOCATED IN: Sec. 4, S. 10, 15, 16 in T. 61 S., R. 68 E., and Sec.  
12, 24, T. 10 S., R. 68 E., GRM; USGS Quad Map  
61848 B-E; Contained on Latitude 57° 20' 07.56" N.,  
Longitude 134° 20' 24.06" W. in Angoon, AK.  
DATE: February 17, 2016 SHEET 1 OF 20



**Cutvert or Stream Reroute (total of 26)**

Existing Road

Airport Perimeter Fence (98 acres)

Airport Property Boundary (213 acres)

Impervious Surface (29 acres)

Terrain Disturbance from Alternative Actions (109 acres, including 471,200 cubic yards of cut, 409,000 cubic yards of fill)

Vegetation Removal (138 acres)

Temporary Use Area (8 acres)

Access Road Right-of-Way

Terrain Disturbance from Proposed Kootznookoo, Inc. Materials Source (41 acres)

Landowner

City of Angoon

Native Allotment (pending conveyance)

Private

Kootznookoo Inc.

Kootznookoo Corridor Lands

Monument-Wilderness Area

Construction duration up to 3 seasons

33,400 truck trips

650-foot bridge span

4.4 miles  
82 acres of road right-of-way  
(includes construction actions)  
150 feet wide in general  
250 feet wide at widest

45 barge trips

1 Mile

0.5

0

**WATER BODIES:**  
FAVORITE BAY

**LOCATION MAP**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

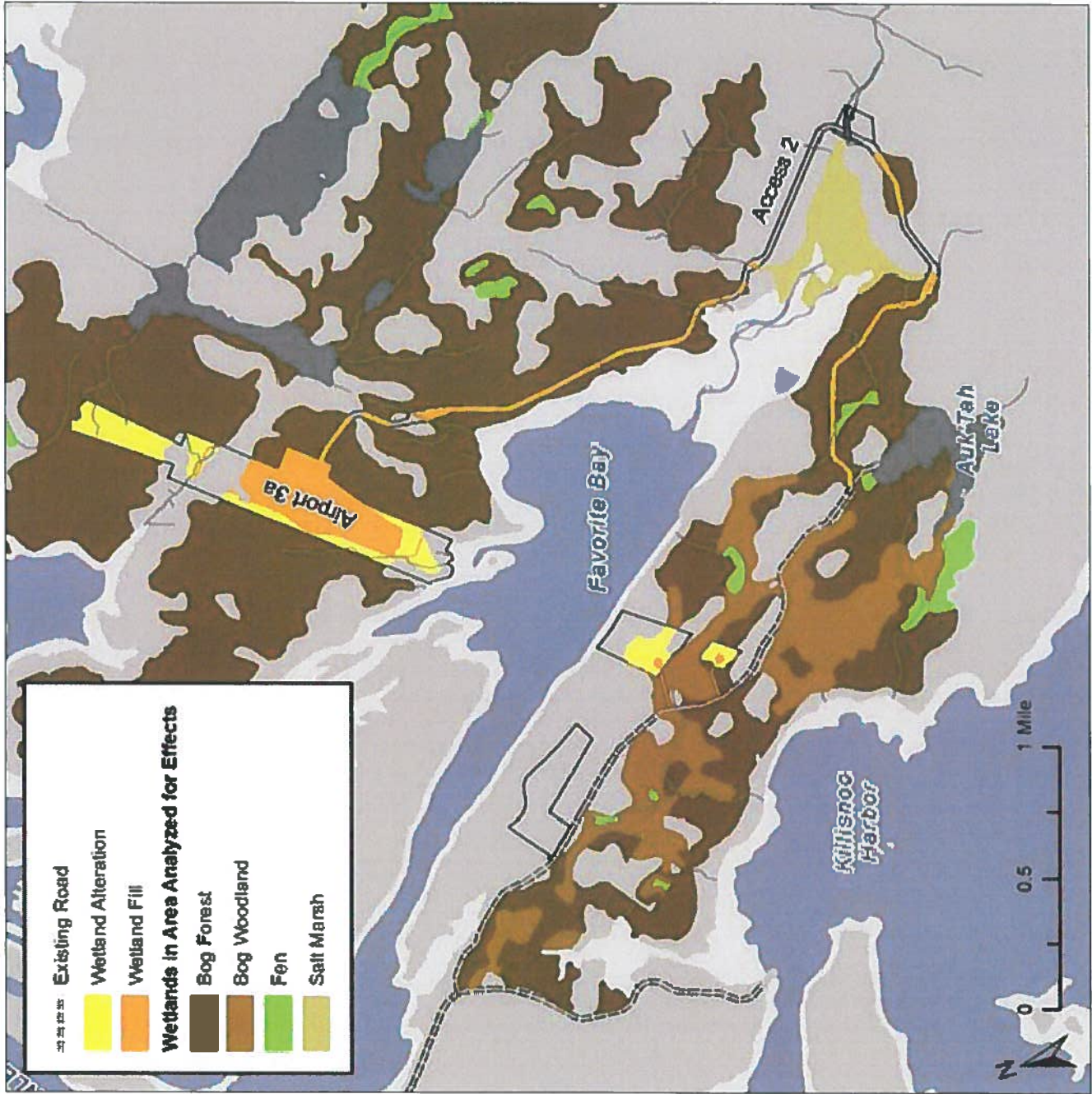
ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 6894D

AT: ANGOON, ALASKA

LOCATED IN: Sec. 4, T. 16. 18, 19 in T. 81 E., R. 29 E., and Sec. 23, 24, 7, 20 S., R. 23 E., CRM; USGS Quad Map Saks 8-2; Contained on Latitude 57° 29' 07.26" N., Longitude 134° 20' 24.09" W. in Angoon, AK.

DATE: February 17, 2016 SHEET 2 OF 20





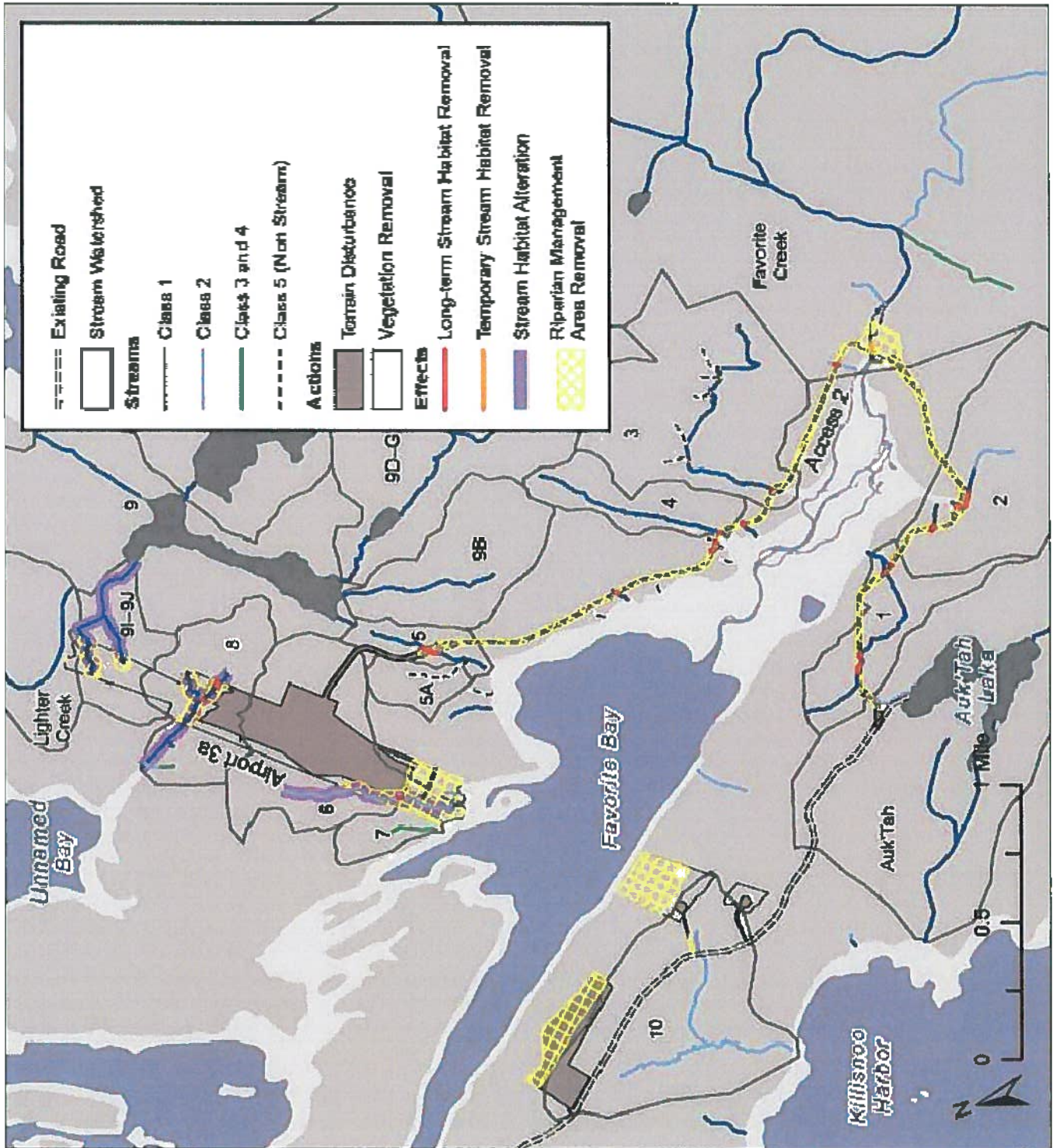
WATER BODIES:  
FAVORITE BAY

**WETLANDS**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 68940  
AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 16 in T. 81 S., R. 05 E., and Sec. 33, 34, T. 66 S., R. 05 E., CRM; USGS Quad Map 5156A R-2; Centered on Latitude 67° 29' 07.58" N., Longitude 154° 20' 24.09" W., in Angoon, AK.  
DATE: February 17, 2016 SHEET 3 OF 20

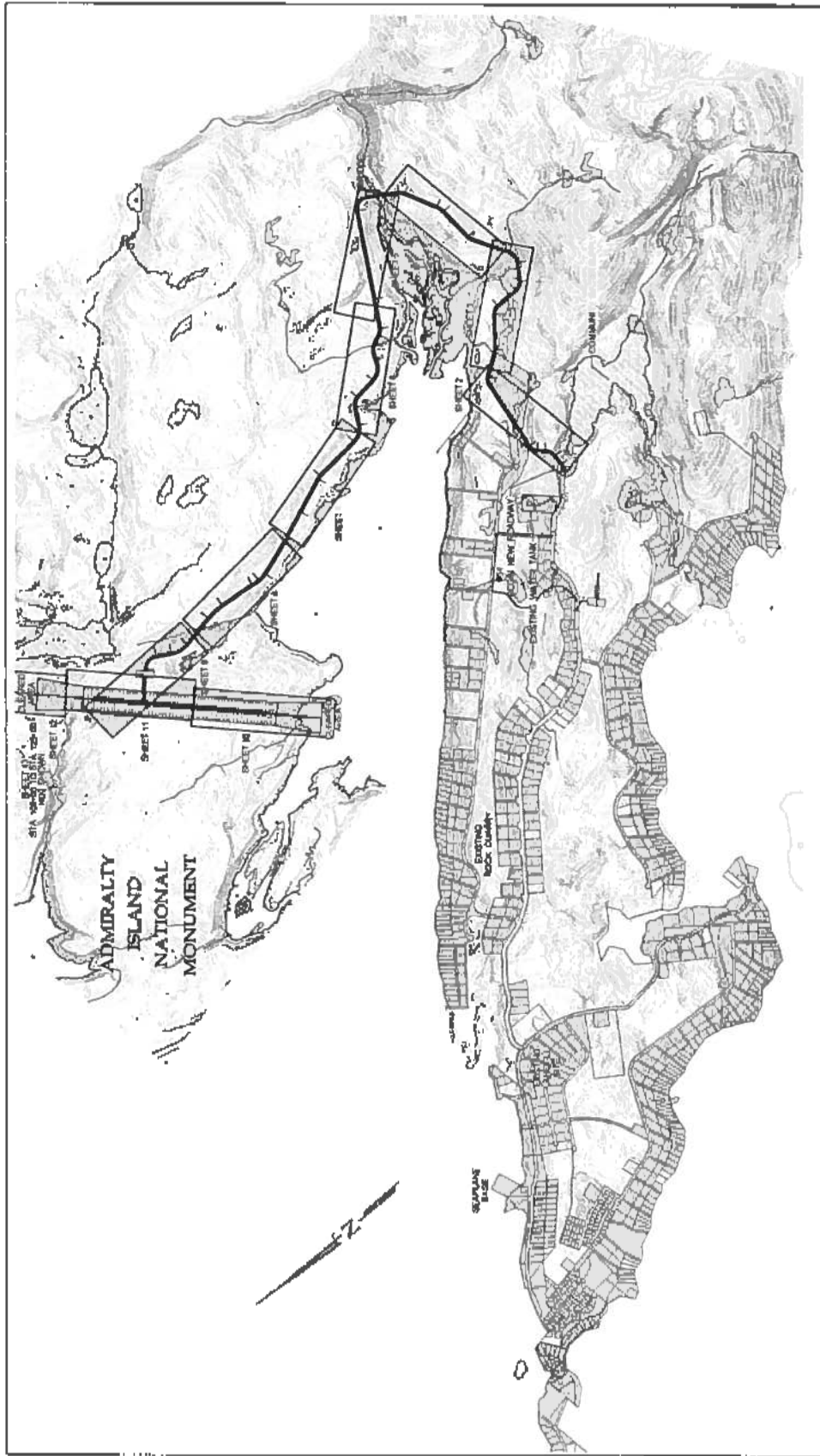




**WATER BODIES:**  
FAVORITE BAY

**OTHER WATERS OF THE US**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 08940  
AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 16 in T. 51 S., R. 55 E., and Sec. 33, 34, T. 52 S., R. 55 E., GRM; USGS Quad Map 5104 B-3; Centered on Latitude 57° 28' 07.38" N., Longitude 134° 20' 34.98" W., in Angoon, AK.  
DATE: February 17, 2016 SHEET 4 OF 20



**WATER BODIES:**  
FAVORITE BAY

**SHEET LAYOUT PLAN**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

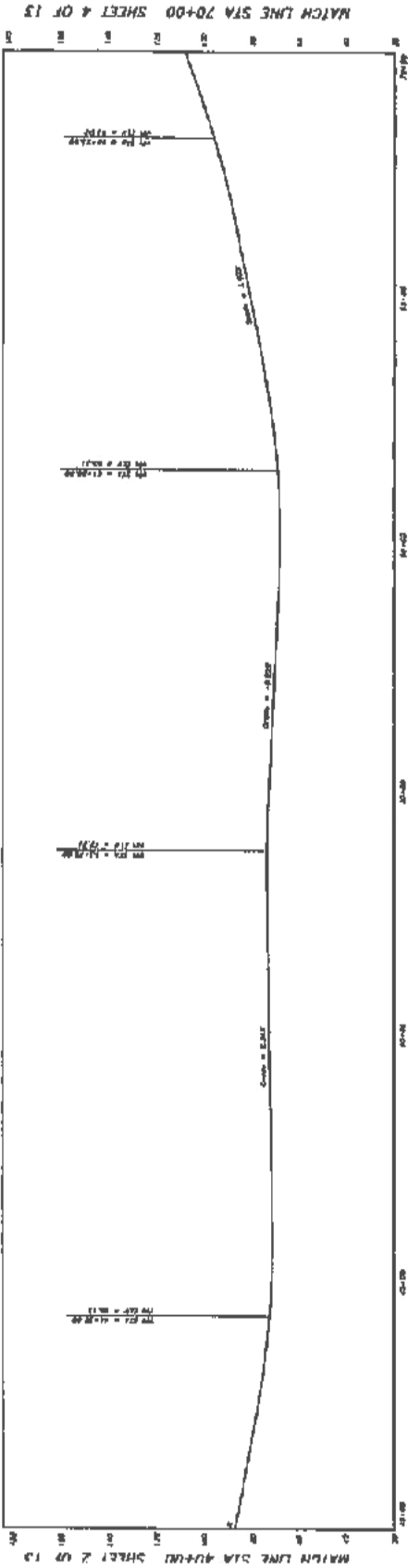
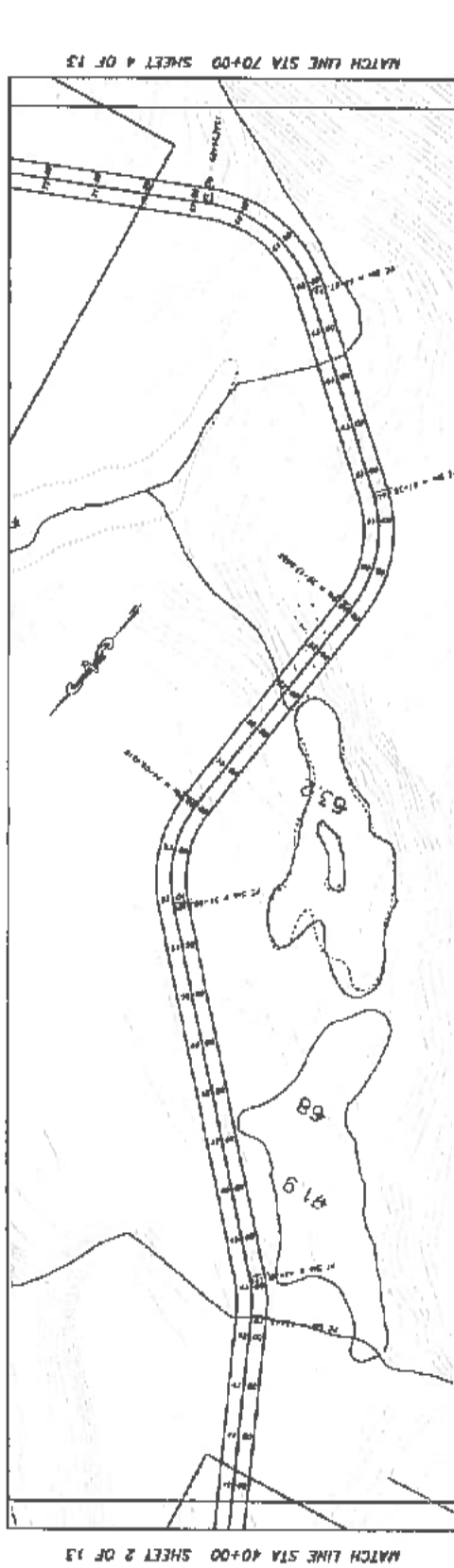
ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 88940

AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 16 in T. 81 S., R. 68 E., and Sec.  
23, 24, T. 82 S., R. 68 E., CPM; USGS Quad Map  
6104 8-2z Contained in Latitude 67° 48' 07.33" N,  
Longitude 134° 20' 54.68" W, in Angoon, AK.

DATE: February 17, 2016 SHEET 5 OF 20



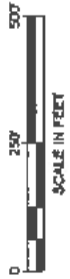
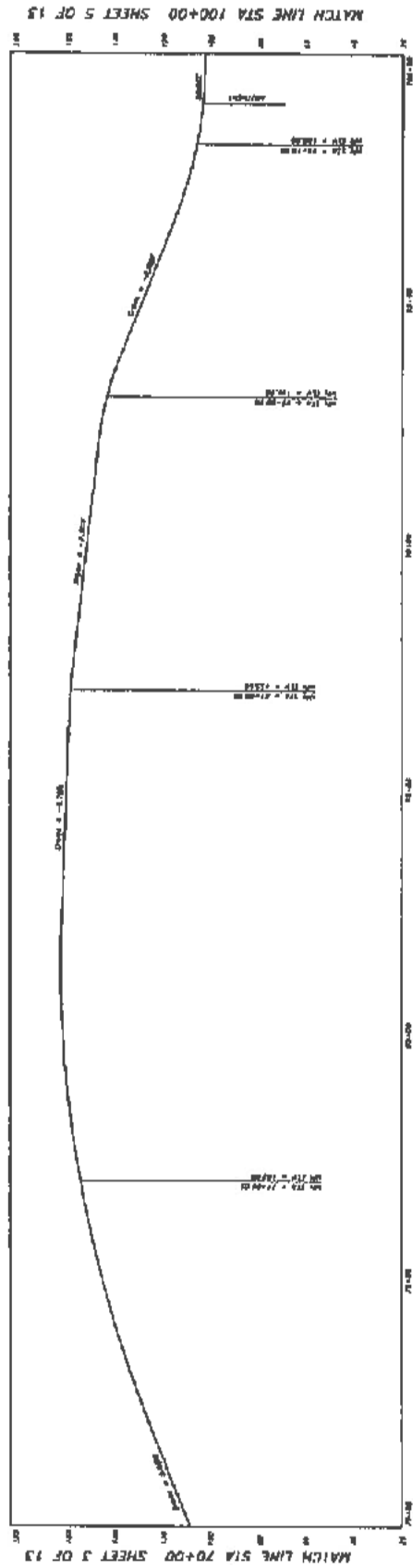
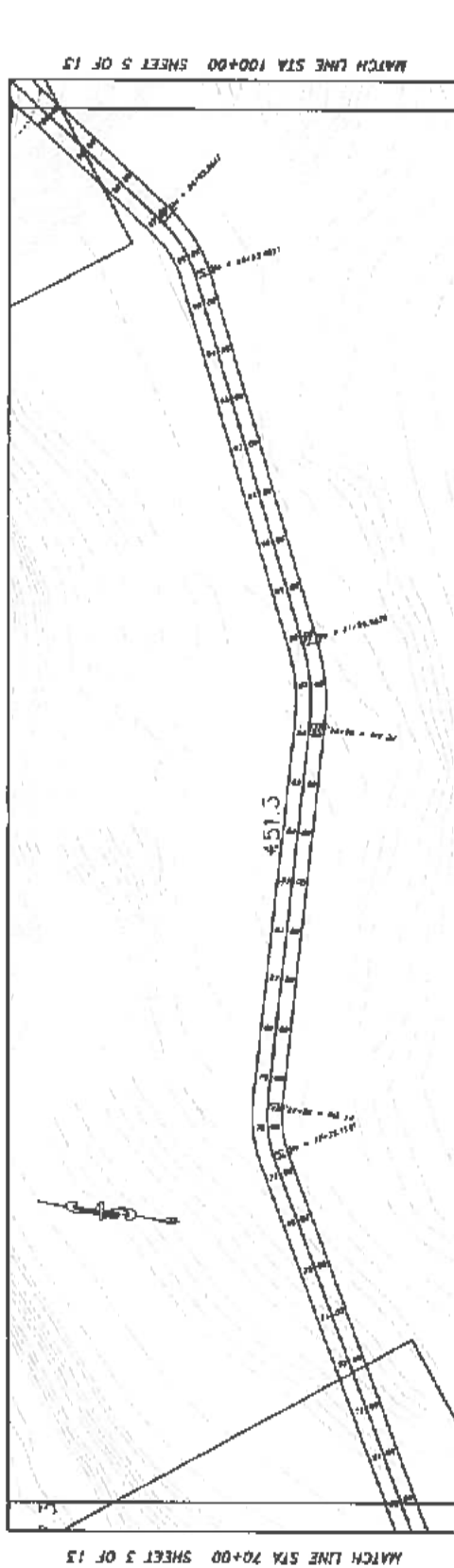




**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANCOON AIRPORT AMICA APPLICATION  
PROJECT NO. 88940  
AT: ANCOON, ALASKA  
LOCATED IN: Sec. 4, S. 10, 15, 18 in T. 61 S., R. 55 E., and Sec. 22, 24, T. 62 S., R. 55 E., CRM; USGS Quad Map 8854-B-2; Derived on Latitude 57° 29' 07.38" N., Longitude 134° 20' 24.88" W, in Ancoon, AK.  
DATE: February 17, 2016 SHEET 7 OF 20

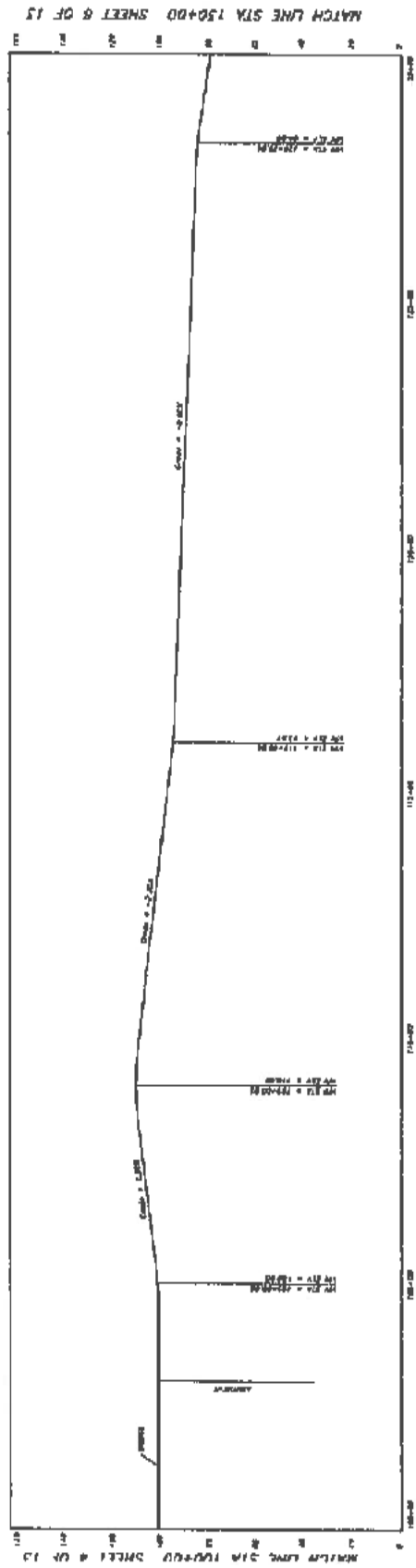
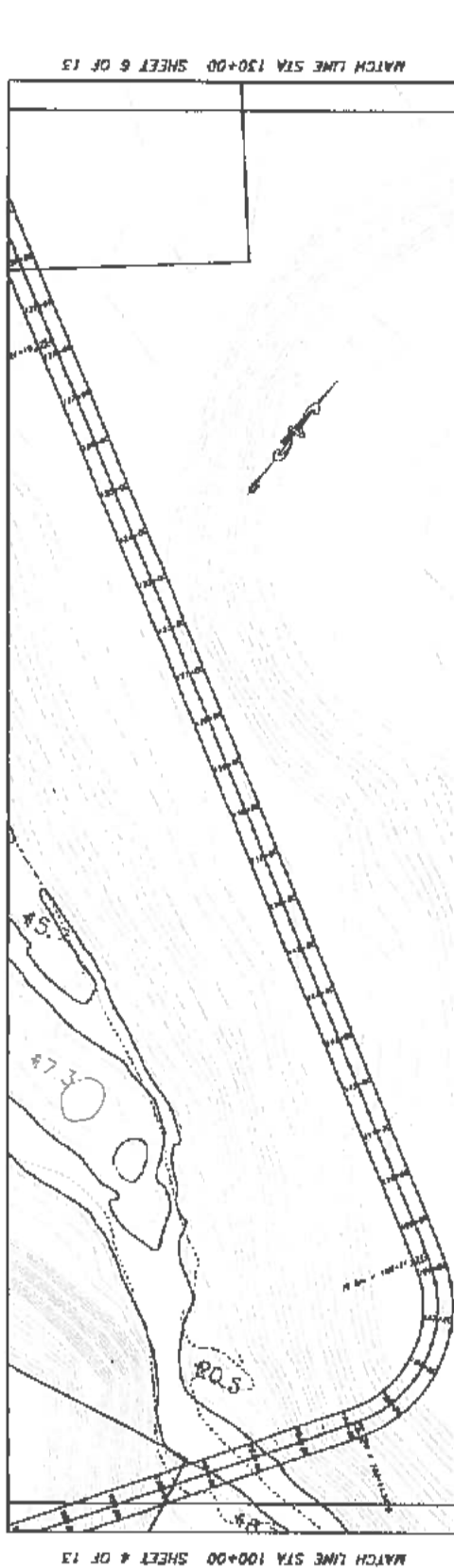


**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

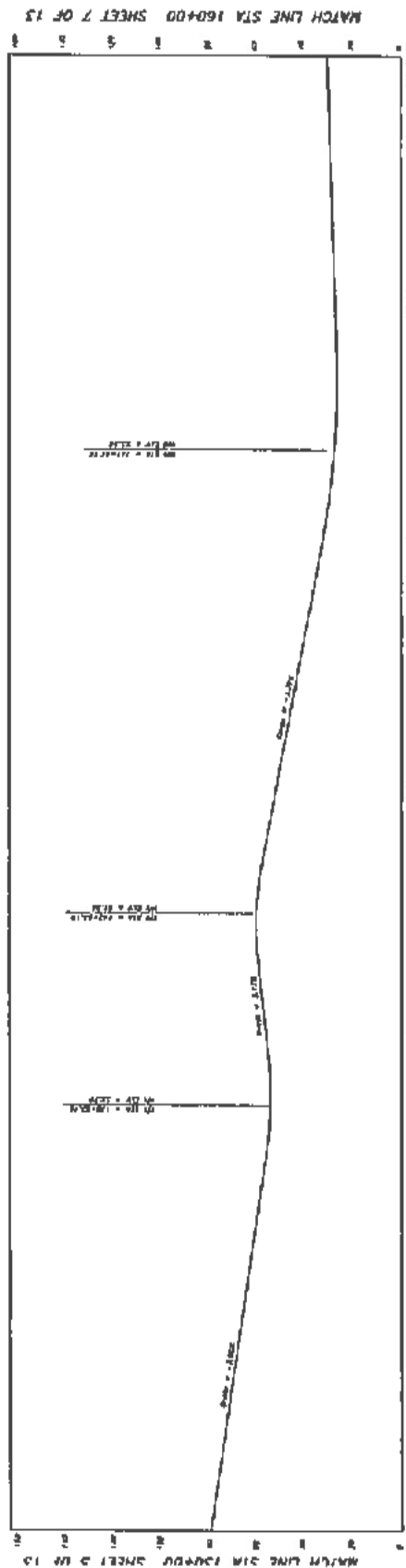
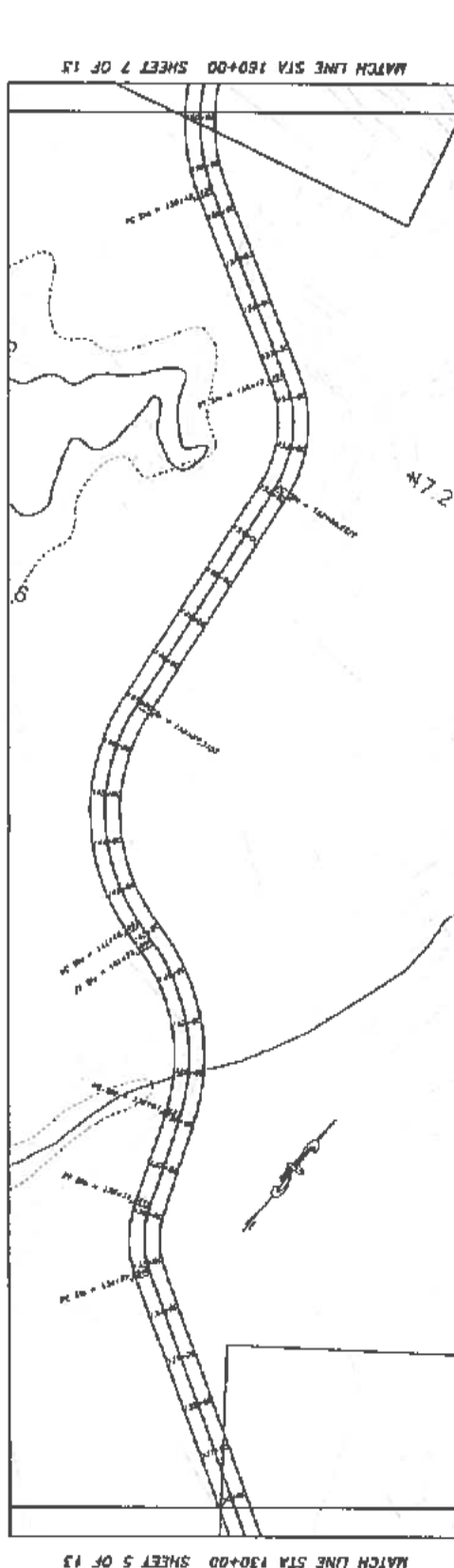
ANGOOK AIRPORT ANILCA APPLICATION  
PROJECT NO. 68940  
AT, ANGOOK, ALASKA  
LOCATED IN: Sec. 4, 8, 16, 18, 19 in T. 81 S., R. 88 E., and Sec.  
13, 14, T. 81 S., R. 88 E., CRM: 18088 Quad Map  
Sheet 8-8) Centered on Latitude 67° 59' 07.36" N.,  
Longitude 156° 20' 24.03" W. in Angook, AK.  
DATE: February 17, 2016 SHEET 8 OF 20



**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 68940  
AT: ANGOON, ALASKA  
LOCATED IN: Secs. 4, 9, 10, 15, 19 to 21 S., R. 6E E., and Sec.  
33, 34, 35, 36 S., R. 6E E., CNM; USGS Quad Map  
68400-8-8; Centered on Latitude 57° 09' 09.34" N.,  
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DATE: February 17, 2016 SHEET 9 OF 20



**WATER BODIES:**  
FAVORITE BAY

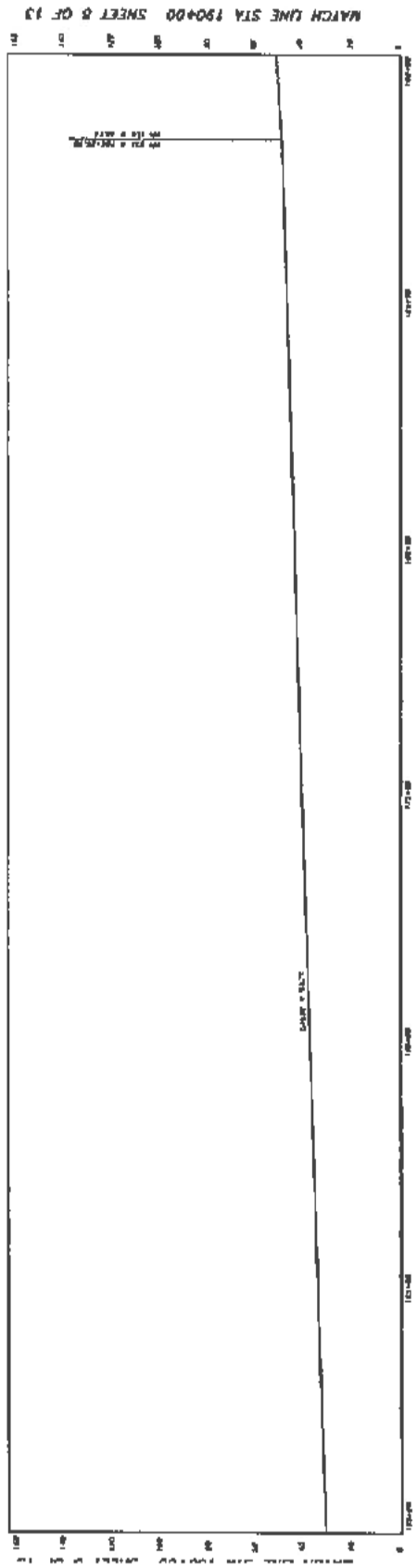
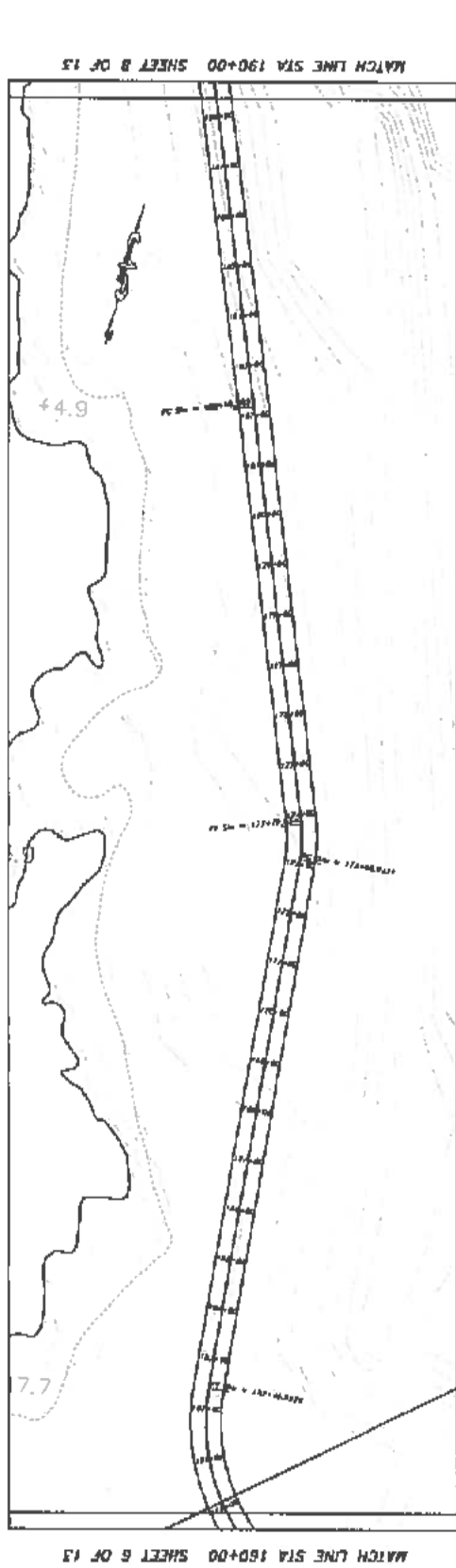
**PLAN & PROFILE**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOON AIRPORT AM/LCA APPLICATION  
PROJECT NO. 68940

AT: ANGOON, ALASKA  
LOCATED IN: Sec. 24, T. 10 S., R. 08 E., and Sec. 25, T. 10 S., R. 08 E., CRIM: USGS Quad Map  
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DATE: February 17, 2016 SHEET 10 OF 20

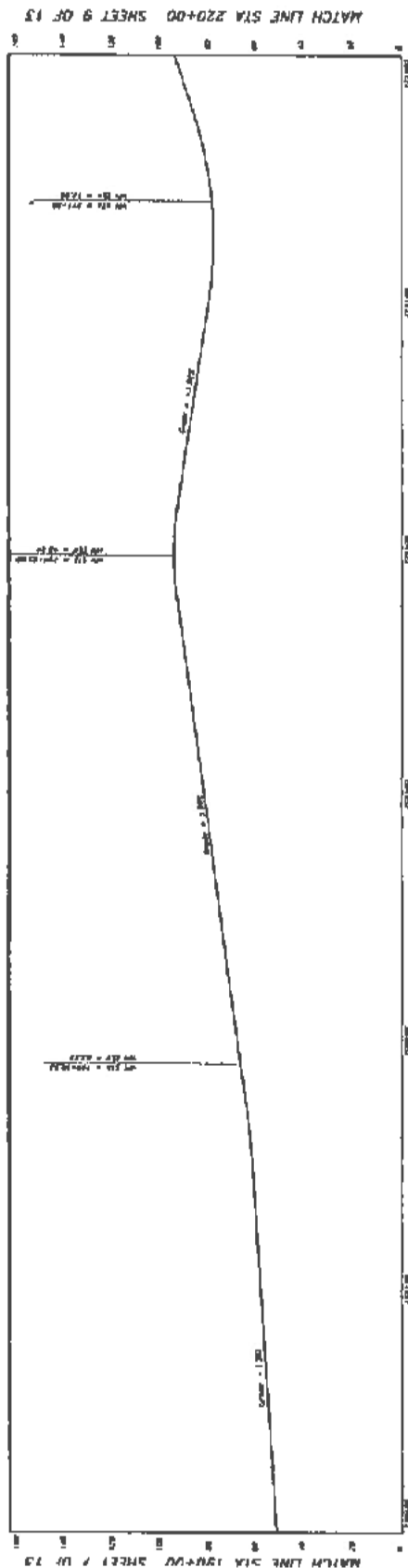
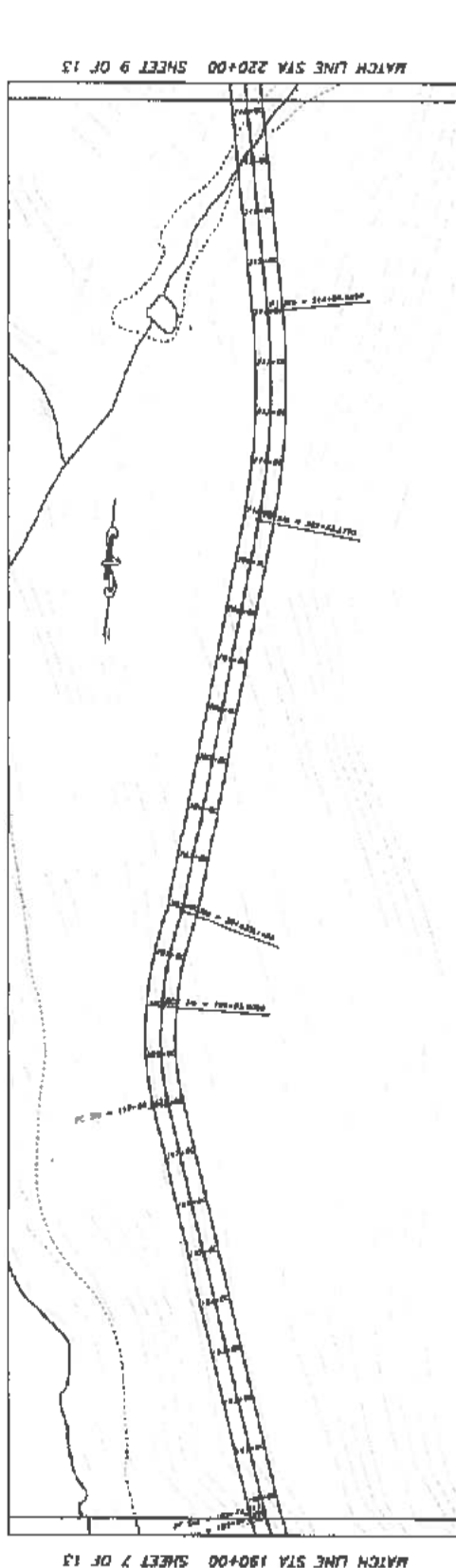


**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

ANGOOK AIRPORT ANILCA APPLICATION  
PROJECT NO. 58840  
AT: ANOOK, ALASKA  
LOCATED IN: S4, T. 10, R. 18, S. 14, R. 18 E., 4th Sep.  
20, 194, T. 10 S., R. 18 E., CTRM; UTM89 Quad Map  
Sheet B-23 Centered on Latitude 67° 07' 07.38" N,  
Longitude 134° 07' 24.00" W, in Angook, AK.  
DATE: February 17, 2018 SHEET 11 OF 20





**WATER BODIES:**  
FAVORITE BAY

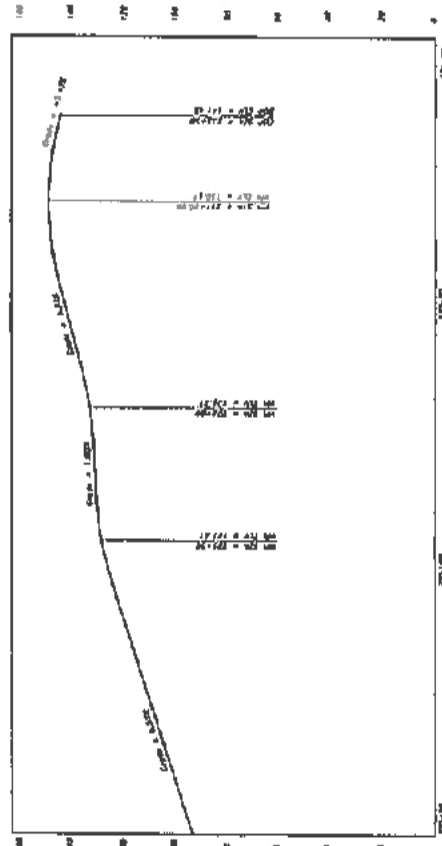
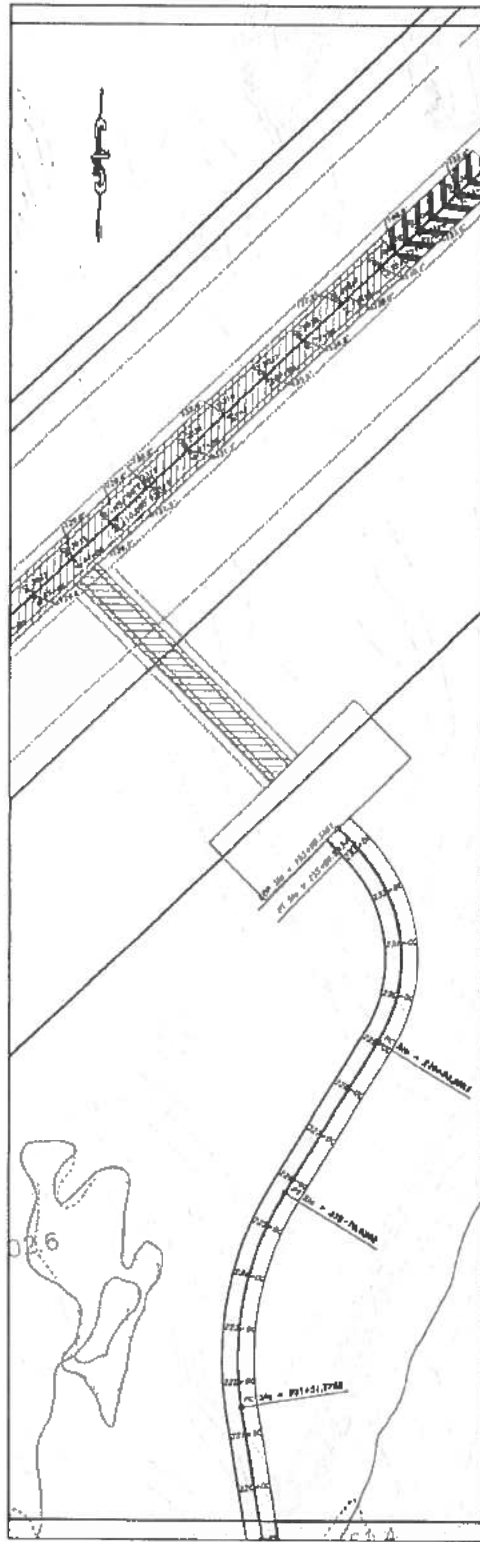
**PLAN & PROFILE**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOON AIRPORT AMLCA APPLICATION  
PROJECT NO. 68940

AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 16, 18 in T. 81 S., R. 28 E., and Sec. 33, 34, 37, 40 S., R. 28 E., CRN; USGS Quad Map 6184-2; Contained on Latitude 67° 38' 57.35" N., Longitude 154° 20' 24.08" W, in Angoon, AK.

DATE: February 17, 2016 SHEET 12 OF 20

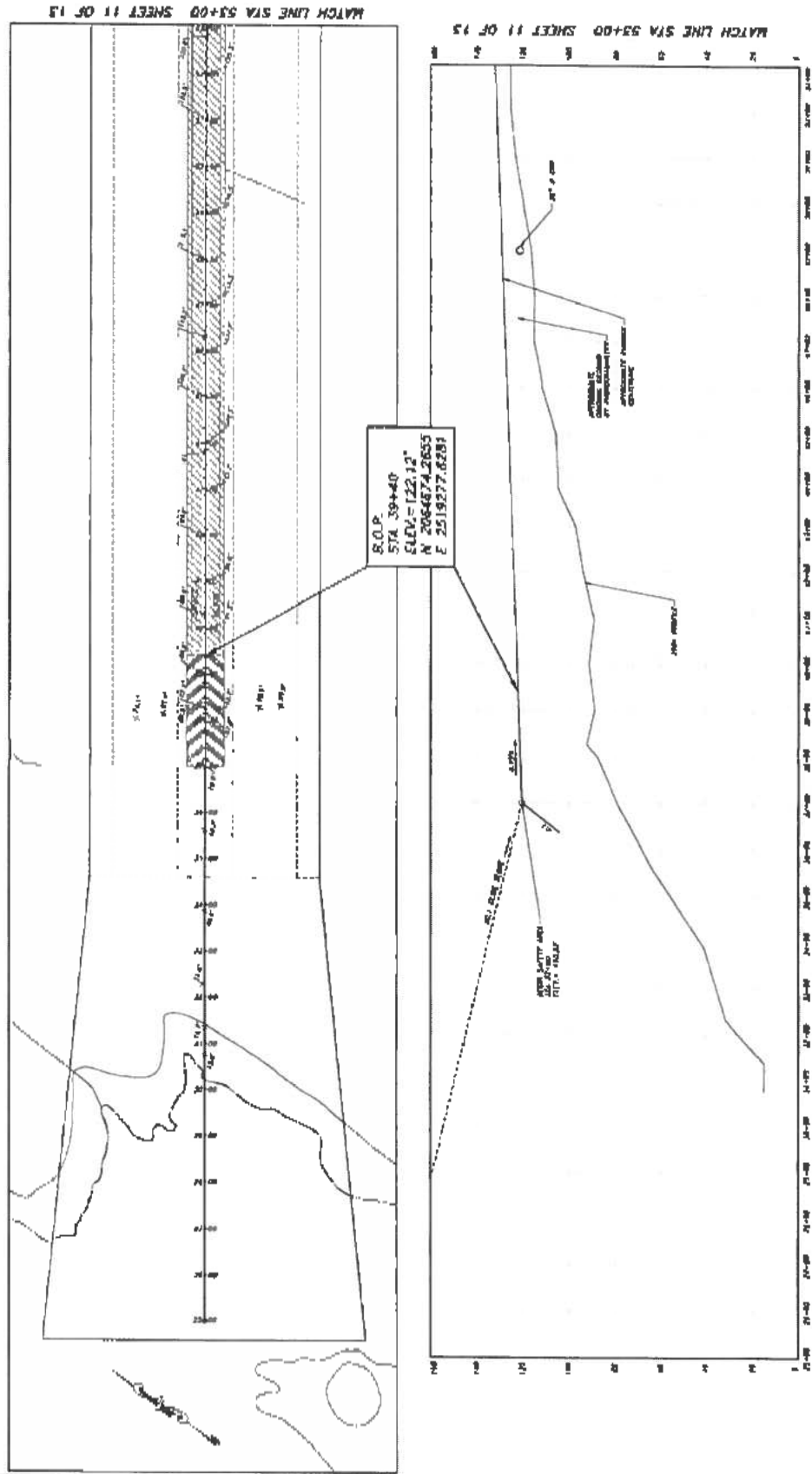


**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

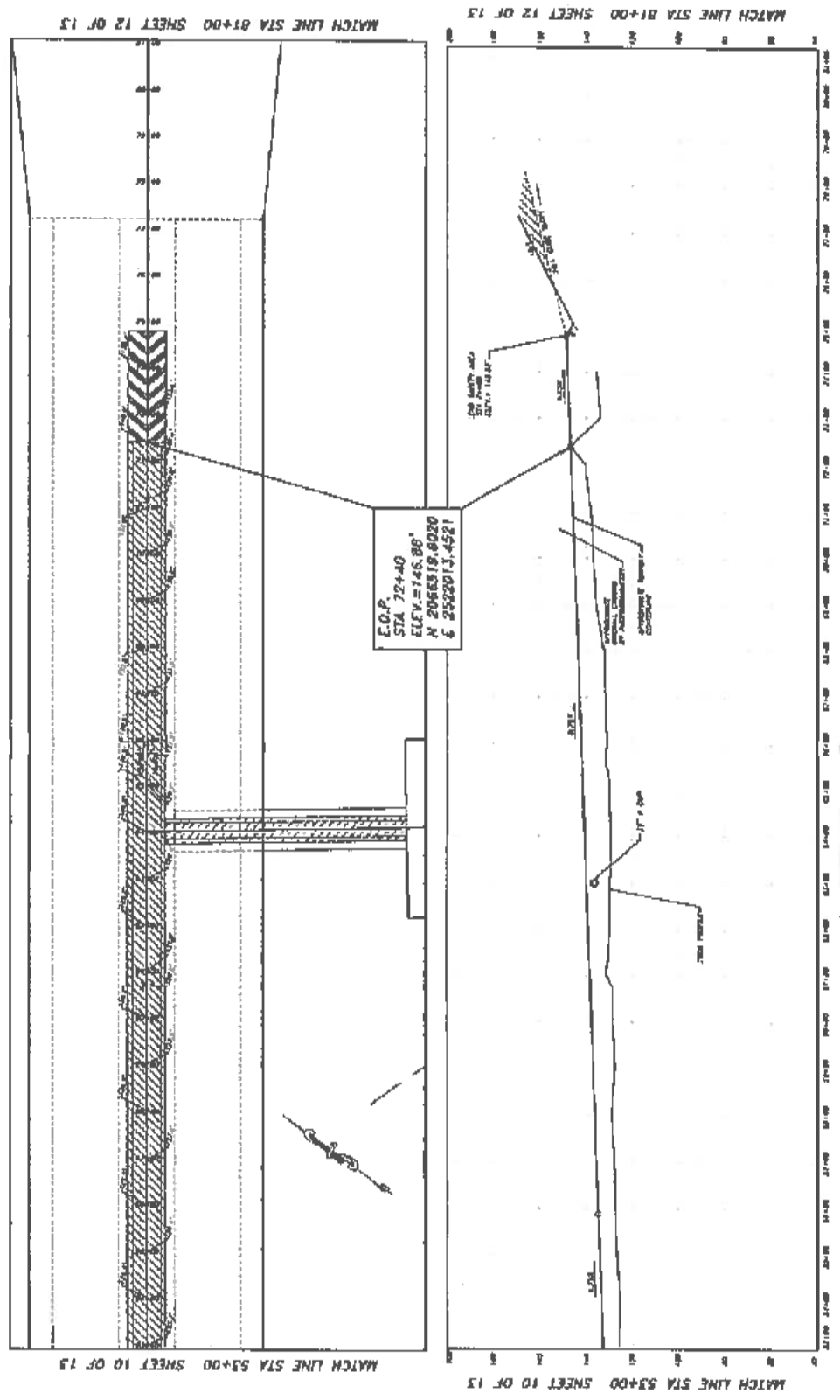
ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 88940  
AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, S. 28, T. 15, R. 65 E., and Sec. 5, S. 28, T. 15, R. 65 E., CRSM 148228 Quad Map  
Sika S-2; Covered on Latitude 67° 38' 02.56" N.,  
Longitude 154° 20' 34.68" W, in Angoon, AK.  
DATE: February 17, 2016 SHEET 13 OF 20



**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**  
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

ANGOOK AIRPORT ANLCA APPLICATION  
PROJECT NO. 68940  
AT: ANGOOK, ALASKA  
LOCATED IN: Sec. 4, Q. 18, 1B, 1E in T. 61 S., R. 20 E., and Sec. 23, 24, T. 60 S., R. 20 E., ERM: 17808 Quad Map  
MUSKIE-E: Contained on Latitude 67° 20' 02.38" N., Longitude 136° 20' 24.09" W. in Angook, AK.  
DATE: February 17, 2016 SHEET 14 OF 20



**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

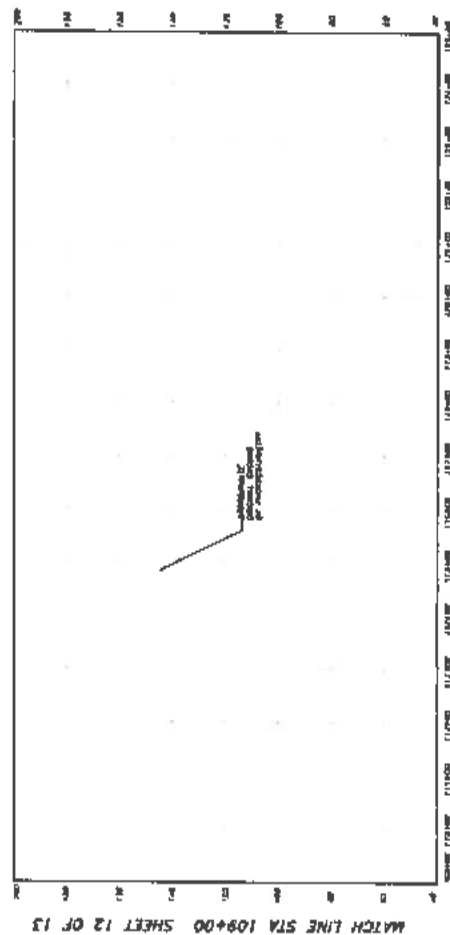
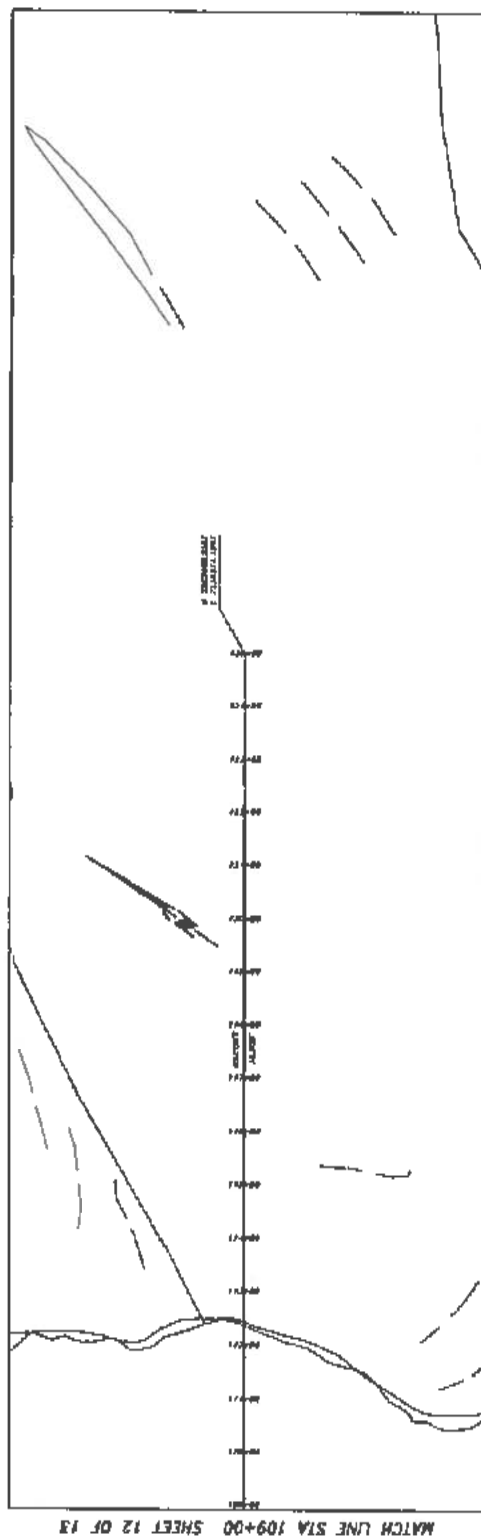
ANGOOD AIRPORT ANILCA APPLICATION  
PROJECT NO. 68840

AT: ANGOOD, ALASKA

LOCATED IN: Secs. 4, 8, 16, 32, 18 in T. 81 S., R. 58 E., and Secs. 30, 34, 7, 10 S., in 68 E., 131M; LIKES Grand Map 880a B-2 Centered on Latitude 67° 30' 07.58" N., Longitude 154° 30' 24.60" W, in Angoon, AK.

DATE: February 17, 2016 SHEET 15 OF 20





SCALE IN FEET

MATCH LINE STA 109+00 SHEET 12 OF 13

MATCH LINE STA 109+00 SHEET 12 OF 13

**WATER BODIES:**  
FAVORITE BAY

**PLAN & PROFILE**

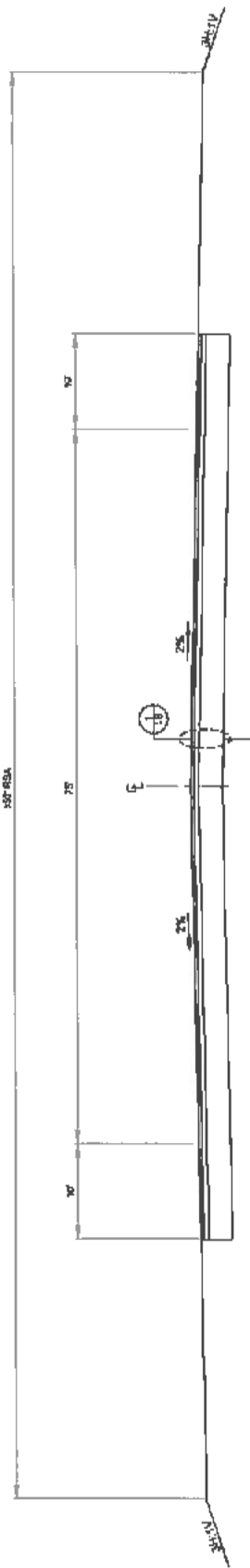
APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOOD AIRPORT ANILCA APPLICATION  
PROJECT NO. 68840

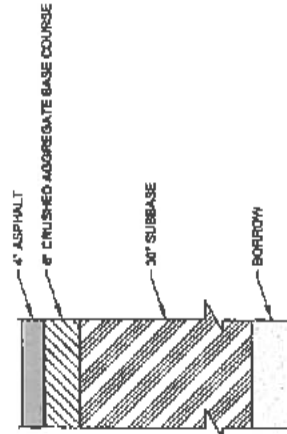
AT: ANGOOD, ALASKA  
LOCATED IN: Sec. 6, 9, 10, 13, 18 in T. 61 S., R. 89 E., and Dep.  
33, 34, T. 61 S., R. 89 E., C 89A; USGS Quad Map  
Shik-B-10 Contained on Letters 87° 58' 07.34" N.,  
Longitude 158° 20' 54.08" W, in Angood, AK.

DATE: February 17, 2016 SHEET 17 OF 20





TYPICAL SECTION  
1/8" = 1' - 0"



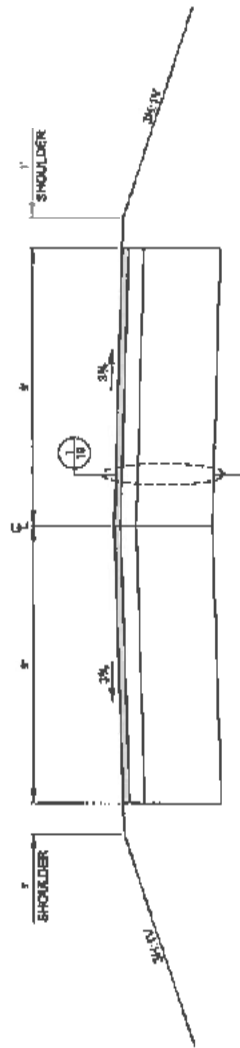
1 PAYEMENT STRUCTURAL SECTION NO. 1  
1/8" SCALE: NOT TO SCALE

**WATER BODIES:**  
FAVORITE BAY

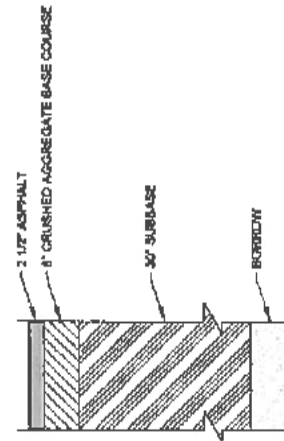
**TYPICAL SECTION**

**APPLICATION BY:**  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOAST REGION

ANGOOD AIRPORT ANILCA APPLICATION  
PROJECT NO. 69940  
AT: ANGOOD, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 16 and 17, 21 S., R. 26 E., and Sec. 23, 24, 27, 30 S., R. 26 E., CHM; USGS Quad Map  
6946 S-2; Contained on Latitude 67° 21' 07.26" N.,  
Longitude 134° 20' 24.06" W, in Angoon, AK.  
DATE: February 17, 2016 SHEET 18 OF 20



TYPICAL SECTION  
N19



1 PAVEMENT STRUCTURAL SECTION NO. 2  
19 SCALE: NOT TO SCALE

WATER BODIES:  
FAVORITE BAY

**TYPICAL SECTION**

APPLICATION BY:  
ALASKA STATE DEPT. OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SOUTHCOST REGION

ANGOON AIRPORT ANILCA APPLICATION  
PROJECT NO. 08040  
AT: ANGOON, ALASKA  
LOCATED IN: Sec. 4, 9, 10, 15, 19 in T. 24 S., R. 05 E., and Sec.  
23, 24, T. 20 S., R. 05 E., C104; USGS Quad Map  
81ka 8-B; Centered on Latitude 57° 25' 07.38" N.,  
Longitude 154° 20' 24.09" W. in Angoon, AK.  
DATE: February 17, 2018 SHEET 19 OF 20



## Jennifer Rideout

---

**From:** Amanda Childs  
**Sent:** Monday, February 22, 2016 7:56 PM  
**To:** Jennifer Rideout  
**Subject:** Fwd: ANILCA Title XI Application Additional Information  
**Attachments:** ANILCA ltr to USACE FEB 22.pdf; ATT00001.htm

For appendix Q.

Amanda

Begin forwarded message:

**From:** "Skagerberg, Verne R (DOT)" <[verne.skagerberg@alaska.gov](mailto:verne.skagerberg@alaska.gov)>  
**Date:** February 22, 2016 at 4:10:38 PM PST  
**To:** "Vigil, Randal P POA ([Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil))" <[Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil)>  
**Cc:** "Hatter, Steve D (DOT)" <[steve.hatter@alaska.gov](mailto:steve.hatter@alaska.gov)>, "[David.S.Hobbie@usace.army.mil](mailto:David.S.Hobbie@usace.army.mil)" <[David.S.Hobbie@usace.army.mil](mailto:David.S.Hobbie@usace.army.mil)>, "[Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)" <[Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)>, "Coffey, Michael J (DOT)" <[mike.coffey@alaska.gov](mailto:mike.coffey@alaska.gov)>, "Barnett, John C (DOT)" <[john.barnett@alaska.gov](mailto:john.barnett@alaska.gov)>, "Amanda Childs ([achilds@swca.com](mailto:achilds@swca.com))" <[achilds@swca.com](mailto:achilds@swca.com)>, "Hughes, Andrew N (DOT)" <[andy.hughes@alaska.gov](mailto:andy.hughes@alaska.gov)>  
**Subject:** ANILCA Title XI Application Additional Information

Randy,

The attached is our response to your January 2015 request for additional information to support our ANILCA Title XI application concerning the Angoon Airport. The original will follow by mail.

Please let me know if you have any questions.

Regards,  
Verne

*Verne R. Skagerberg, MPA  
Airport Planner  
AK DOT&PF, Southcoast Region  
PO Box 112506  
Juneau, AK 99811-2506  
(907) 465-4477*



**File Code:** 2700  
**Date:** March 8, 2016

Marc Luiken  
Commissioner  
Alaska Department of Transportation and Public Facilities  
P.O. Box 112500  
3132 Channel Drive  
Juneau, AK 99811

*Masc.*  
Dear Commissioner Luiken:

We have reviewed your letter of February 22, 2016, providing updated information to support your January 9, 2016, Alaska National Interests Lands Conservation Act (ANILCA) Title XI application for the Angoon Airport. The Title XI application is required because your proposal to construct and operate the airport is located within the Kootznoowoo Wilderness and Admiralty Island National Monument, both considered conservation system units under ANILCA.

As described in your letter, additional analysis will be included in the Final Environmental Impact Statement (FEIS) for potential impacts to both the National Monument and Kootznoowoo Corridor lands. In addition, the Forest Service terms and conditions for a special use authorization that includes the requirement for cultural resources field surveys and determinations of effect reviewed by the State Historic Preservation Officer will be included in the FEIS.

With the information submitted in your letter, and inclusion of the information in the FEIS, the Forest Service has reviewed your application and the supporting information for each of the decision criteria identified in ANILCA Section 1104(g) and has determined that the application contains the information required by this title and applicable law insofar as this agency is concerned.

Although the Forest Service finds that your Title XI application is complete, this finding must not be construed to mean that the Forest Service would provide tentative approval of this application.

Sincerely,

BETH G. PENDLETON  
Regional Forester

cc: Melissa Dinsmore, Chad VanOrmer





REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
REGULATORY DIVISION  
P.O. BOX 22270  
JUNEAU, ALASKA 99802-2270

MAR 10 2016

Regulatory Division  
POA-2009-1254

Mr. Michael J. Coffey  
Southcoast Division Director  
Alaska Department of Transportation  
and Public Facilities  
Post Office Box 112506  
Juneau, Alaska 99811

Dear Mr. Coffey:

This is in regard to your January 9, 2015, Alaska National Interest Lands Conservation Act, Title XI / Section 404 Clean Water Act (CWA) application for the proposed construction of a public use airport to serve the community of Angoon, Alaska. The proposed project would involve the placement of fill material into 112 acres of waters of the United States to construct an access road, runway with safety areas, aircraft lease lots, parking lot, terminal site, aircraft apron and taxiway, support facilities (weather station, communication etc.), navigational aids and lighting, and electrical control building with generator.

The proposed project is located within Sections 33 and 34, T. 50 S., R. 68 E., and Sections 4, 5, 8, 9, 10, 15, and 16, T. 51 S., R. 68 E., Copper River Meridian; USGS Quad Map Sitka B-2; Latitude 57.475064° N., Longitude 134.502115° W.; Tongass National Forest, Admiralty Island National Monument, Kootznoowoo Wilderness; near Angoon, Alaska.

Based on our review of the February 22, 2016, information you provided, as well as the Federal Aviation Administration, Draft Environmental Impact Statement and Section 4(f) Evaluation, Angoon Airport (DEIS) dated January 2015, we have determined that your application is complete. The Corps will proceed with a public notice. Any comments received from reviewing agencies or interested parties will be forwarded to you for your information and/or appropriate action. We have attached a preliminary Jurisdictional Determination (PJD) Form. Please sign and return the form to our office. For your information, a PJD is not appealable. You may request, at any time, an approved Jurisdictional Determination, which can be appealed.



Section 401(a)(1) of the Clean Water Act requires that you obtain a Certificate of Reasonable Assurance or waiver of certification. This is the responsibility of the Alaska Department of Environmental Conservation (ADEC). We are forwarding a copy of your application to the ADEC, which they will accept as an application for a Certificate of Reasonable Assurance.

Under the U.S. Army Corps of Engineers' (Corps) substantive evaluation criteria for all CWA permits, the Environmental Protection Agency's (EPA) 404(b)(1) Guidelines, mitigation is a sequential process of avoidance, minimization, and compensation. Compensatory mitigation is not considered until after all appropriate and practicable steps have been taken to first avoid and then minimize adverse impacts to the aquatic ecosystem.

The mitigation regulations at 33 CFR Part 332 establishes standards and criteria for the use of appropriate and practicable compensatory mitigation for unavoidable functional losses of aquatic resources authorized by Department of the Army permits.

The information provided states that the Alaska Department of Transportation and Public Facilities' (ADOT&PF) proposed compensatory mitigation for unavoidable impacts to waters of the United States would consist of "a variety of actions or activities to ensure the sufficient replacement of lost aquatic resource functions. The compensatory mitigation effort for this project would include a payment to a mitigation bank (Sealaska Corporation Mitigation Bank) or in-lieu fee program (Southeast Alaska Land Trust); or permittee-responsible mitigation such as removal of derelict boats in Favorite Bay, removal of mining tailings at Empire Mine (Hawk Inlet) or restoration of wetlands around Florence Lake; or a combination of both in-lieu fee payments and permittee responsible projects."

The compensatory mitigation regulations establish performance standards and criteria for permittee responsible, mitigation banks, and in-lieu fee compensatory mitigation in order to improve the quality and success of mitigation projects for proposed activities which would be authorization by a DA permit. In 33 CFR 332.3(b), the Corps and EPA have established a preference hierarchy for compensatory mitigation options (i.e., mitigation banks, in-lieu fee programs, and permittee-responsible mitigation). Nevertheless, the potential for success may also justify as environmentally preferable permittee responsible compensatory mitigation projects that would restore or enhance an exceptional aquatic resource, based on robust scientific and technical analysis.

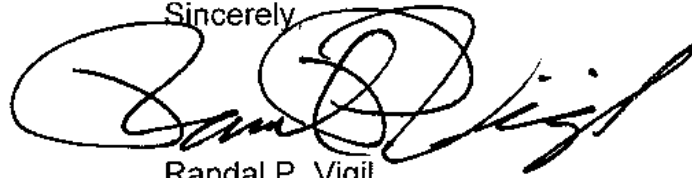
The information provided indicates that the ADOT&PF intends to develop a compensatory mitigation plan to offset impacts to waters of the United States. The Corps mitigation regulations at 33 CFR 332.4(c) state in part that it is the responsibility of the permit applicant to develop the draft mitigation plan and submit it to the Corps for review and comment. The applicant after addressing any comments on the draft mitigation plan must prepare the final plan. All proposed compensatory mitigation projects must comply with the guidelines and requirements outlined in the regulations at 33 CFR 332. Individual compensatory mitigation plans must undergo approval by the Corps in accordance with the regulations in this part.<sup>1</sup>

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<sup>1</sup> See 33 CFR 332.4

You may contact me via email at [Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil), by mail at the address above, or by phone at (907) 790-4491, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Randal P. Vigil". The signature is fluid and cursive, with the first name "Randal" being particularly prominent and stylized.

Randal P. Vigil  
Project Manager

Enclosure

CF:

leslie.grey@faa.gov

cvanormer@fs.fed.us

verne.skagerberg@alaska.gov

john.barnett@alaska.gov

**BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):** March 4, 2016

**B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**

Alaska Department of Transportation and Public Facilities  
PO Box 112506  
Juneau, AK 99811

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:** POA-RD, POA-2009-1254, Favorite Bay

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**  
*(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)*

State: Alaska                      Borough: Angoon                      City: Angoon

Center coordinates of site: Universal Transverse Mercator:

Latitude: 57.475064° N; Longitude: 134.502115° W

Authority:         Section 404                       Section 10

Name of nearest waterbody: Favorite Bay

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 4 miles.

    Cowardin Class: Riverine  
    Stream Flow: Perennial

Non-wetland waters: 237.83 acres

    Cowardin Class: Lacustrine  
    Stream Flow: Perennial

Wetlands: 4,250 acres.

    Cowardin Class: Palustrine

Name of any water bodies on the site that have been identified as Section 10 waters:

    Tidal: Favorite Bay

    Non-Tidal: NA

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination.                      Date: March 4, 2016

Field Determination.                      Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

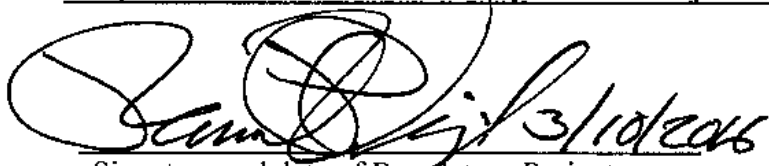
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. §331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply)**

**- checked items should be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: ADOT&PF  
Angoon Airport ANILCA Application
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Sitka B2, 63K
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is:  
(National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Google Earth Pro 2016
- or  Other (Name & Date):
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature: Draft Environmental Impact Statement and Section 4(f)  
Evaluation, Angoon Airport January 2015
- Other information (please specify):

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**



Signature and date of Regulatory Project  
Manager (REQUIRED)

\_\_\_\_\_  
Signature and date of  
person requesting preliminary JD  
(REQUIRED, unless obtaining  
the signature is impracticable)



## Jennifer Rideout

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**From:** Amanda Childs  
**Sent:** Friday, March 18, 2016 2:44 PM  
**To:** Jennifer Rideout  
**Subject:** FW: Angoon Airport Government to Government

**Importance:** High

For record

---

**From:** Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]  
**Sent:** Friday, March 18, 2016 2:38 PM  
**To:** alclhoward99@yahoo.com  
**Cc:** Leslie.Grey@faa.gov; Amanda Childs; Kristi.Warden@faa.gov  
**Subject:** Angoon Airport Government to Government  
**Importance:** High

Tribal President Howard,  
While we are in town, FAA would like to have a Government to Government meeting with the Angoon Community Association separate from the City meeting already scheduled.

It will be an uncommonly good opportunity to have Kristi Warden our Acting Division Manager / Deputy Division Manager be there in person as the FAA representative to meet with you and the ACA Council face to face and as Government to Government entities.

Please let me know if you would like to hold this separate meeting. Leslie

**Leslie Grey**  
Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453

**From:** [Amanda Childs](#)  
**To:** [Jennifer Rideout](#)  
**Subject:** FW: Angoon Airport Government to Government  
**Date:** Friday, March 25, 2016 3:17:39 PM

---

**From:** Leslie.Grey@faa.gov [mailto:Leslie.Grey@faa.gov]  
**Sent:** Friday, March 25, 2016 3:07 PM  
**To:** alclhoward99@yahoo.com  
**Cc:** Amanda Childs; Kristi.Warden@faa.gov; Leslie.Grey@faa.gov  
**Subject:** RE: Angoon Airport Government to Government

Good Afternoon Albert,  
Hope you are well. We are looking forward to our trip to discuss the airport project next week in Angoon.

I just wanted you to know that I have tried to reach out and call the City office a few times this week to touch base regarding whether or not you would like to have a Government to Government meeting while FAA is in town next week. As an FYI, I rang the City number on week of March 28, 2016 on Wednesday, Thursday and Friday mornings. It rang many times with no roll over to voicemail. Best regards, Leslie

***Leslie Grey***

Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453

---

**From:** Grey, Leslie (FAA)  
**Sent:** Friday, March 18, 2016 1:38 PM  
**To:** Albert Howard ([alclhoward99@yahoo.com](mailto:alclhoward99@yahoo.com))  
**Cc:** Grey, Leslie (FAA); Amanda Childs ([achilds@swca.com](mailto:achilds@swca.com)); Warden, Kristi (FAA)  
**Subject:** Angoon Airport Government to Government  
**Importance:** High

Tribal President Howard,  
While we are in town, FAA would like to have a Government to Government meeting with the Angoon Community Association separate from the City meeting already scheduled.

It will be an uncommonly good opportunity to have Kristi Warden our Acting Division Manager / Deputy Division Manager be there in person as the FAA representative to meet with you and the ACA Council face to face and as Government to Government entities.

Please let me know if you would like to hold this separate meeting. Leslie

***Leslie Grey***

Environmental Program Manager  
FAA Airports, Alaskan Region  
907.271.5453





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF  
ECOSYSTEMS, TRIBAL  
AND PUBLIC AFFAIRS

April 11, 2016

Colonel Michael Brooks  
Alaska District Engineer  
U.S. Army Corps of Engineers  
P.O. Box 6898  
JBER, Alaska 99506-0898

Dear Colonel Brooks:

The U.S. Environmental Protection Agency has reviewed Public Notice No. POA-2009-1254 (Favorite Bay, Angoon Land-Based Airport), dated March 15, 2016, which describes a project proposed by Alaska Department of Transportation and Public Facilities to provide land-based air transportation to the community of Angoon, Alaska. The proposed project would discharge 517,200 cubic yards of fill material into approximately 112 acres of jurisdictional waters of the United States, consisting of bog forest, bog woodland, fen, and salt marsh wetlands. Based on our review of currently available information, and pursuant to Part IV, paragraph 3(a) of the 1992 CWA Section 404(q) Memorandum of Agreement between the EPA and Department of the Army, the EPA is hereby notifying the U.S. Army Corps of Engineers that this project may have substantial and unacceptable impacts on aquatic resources of national importance.

The EPA supports the development of a land-based airport for the community of Angoon to address health and safety concerns and transportation needs as outlined in the Federal Aviation Administration's Draft Environmental Impact Statement for the Angoon airport. The EPA and the Corps have been working together in good faith to analyze the existing application materials and to gather additional information necessary to make an informed permitting decision. I appreciate your commitment to continue to cooperate with the EPA as we work to gather and analyze this information.

The FAA is the federal approving agency and primary source of funding for the Angoon airport. Through the National Environmental Policy Act process, the FAA developed a DEIS to study the feasibility and location of a land-based airport to improve the availability of aviation travel for the community of Angoon. The DEIS evaluated various locations near Angoon that would meet FAA standards and provide similar levels of improved access to the community. In its DEIS, the FAA identified the "in town" airport alternative 12a as the preferred alternative. Along with other federal and state agencies, the EPA has participated in the development and review of the DEIS beginning in 2008 with the issuance of a scoping letter. In a November, 2013 comment letter to the FAA, the EPA supported the selection of the preferred alternative because it appeared to be the environmentally preferable alternative. The EPA again supported the FAA's preferred alternative in a March, 2015 comment letter and identified it as the likely least environmentally damaging practicable alternative (LEDPA) for purposes of Section 404 of the Clean Water Act.

However, as reflected by the project description in the public notice, ADOT selected a different alternative from the FAA's preferred alternative in the DEIS as their proposed alternative. This "out of town" alternative, known as 3a with access road 2, is further away from the community of Angoon. It proposes to place fill material for the footprint of the airport and associated 4.4 mile gravel road, which would require a 650' bridge and 27 culverts, and would cause the loss of 112 acres of relatively pristine, undisturbed wetlands. This proposed alternative appears to have one of the highest projected costs in addition to the greatest amount of impacts to wetlands of all alternatives studied in the DEIS. The applicant has not indicated why this proposed alternative is necessary when other alternatives are available that would cost less and have fewer impacts, as documented in the DEIS.

ADOT's proposed alternative is located within the Tongass National Forest, Admiralty Island National Monument, and Kootznoowoo Wilderness Area (Monument-Wilderness Area) which are managed by the U.S. Forest Service. The Alaska National Interest Lands Conservation Act (ANILCA) of 1980, Title XI requires the review of transportation and utility systems that would be located within conservation system units such as the Monument-Wilderness Area. Although the EPA's comments on the public notice are limited to the Clean Water Act Section 404(b)(1) Guidelines, the EPA notes that the preferred alternative in the DEIS is not on ANILCA lands and therefore would not be subject to that process.

The Guidelines direct that only the LEDPA may be permitted, so long as the LEDPA does not cause or contribute to significant degradation of waters of the United States. The EPA is concerned the proposed project is not the least environmentally damaging practicable alternative, but rather one of the most environmentally damaging of the alternatives studied in the DEIS. The direct and cumulative effects of the project may result in substantial and unacceptable impacts to tributaries and adjacent wetlands contributing to Chatham Strait and its adjacent waterbodies, an aquatic resource of national importance. There are less damaging practicable alternatives in light of the overall project purpose. The EPA supports the FAA's preferred alternative, which is likely the LEDPA, and which will provide the residents of and travelers to Angoon with necessary regional transportation. Further details on the EPA's position on this project are found in the attached enclosure.

In accordance with Part IV, paragraph (3)(b) of the Section 404(q) MOA, the EPA may provide further comments on this matter over the next 25 calendar days, or no later than May 6, 2016. I appreciate the attention that you and your staff have provided to this project, and Region 10 looks forward to discussing our concerns. Should you have any questions about this letter, please do not hesitate to contact me or have your staff contact Mark Douglas, at (907) 271-1217, or by email at [douglas.mark@epa.gov](mailto:douglas.mark@epa.gov).

Sincerely,



R. David Allnutt, Director  
Office of Ecosystems, Tribal, and Public Affairs

## **Enclosure for Public Notice POA-2009-1254**

Alaska Department of Transportation and Public Facilities (ADOT), the local sponsor and applicant, is proposing to build a land-based airport for the community of Angoon in southeast Alaska approximately 55 miles from Juneau. Federal Aviation Administration (FAA) has prepared a Draft Environmental Impact Statement (DEIS) and is the source of funding and approval for the project. ADOT would maintain and operate the airport and associated infrastructure including the proposed access road. The location of the proposed project is in the Tongass National Forest, Admiralty Island National Monument and Kootznoowoo Wilderness Area (Monument-Wilderness Area) which are managed by the United States Forest Service. The proposed project purpose and need is to provide land-based air transportation for the community of Angoon, as it currently relies on sea-plane and ferry transportation. The land-based airport would accommodate small, wheeled aircraft and would improve availability and reliability of aviation transportation service. EPA generally supports the development of a land-based airport for the community of Angoon for health and safety concerns in addition to improved transportation needs, as outlined in the DEIS.

In the development of the DEIS, FAA evaluated locations for the placement of the airport that met standards and provided a level of comparable performance criteria for improved aviation transportation. Alternatives 3a and 12a were carried forward, among others, in the DEIS with different access road configuration in the analysis. Alternative 3a is "out of town" and located within the Monument-Wilderness Area; whereas alternative 12a is "in town". The necessary access roads extending from current infrastructure range from 0.2 to 4.7 miles in length for the various alternatives. The access road for the "out of town" alternatives requires a bridge across Favorite Creek from 450' to 650' in length.

### **Potential Impacts**

In the public notice, the applicant has proposed "out of town" alternative 3a, which would directly impact 112 acres of waters of the United States to build the airport footprint and associated infrastructure in addition to a 4.4 mile gravel road requiring a 650' foot bridge crossing Favorite Creek and 27 culverts. Stream impacts are reported as 0.3 acres resulting from rerouting, placement of culverts, and fill. The proposed alternative appears to contain the most wetland impacts of the alternatives studied in the DEIS. The location of the road and airport footprint would impact **undisturbed and pristine wetlands** in the Favorite Bay watershed contributing to Chatham Strait. The project would impact 108 acres of bog forest, 2 acres of bog woodland and an acre each of fen and salt marsh. In addition to the direct loss of the wetlands as a result of fill, the resulting fragmentation of the wetland systems and complexes can cause loss of hydrologic inputs or outputs which will degrade wetland quality and may also result in adverse effects to otherwise undisturbed wetlands and habitat corridors through indirect and cumulative impacts. The other alternatives identified in the DEIS meet similar performance criteria improvements, cost less, and have fewer direct, indirect and cumulative impacts than the proposed project.

### **Alternatives Analysis and LEDPA**

The Guidelines require that no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge, that meets the project purpose, which has less adverse impacts on the aquatic ecosystem (40 C.F.R. § 230.10(a)). Additionally, as reference, the Guidelines



also include a presumption that if the activity associated with the proposed discharge into a special aquatic site is not water dependent, then practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise (40 C.F.R. § 230.10(a)(3)). The term “practicable” means capable of being done after taking into account consideration cost, existing technology, and logistics in light of the overall project purposes (40 C.F.R. § 230.3(q)). An alternative must be capable of achieving the basic project purpose to be deemed practicable. The basic purpose test does not identify which alternative best meets the project purpose, but rather, it is a question of which alternatives to the proposed project are also able to meet the overall purpose.

The applicant’s stated purpose in the public notice is “to provide land-based air transportation to the community of Angoon, Alaska.” In development of the DEIS, FAA went through an extensive alternatives evaluation process resulting in alternatives which would double the current availability of air travel to/from Angoon and meet or exceed the FAA standards for the type of aircraft using the proposed airport. Alternatives 3a and 12a are considered practical and the differences in performance criteria between the alternatives are relatively small. FAA has estimated the cost of the alternatives to range in cost from \$34-74 million.

In the DEIS, FAA identified “in town” alternative 12a with access 12a as the preferred alternative based on the evaluation of three criteria: cost, social and environmental effects, and Section 4(f) regulations. The Monument-Wilderness Area is subject to Section 4(f) of the Department of Transportation Act of 1966, as amended by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Public Law [PL] 109-59). This limits the use of designated resources or properties unless “there is no feasible and prudent alternative to avoid such effects and the action in question includes all possible planning to minimize harm to the property in question or the use of that property will have a *de minimis* impact on it.” In light of the three criteria; the preferred alternative is the most cost effective. It is approximately \$40 million less than the most expensive alternative and \$22 million less than the proposed “out of town” alternative 3a. While still resulting in environmental impacts, according to FAA, the preferred alternative 12a, has the fewest adverse social and environmental effects overall. Additionally, the proposed alternative 3a would result in direct physical use of the Monument-Wilderness Area, whereas the preferred alternative would result in *de minimis* impact to two Section 4(f) resources.

EPA issued two comment letters during the development of the DEIS in addition to a scoping letter in December 2008. In a November 2013 comment letter, EPA supported FAA’s selection of the “in town” preferred alternative as it appeared to be the environmentally preferable alternative despite the impacts to a stream system, subsistence access and other identified resources in the DEIS. EPA again supported FAA’s preferred alternative 12a in the March 2015 DEIS comment letter. EPA raised concerns that the preferred alternative, when compared to the other alternatives, required more vegetation removal and concentrated impact to a stream system. Generally, the preferred alternative compares favorably to the other alternatives in minimizing or avoiding impacts to nearly all resource categories and is likely the LEDPA. EPA’s letters are incorporated herein by reference. It should be noted that another alternative studied in the DEIS, alternative 4 also in the Monument-Wilderness Area and has fewer wetland impacts than FAA’s preferred alternative; however, it has more impacts to other aquatic resources. This alternative would result in more stream crossings and culverts, land disturbance, and addition of impervious surface among other considerations when compared to the preferred alternative.

Based on the information found in the DEIS and public notice, EPA believes that the proposed alternative may not be the LEDPA. The Guidelines state that only the LEDPA may be permitted. FAA's preferred alternative contains impacts to 78 acres of wetlands whereas the proposed alternative would impact 112 acres of wetlands, a 44% increase. The applicant has not provided a justification for the proposed alternative which has the most wetland impacts of all the alternatives analyzed in the DEIS.

#### **Avoidance and Minimization**

The Guidelines require that no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken that will minimize potential adverse impacts of the discharge on the aquatic ecosystem (40 C.F.R. § 230.10(d)). EPA maintains the proposed alternative may not be the LEDPA and a review of the DEIS leads us to believe that the other alternatives that were evaluated have fewer impacts. If ADOT decides to revise the application and propose another alternative, such as alternative 12a "in town", further steps should be taken to demonstrate an avoidance and minimization of impacts to aquatic resources while still meeting the overall project purpose. This could include additional alignment shifting; and minimizing the footprint of the airport including the size and location of the leasable lands. The DEIS does discuss the efforts to avoid and minimize impacts to waters of the United States, however, the information in the DEIS may not be sufficient to meet the requirements of the Guidelines. EPA welcomes the opportunity to review future documents and provide suggestions to further reduce the impact to waters of the United States.

#### **Mitigation**

Once all appropriate and practicable measures have been taken to avoid and minimize potential harm to the aquatic ecosystem, EPA suggests the Corps require compensatory mitigation to ensure that an activity which requires a Section 404 permit complies with the Guidelines (40 C.F.R. § 230.91(c)(2)). Any final mitigation plan associated with a Section 404 permit, should a permit be issued, must comply with the joint EPA-Corps Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (33 C.F.R. §§ 325 and 332; 40 C.F.R. § 230 Subpart J). The amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions and values.

For unavoidable impacts to waters of the United States, the applicant proposes compensatory mitigation consisting of "a variety of actions or activities to ensure the sufficient replacement of lost aquatic resource functions." This includes payment to mitigation banks or in-lieu fee program; permittee-responsible mitigation such as the removal of derelict boats in Favorite Bay, removal of mining tailings at Empire Mine in Hawk Inlet, or restoration of wetlands around Florence Lake; or a combination of payments and permittee-responsible mitigation. EPA recommends that the applicant develop a fully vetted compensatory wetland and stream mitigation package. This should include biological, chemical and physical success criteria of the stream channels and wetlands mitigation. Additionally, the mitigation package should include monitoring and an adaptive management plan containing corrective actions if the mitigation efforts are not meeting success criteria. If onsite mitigation is not practicable to fully replace the functions and values of the impacts, alternative site mitigation should be considered. EPA welcomes the opportunity to further comment on the anticipated mitigation package developed in compliance with the 2008 Final Compensatory Mitigation Rule regulations.

## Jennifer Rideout

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**From:** Angoon Airport EIS <maillist@angoonairporteis.com>  
**Sent:** Tuesday, April 12, 2016 3:21 PM  
**To:** Angoon Airport EIS  
**Subject:** Angoon Airport EIS News & Announcements April 2016



### Angoon Airport EIS News, Announcements, & Updates (04/12/2016)

(Test announcement, please review)

FAA is pleased to announce that we have posted the April Project Update to our Angoon Airport project website. We invite you to visit the site at [www.angoonairporteis.com](http://www.angoonairporteis.com). You can view the update by clicking on the link below:

[April Project Update](#)

Please visit our web page at [www.angoonairporteis.com](http://www.angoonairporteis.com) and our [Angoon Airport EIS Facebook Page](#) for project information and updates. Remember to "like" the page!

As always, please feel free to call me at (907) 271-5453 or e-mail me at [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov) with your concerns, questions, or comments.

Sincerely,  
Leslie

Angoon Airport EIS Project Manager



**Leslie Grey**, Federal Aviation Administration  
Alaskan Region Airports Division  
222 West 7th Avenue, Box #14  
Anchorage, Alaska 99513-7587

**Phone.** 907-271-5453 **Fax.** 907-271-2851  
**Email.** [Leslie.Grey@faa.gov](mailto:Leslie.Grey@faa.gov)

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# CITY OF ANGOON • PHONE (907) 788-3653

P.O. BOX 189 • FAX (907) 788-3821  
ANGOON, ALASKA 99820

## CITY OF ANGOON RESOLUTION NO. 16-08.

### A RESOLUTION OF SUPPORT FOR THE ANGOON AIRPORT 12a

**WHEREAS,** The City of Angoon local government for the Community of Angoon, Alaska and the Angoon City Council duly elected by the Community of Angoon supports Angoon Airport 12a, and

**WHEREAS,** The City of Angoon has an opportunity to show its support by a majority vote by the Angoon City Council on April 22, 2016; and

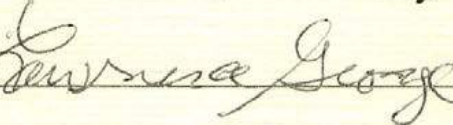
**WHEREAS,** The City of Angoon City Council is in support of Angoon Airport 12a;

**WHEREAS,** The City of Angoon has has public meetings and reviewed the community's needs; and

**NOW, THEREFORE BE IT RESOLVED THAT:** The City Council by this resolution hereby supports the Angoon Airport 12a site for the construction of airstrip.

PASSED AND APPROVED by duly constituted quorum of the city council this  
22 day of April, 2016

SIGNED:  Mayor – Albert H. Howard

ATTEST:  City Clerk – Lawrence George

|                |     |               |     |
|----------------|-----|---------------|-----|
| Edward Jack    | Yes | Jesse Daniels | Yes |
| Albert Howard  | Yes | Pauline Jim   |     |
| Randall Gamble | Yes | Harriet Silva | Yes |
| Kevin Frank    | Yes |               |     |





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF THE REGIONAL  
ADMINISTRATOR

MAY - 5 2016

Colonel Michael Brooks  
Alaska District Engineer  
U.S. Army Corps of Engineers  
P.O. Box 6898  
JBER, Alaska 99506-0898

Dear Colonel Brooks:

This letter is in further reference to Public Notice No. POA-2009-1254, for the permit application by the Alaska Department of Transportation and Public Facilities to provide land-based air transportation to the community of Angoon, Alaska. The proposed project will adversely impact 112 acres of waters of the United States, including wetlands, streams and salt marsh. The U.S. Environmental Protection Agency sent the U.S. Department of the Army a letter regarding this public notice on April 11, 2016 that this project may have substantial and unacceptable impacts on aquatic resources of national importance. The EPA's position in this case is based on site-specific information presented in the Draft Environmental Impact Statement and the Public Notice. In developing the DEIS, the Federal Aviation Administration identified the "in town" airport alternative 12a as its preferred alternative. Likewise, the City of Angoon recently passed a resolution in support of this alternative. The EPA has supported the FAA's preferred alternative in comment letters and identified it as the likely least environmentally damaging practicable alternative.

As described in the Public Notice, ADOT has chosen a different alternative from the FAA's preferred alternative as their proposed project. This "out of town" alternative, known as Alternative 3a with access road 2, is further away from the community of Angoon and includes a 4.4 mile gravel access road requiring 27 culverts and a 650-foot bridge leading to the airport location. This proposed alternative would result in the loss of 112 acres of relatively pristine, undisturbed wetlands. This proposed alternative also appears to have one of the highest projected costs in addition to the greatest amount of impacts to wetlands of all alternatives studied in the DEIS. The applicant has not indicated why this proposed alternative is necessary when other alternatives are available that would have fewer impacts, as documented in the DEIS. The Clean Water Act Section 404(b)(1) Guidelines (Guidelines) direct that only the LEDPA may be permitted, so long as the LEDPA does not cause or contribute to significant degradation of waters of the United States, or violate state water quality or other standards. The EPA is concerned the proposed project is not the least environmentally damaging practicable alternative, but rather one of the most environmentally damaging of the alternatives studied in the DEIS. There are less damaging practicable alternatives in light of the overall project purpose and the EPA supports the FAA's preferred alternative, which is likely the LEDPA.

The EPA has received no new information regarding this project since the EPA's April 11<sup>th</sup> letter, therefore the EPA maintains our objections from that letter. Pursuant to paragraph IV(3)(b) of the August 11, 1992 Memorandum of Agreement between the EPA and the DA under Clean Water Act Section 404(q), the EPA concludes that that the proposed project will have substantial and unacceptable adverse effects on aquatic resources of national importance, specifically Chatham Strait and its



contributing waterbodies. The enclosure provides the basis for our finding that Chatham Strait and its supporting waters are an ARNI.

The EPA supports the development of a land-based airport for the community of Angoon to address health and safety concerns and transportation needs as outlined in the FAA's DEIS for the Angoon airport, and we hope that the ADOT will consider moving forward with the FAA's preferred alternative, which has also been endorsed by the City of Angoon in its Resolution 16-08, dated April 22, 2016. Should the Corps decide to issue the permit, I request that you notify me pursuant to paragraph IV(3)(c) of the MOA.

Thank you for the opportunity to review this project. The EPA greatly appreciates the attention that you and your staff have provided to this project. Should you have any questions about this letter, please do not hesitate to contact me or have your staff contact Mark Douglas, at (907) 271-1217, or by email at [douglas.mark@epa.gov](mailto:douglas.mark@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis J. McLerran". The signature is fluid and cursive, with a large initial "D" and "M".

Dennis J. McLerran  
Regional Administrator

Enclosure

cc: Mr. Steve Brockman, Deputy Field Supervisor  
U.S. Fish and Wildlife Service

Ms. Linda Shaw, Wildlife Biologist  
National Oceanic and Atmospheric Administration

Mr. Randal Vigil, Project Manager  
U.S. Army Corps of Engineers

## **Chatham Strait and Contributing Waters are an Aquatic Resource of National Importance**

Chatham Strait is a waterbody in the southeastern region of Alaska approximately 150 miles in length extending from the confluence of Lynn Canal and Icy Strait near Juneau continuing out to the open ocean ranging in width of 3-10 miles. Chatham Strait is a part of Alaska's Inside Passage making it a major route for shipping, cruise ships, and ferries. The strait is bordered by Chichagof and Baranof Islands to its west and from Admiralty Island and Kuiu Island on its east. The islands adjacent to the strait are a part of the Tongass National Forest which is the largest, intact coastal rainforest in America. The watersheds draining into Chatham Strait are largely un-impacted, owing in part to the remoteness and topography which has generally hindered the easy development of land-based transportation routes. The rivers and streams which drain into Chatham Strait are relatively pristine, as are the waters of the strait, surrounding wetlands and shallow waters, and support a number of significant fisheries. In addition, the waters of Chatham Strait also support populations of marine mammals, including Steller sea lions and the endangered humpback whale. The surrounding watersheds and land forms support significant wildlife, including brown bear and large numbers of nesting bald eagles.

### **Attributes of watersheds contributing to Chatham Strait**

Admiralty Island is the seventh largest island in the U.S. at approximately 1,680 square miles, and abuts the strait for roughly half of the length of the waterway. Admiralty Island is a designated National Monument in addition to 90% of the island comprising the Kootznoowoo Wilderness Area. The land use of the Angoon area as a whole, including the DEIS study area, includes subsistence harvest activities, commercially guided hunting and fishing, non-guided sport hunting and other non-motorized recreational activities.

Favorite Creek, which is proposed to be crossed by a 650 foot bridge for the project, has a 21 square mile watershed containing USFS Class I, II and III streams which either contain anadromous fish, resident fish populations, or directly influences downstream fish-bearing reaches. The lower 0.7 mile of the creek is within the proposed bridge area. Fish sampling verified six species of salmonids with coho being the most predominant. The unnamed streams in the area are reported as relatively small but most appeared suitable for seasonal coho habitat. Generally, both anadromous and resident salmonids were observed in the freshwater habitats throughout the study area. These small streams are in mature forests with closed canopy, which limits thermal accumulation and allows for year-round fish use when supported by flow levels. There are considerable amounts of large woody debris in the riparian buffer, which provides for instream pool-forming features. Impacts to the streams and riparian areas would potentially remove these functions as well as alter the hydrologic characteristics of the streams, thus reducing suitable habitat for salmonid rearing. Introduction of culverts and other stream alteration to these largely undisturbed areas could impact the salmon habitat in Favorite Bay and the adjacent Chatham Strait.

The wetlands within the study area are primarily bog forest and bog woodland in addition to fen and salt marsh. The wetlands in the study area provide a range of functions in the watershed and

receiving waters. The DEIS includes a wetland technical report describing the functions that were qualitatively examined, including ground water recharge, sediment retention, nutrient export, fish habitat, and riparian support among others. The functional scores of the wetlands, as reported, were wide ranging by type of wetland and the location within the watershed.

While these are specific to this project and the study area, the characteristics are generally representative of the condition and uniqueness of the contributing watersheds connected to Chatham Strait. The Wilderness Area goal of retaining untrammelled qualities and having no changes to any natural ecological systems supports the wildlife discussed below, in addition to the sought-after tourist experience in Chatham Strait and in Alaska.

### **Fish and Fisheries**

As documented in the DEIS and the Appendices, all five species of Pacific salmon are caught in Chatham Strait and in the vicinity of Angoon. Salmon are fished commercially, recreationally, and also for subsistence in the straight and contributing waterbodies. Lodges in the Angoon area provide charter fishing services for sport fishing in the area. Additional harvest species include Dolly Varden, cutthroat trout, smelt, halibut, rockfish, and lingcod. As discussed above, the contributing watersheds assist in maintaining the integrity of the fisheries, which in turn support the marine mammals utilizing Chatham Strait and wildlife on the islands surrounding it.

### **Marine mammals**

The Stellar Sea lion, *Eumetopis jubatus*, has been identified as comprising two distinct population segments in the northern Pacific. These are the eastern population segment and the Western Population Segment. The eastern stock of Stellar sea lion was previously listed under the Endangered Species Act as threatened and delisted in 2013 as population studies indicate are stable. The Stellar sea lions use a major haulout in the vicinity of Angoon called Lull Point across Chatham Strait on Baranof Island. Stellar sea lions are also observed in Favorite Bay. Additional haul outs are found the length of Chatham Strait and at the southern point as it meets the Gulf of Alaska, a rookery is found at Hazy Island (NMFS 2013).

The humpback whale, *Megaptera novaeangliae*, is considered endangered throughout its range. Pacific populations typically winter in the Hawaiian islands, where calving occurs, and migrate to the north Pacific for the summer months, where they spend their time building up fat reserves by filter-feeding on krill and small fish. Chatham Strait provides such habitat for humpback whales. Additional marine mammals protected under the Marine Mammal Protection Act that were observed in Favorite Bay or nearby Angoon in Chatham Strait in the development of the DEIS include harbor seals, harbor porpoises, and Dall's porpoises.

### **Wildlife**

In Tlingit, "Kootznoowoo" translates to "Fortress of the Bears." Admiralty Island has an estimated population of 1,500 brown bears, *Urus arctos*, which is more than all the lower 48 states combined. The brown bear density is roughly one per square mile resulting in one of the most densely populated areas in the world. Admiralty Island has one of the highest concentration

of nesting bald eagles (ADFG 2016) with an overall estimated population of approximately 2,500 (NPS 2016). Field survey results show there are several nesting sites within the study area. Sitka black-tailed deer are also found on the island. The land surrounding the Strait is able to support the high population density of the brown bears and eagles because the waters of the Strait, supported by the intact habitat of the contributing watersheds, provide the essential food source of salmon on which these populations rely.

### **Recreational Resources**

Chatham Strait, which forms part of the Inside Passage and borders Tongass National Forest, is significant in supporting Alaska's tourist industry. In recent studies, it is estimated half of the tourists visiting Alaska arrive via cruises (RDCA 2016). The exceptional aquatic resources of Chatham Strait and its watersheds contribute significantly to this total and help to provide unique and significant recreational opportunities, in addition to their support for fish and fisheries as well as wildlife.

The scenic beauty, exceptional fish and wildlife resources, and largely undisturbed nature of Chatham Strait and the contributing watersheds have made this portion of the Inside Passage a desirable destination for wildlife viewing and potentially the activity which generates the highest amount of recreational revenue—cruise ships. In an article analyzing the tourist industry in southeast Alaska, John Sisk wrote:

*Interviews with visitors to Southeast consistently reveal that they come to see, and value, three top attributes: the Inside Passage itself, magnificent scenery, and abundant marine and terrestrial wildlife. These three experiences derive directly from the Tongass National Forest and Glacier Bay National Park, and the marine waters that ebb and flow among the islands of the Alexander Archipelago. These federal lands and waters together create the essential asset, the foundation, for the tourism industry of Southeast. (Sisk, 2005)*

### **Conclusions**

The aquatic resources in the Chatham Strait and its contributing watersheds in southeast Alaska are exceptional. Chatham Strait helps to support, and provide habitat critical to, a number of threatened or endangered species of marine mammals. It supports significant runs of all five species of Pacific salmon, four of which are commercially harvested, as well as providing subsistence and recreational fishing for all of the salmon species as well as other salmonid and non-salmonid fish species. The intact ecosystems which form this watershed support significant numbers of large mammals, some of which are much less common or absent in the lower 48 states. These unique characteristics contribute to the overall importance of Chatham Strait. Finally, the significant recreational opportunities it supports provide an important sector to the Alaskan economy. The EPA therefore concludes that, based on any one of these criteria, Chatham Strait and its supporting waters are an aquatic resource of national importance.

### **Literature Cited**

Alaska Department of Fish and Game. 2016.

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National Marine Fisheries Service. 2013. Status Review of the Eastern Distinct Population Segment of Steller Sea Lion (*Eumetopias jubatus*). 144pp + Appendices. Protected Resources Division, Alaska Region, National Marine Fisheries Service, 709 West 9<sup>th</sup> St, Juneau, Alaska 99802.

National Park Service. Admiralty Island Province. 2016

<https://www.nps.gov/glba/learn/nature/admiralty-island-province.htm>

Sisk, J. 2005. The Southeastern Alaska Tourism Industry: Historical Overview and Current Status *in* Southeast Alaska Conservation Assessment - Chapter 9.8, pp. 1-6.

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Resource Development Council for Alaska, Inc. 2016. <http://www.akrde.org/tourism>

USDA, Forest Service, Tongass National Forest 2016.

<http://www.fs.usda.gov/detail/tongass/recreation/natureviewing/?cid=stelprdb5401876>



IN REPLY REFER TO  
FWS/AFES

# United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE  
1011 East Tudor Road  
Anchorage, Alaska 99503-6199



**MAY 06 2016**

Colonel Michael Brooks  
U.S. Army Corps of Engineers, Alaska District  
P.O. Box 6898  
Joint Base Elmendorf Richardson, Alaska 99506-0898

Re: POA-2009-1254

Dear Colonel Brooks:

After careful review of the referenced Public Notice dated March 15, 2016, and other available information, it is the Department of the Interior's opinion that issuance of the requested permit will have a substantial and unacceptable impact on aquatic resources of national importance. A description of the affected resources of concern and our recommendations to protect them are provided in our enclosed comment letter, dated April 14, 2016.

The U.S. Fish and Wildlife Service (Service) is prepared to work with your office and the applicant, Alaska Department of Transportation and Public Facilities, in an effort to reach a mutually compatible resolution on the proposed project. Due to the value of the resources involved, the Service must reserve the option of negotiation to resolve outstanding issues, and/or of elevating this project to the Washington level for further review. This reservation complies with the requirements of Part IV, Section 3(b) of the Memorandum of Agreement between the Department of the Interior and the Department of the Army, dated December 21, 1992, regarding Section 404(q) of the Clean Water Act.

If you have specific questions about our concerns or wish to discuss project modification or permit conditions, please contact Dr. Socheata Lor, Anchorage Fish and Wildlife Field Office Supervisor, at (907) 271-2787 or socheata\_lor@fws.gov.

Sincerely,

Acting Regional Director

Enclosure

cc: Randal Vigil







# United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE  
Anchorage Fish and Wildlife Field Office  
4700 BLM Road  
Anchorage, Alaska 99507



IN REPLY REFER TO:  
FWS/APFS/AFWFO

April 14, 2016

Colonel Michael Brooks  
U.S. Army Corps of Engineers, Alaska District  
Attention: Regulatory Branch, Randal Vigil  
Juneau Field Office  
Post Office Box 22270  
Juneau, Alaska 99802-2270

Subject: POA-2009-1254, Angoon Community Airport and Access Road, Angoon, Alaska

Dear Colonel Brooks:

We have reviewed the Public Notice for Department of the Army Permit POA-2009-1254, dated March 15, 2016. The applicant, the Alaska Department of Transportation and Public Facilities (ADOT&PF), proposes to discharge approximately 517,200 cubic yards of sand, gravel, and rock fill into approximately 112 acres of waters of the United States to construct a land-based public use airport and associated access road for the community of Angoon, Alaska. The proposed project would be located within the Tongass National Forest, Admiralty Island National Monument, and Kootznoowoo Wilderness Area managed by the U.S. Forest Service. The Federal Aviation Administration (FAA) would provide construction funding for any approved airport, and has developed a Draft Environmental Impact Statement (DEIS) dated January 2015 for a proposed Angoon Airport. The FAA's Preferred Alternative identified in the DEIS differs from ADOT&PF's Preferred Alternative as detailed in the public notice.

Our comments are submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended: 16 U.S.C. 661 et seq.) and constitute the report of the Department of the Interior. Species potentially affected by the proposed project, for which the Service has trust responsibility, include migratory birds (Migratory Bird Treaty Act; 16 U.S.C. 703-712), bald eagles (Bald and Golden Eagle Protection Act; 16 U.S.C. 668-668c), and anadromous fish (Anadromous Fish Conservation Act; 16 U.S.C. 757a-757g). We also provide comments on State-managed species (e.g., brown bear) under the authority of the Fish and Wildlife Coordination Act. These comments are also for your use in determination of Clean Water Act Section 404(b)(1) guidelines compliance (40 CFR 230), and in the public interest review (33 CFR 320.4) relating to protection of fish and wildlife resources.

The Alaska National Interest Lands Conservation Act of 1980 (16 USC 410hh-3233, 43 USC 1602-1784) Title XI requires special review of transportation and utility systems that would be located within conservation system units such as the Kootznoowoo Wilderness Area. This nationally-recognized wilderness area was set aside to protect habitat for brown bears and salmon, and wilderness characteristics. Many species of migratory birds that nest in the dense forests and forested wetlands of the proposed project site and associated 4.4-mile access road would be impacted through loss of nesting and feeding habitat. The proposed road would also be within a few feet of several bald eagle nests. Because of its proximity to the Favorite Creek estuary, the proposed access road would reduce habitat security (increase disturbance) for brown bears, geese, various ducks, and other species using the salt marsh and estuarine habitats at the head of Favorite Bay. Anadromous pink, chum, and coho salmon; Dolly Varden char; and cutthroat trout spawn and rear in nine streams that would be impacted by the access road. The proposed runway could affect an additional anadromous fish stream and one resident fish stream.

We believe that the applicant has other practicable alternatives, including the FAA's Preferred Alternative, that would provide land-based air transportation to the community of Angoon while minimizing wetland fill and adverse impacts to the aquatic ecosystem and species that depend on these habitats. The FAA alternative would require only a comparatively short 0.5-mile access road crossing one resident fish stream, and the runway would affect one additional tributary. The FAA alternative would minimize impacts to migratory birds by avoiding construction of over 4 miles of road, and would avoid the sensitive habitats of the Favorite Creek estuary. This alternative would also avoid an incursion into the Kootznoowoo Wilderness Area.

We believe the project as proposed will have significant adverse impacts on important fish, wildlife, and habitat resources. We are advising the U.S. Army Corps of Engineers in accordance with the procedural requirements of the 1992 404(q) Memorandum of Agreement (MOA), Part IV.3(a), that the proposed work may result in substantial and unacceptable impacts to aquatic resources of national importance. Consequently, we recommend that a permit not be issued for the project as currently proposed. We recommend the FAA's Preferred Alternative, as described in the DEIS, as a less-damaging, practicable alternative. If you intend not to accept this recommendation, please advise us before permit issuance in accordance with the MOA of 1992 between our Departments.

If you have any questions or need additional information, please contact Steve Brockman at (907) 780-1181 or [steve\\_brockmann@fws.gov](mailto:steve_brockmann@fws.gov).

Sincerely,

*Socheata Lor*

Socheata Lor, Ph.D  
Field Supervisor

Cc: Jackie Timothy, ADF&G  
Linda Shaw, NOAA  
Mark Douglas, EPA

# ANGOON AIRPORT

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Wetland and Stream Mitigation

# Alternative 12a Wetland Impact

- 78 ac Permanent Fill
- 99 ac Altered (vegetation removal)
- Realign Stream 12a

# Measures to Avoid Impacts

- ❑ Selecting Alt 12 as the Preferred Alternative (LEDPA)
- ❑ Environmental Commitments
  - ❑ Avoid vegetation clearing in forest or woodland habitats during the migratory bird and raptor breeding season (April 15 through July 15).
  - ❑ Avoidance buffers around bald eagle nests would be established.
  - ❑ Maintain a 600-foot no-construction buffer around active Queen Charlotte goshawk nests (March 15 to August 15)
  - ❑ Complying with other timing windows (ADF&G, NMFS, USFWS)



# Measures to Minimize

- ❑ Minimize fill footprint.
- ❑ Develop an airport wildlife hazard management plan (WHMP)
- ❑ Use pilot-activated runway lights.
- ❑ Maintain natural vegetation wherever possible.
- ❑ All fish-bearing stream re-routes would be made fish-passable per MOA with ADF&G.
- ❑ Materials sources used would be free of acid rock drainage potential
- ❑ Develop and implement Erosion and Sediment Control Plan
- ❑ Revegetate, rehabilitate, or restore temporary work sites
- ❑ Cultural resource monitors would be used during construction
- ❑ Invasive species control and management
- ❑ Employ other standard BMPs

# Minimization Efforts □ Alt 12a

- The access road to Alternative 12a would be designed to avoid the headwaters of Stream 12a.
- Stream 12a would be re-aligned to avoid being crossed with culverts

# Mitigation Objectives & Criteria

- ❑ Complies with the Final Compensatory Mitigation Rules
- ❑ Realigning Stream 12a to maintain fish passage and avoid being put into a culvert
- ❑ Replacement of lost wetland functions and values
- ❑ Benefit the community of Angoon
- ❑ Mitigation would be in close proximity to where the impacts would occur, ideally on Admiralty Island

# Mitigation Projects Considered

- ❑ Removal of Abandoned Boats - Favorite Bay
- ❑ Removal of Boat Batteries - Killisnoo Island
- ❑ Empire Mine Reclamation and Anadromous Stream Enhancement
- ❑ East Ohmer and Lump Creek Anadromous Fish and Floodplain/Riparian Restoration
- ❑ South Fork Saginaw and Shorty Creeks Anadromous Fish and Floodplain/Riparian Restoration
- ❑ Creek Flow Maintenance and Anadromous Fish Habitat Enhancement
- ❑ Cube Creek Wilderness Protection and Enhancement Project
- ❑ Chuck River Wilderness Protection and Enhancement Project
- ❑ Purchase Mitigation Bank Credits or Make In-Lieu Payment

# Mitigation Plan

- Provide the U.S. Forest Service with adequate funding to acquire an equal number of acres of wetlands or waters of the U.S. and associated buffer that would be impacted by the project to be incorporated into the Tongass National Forest
- Realigning Stream 12a around the airport to avoid use of culverts, prevent aircraft and wildlife hazard, and allow for fish passage
- Provide □60,000 toward the removal of abandoned boats in Favorite Bay

# Site Protection Instrument

- The lands acquired shall be managed for the purposes of preserving streams, creeks, wetlands, and their buffers to the extent consistent with laws, rules, and regulations applicable to the administration and management of National Forest System lands.
- The land acquired would not be utilized again as mitigation for any future Department of Army permit.

# Baseline Environmental Conditions

- The acquired lands would consist of previously impacted wetlands or waters of the U.S. in need of restoration or enhancement.
- After the lands are acquired, the U.S. Forest Service would evaluate and assess the restoration needs and develop a plan for restoration and habitat enhancement.



# Determination of Mitigation Credits

- ❑ Mitigation would be located adjacent to Wilderness or Monument
- ❑ Conservation Land Use Agreement
- ❑ At least a 1:1 ratio to achieve restoration of hydrology and enhancement of degraded wetlands or waters of the U.S.

# 404 Permit Application

- Mitigation work plan
- Ecological performance standards
- Monitoring requirements
- Maintenance and long-term management plan



DEPARTMENT OF THE ARMY  
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
REGULATORY DIVISION  
P.O. BOX 6898  
JBER, AK 99506-0898

JUN 17 2016

Regulatory Division  
POA-2009-1254

Southcoast Division Director  
Alaska Department of Transportation  
and Public Facilities  
Attention: Mr. Michael J. Coffey  
Post Office Box 112506  
Juneau, Alaska 99811

Dear Mr. Coffey:

This is in regard to your January 9, 2015, Alaska National Interest Lands Conservation Act, Title XI/Section 404 Clean Water Act (CWA) application for the proposed construction of a land-based public use airport to serve the community of Angoon, Alaska. The proposed project would involve the placement of fill material for the footprint of the airport and associated 4.4 mile gravel road, which would require a 650 feet long bridge and 27 culverts, and cause the permanent loss of 112 acres of the United States (U.S.), including wetlands, which are located in the Federally designated Admiralty Island National Monument, Kootznoowoo Wilderness.

The proposed project is located within Sections 33 and 34, T. 50 S., R. 68 E., and Sections 4, 5, 8, 9, 10, 15, and 16, T. 51 S., R. 68 E., Copper River Meridian; USGS Quad Map Sitka B-2; Latitude 57.475064° N., Longitude 134.502115° W.; Tongass National Forest, near Angoon, Alaska.

Section 404 permits are only issued for projects that clearly demonstrate compliance with the CWA, Section 404(b) (1) Guidelines (Guidelines). The Guidelines state that no discharge of dredged or fill material can be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences. In those cases where work is proposed in a "special aquatic site", (such as wetlands, eelgrass beds, or mudflats), practicable alternatives are presumed to exist unless clearly demonstrated otherwise by the applicant.

An alternative is considered practicable if it is available and capable of being accomplished after taking into consideration costs, existing technology, and logistics in light of the overall project purpose. The least environmentally damaging practicable alternative (LEDPA) may include construction in uplands, reducing the size of the proposal to the minimum discharge necessary for the project, or the inclusion of logistic and operational controls.

The information provided in the Federal Aviation Administration's (FAA), Draft Environmental Impact Statement (DEIS) prepared for the proposal, identifies alternatives with varying degrees of impacts. ADOT's proposed action, Alternative Airport 3a with Access 2, would permanently impact 112 acres of relatively pristine, undisturbed waters of the U.S., primarily wetlands which are located within the Kootznoowoo Wilderness. The proposed action has the greatest amount of impacts to special aquatic sites and one of the highest projected costs of all alternatives studied in the DEIS. The ADOT has not clearly demonstrated why the proposed alternative is the LEDPA when other less damaging practicable alternatives are available. Therefore, the Corps has determined that the project, as currently proposed in your application, does not satisfy the requirements of the Guidelines and is not the LEDPA.

The Kootznoowoo Wilderness was designated by Congress for the purposes of recreational, scenic, scientific, educational, conservation and historical use as described in the section 4(b) of the Wilderness Act. The discharge of dredged or fill material into the Kootznoowoo wilderness would modify its aesthetic, educational, historical, recreational and/or scientific qualities thereby reducing or eliminating the uses for which the wilderness area has been set aside and managed. The Corps of Engineers has received letters of objection to the proposed project from the Environmental Protection Agency (EPA) and the US Fish and Wildlife Service (USFWS) and have determined the proposal will have substantial and unacceptable adverse effects on aquatic resources of national importance.

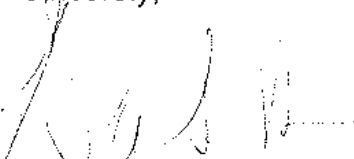
The FAA preferred alternative Airport 12a with Access 12a would permanently impact 78 acres of primarily bog forest and bog woodland wetlands outside the Kootznoowoo wilderness boundary. This alternative represents less impact to aquatic resources and public interest values. In comparison, this alternative would be less damaging to the aquatic environment and would have less adverse impact on aquatic ecosystems as required by the Guidelines.

My staff will be recommending that the permit be denied. I bring this to your attention to allow you the opportunity to modify your proposed action to reflect an alternative that would have less impact on aquatic resources and meet your project purpose or to add to our record additional information you feel is relevant to our review process.

Further evaluation of your application will be held in abeyance for 30 days pending receipt of your response. Failure to respond within the 30 days will result in the Corps completing its application review with the information available, which may result in an unfavorable permit decision.

Please contact Randal Vigil via email at [Randal.P.Vigil@usace.army.mil](mailto:Randal.P.Vigil@usace.army.mil), by mail at the address above, by phone at (907) 790-4491, if you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "David S. Hobbie". The signature is written in a cursive style with a horizontal line at the end.

David S. Hobbie  
Chief, Regulatory Division

CF:

verne.skagerberg@alaska.gov

john.barnett@alaska.gov

Leslie.Grey@faa.gov

steve\_brockmann@fws.gov

douglas.mark@epa.gov

**From:** [Barnett, John C \(DOT\)](#)  
**To:** [Brockmann, Steve](#)  
**Cc:** [Timothy, Jackie L \(DFG\)](#); [Legere, Nicole M \(DFG\)](#); [Leslie.Grey@faa.gov](#); [Amanda Childs; SCunningham@esassoc.com](#); [Skagerberg, Verne R \(DOT\)](#); [Brown, James L \(DOT\)](#)  
**Subject:** RE: Angoon Airport Stream 10 Realignment  
**Date:** Thursday, August 04, 2016 3:33:04 PM

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Thanks Steve,

I agree with your comments and I will work to coordinate our design efforts with both you and Jackie to address your concerns. DOT&PF will commit to insuring this element of the project be a collaborative effort between our respective agencies.

Thanks!

~~~~~  
John C. Barnett
Design Group Environmental Lead
Engineering Assistant III
DOT&PF, Southcoast Region
6860 Glacier Hwy.
P.O. Box 112506
Juneau, Alaska USA 99811-2506
Phone (907) 465-4504

From: Brockmann, Steve [mailto:steve_brockmann@fws.gov]
Sent: Thursday, August 04, 2016 2:12 PM
To: Barnett, John C (DOT)
Cc: Timothy, Jackie L (DFG); Legere, Nicole M (DFG); Leslie.Grey@faa.gov; achilds@swca.com; SCunningham@esassoc.com; Skagerberg, Verne R (DOT); Brown, James L (DOT)
Subject: Re: Angoon Airport Stream 10 Realignment

John,

I agree that using a bottomless arch culvert under the runway is likely to cause less disruption to the stream than routing the stream around the end of the runway.

Jackie makes some good points about maintenance of the stream's physical and chemical characteristics over the long term.

I would like to see the channel that would divert flow from the north fork into the south fork be constructed in a way that re-creates and maintains habitat similar to what is currently available in the reach that would be abandoned.

The south fork's channel is likely to adjust substantially once its flows are approximately doubled. Any envisioned infrastructure such as roads that would be constructed near what is now the south fork channel should take this into consideration.

Steve Brockmann

On Thu, Aug 4, 2016 at 9:57 AM, Barnett, John C (DOT) <john.barnett@alaska.gov> wrote:
Thanks Jackie – good comment.

I will work with you and Nichole to develop appropriate measures to protect the existing riparian habitat and general health of the stream. Once we have a preliminary design I will contact you to develop the necessary long-term strategies as well as any recommended construction BMP's.

Thanks again!

~~~~~

**John C. Barnett**  
Design Group Environmental Lead  
Engineering Assistant III  
DOT&PF, Southcoast Region  
6860 Glacier Hwy.  
P.O. Box 112506  
Juneau, Alaska USA 99811-2506  
Phone (907) 465-4504

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**From:** Timothy, Jackie L (DFG)  
**Sent:** Thursday, August 04, 2016 9:47 AM  
**To:** Barnett, John C (DOT); [Steve Brockmann@fws.gov](mailto:Steve_Brockmann@fws.gov)  
**Cc:** Legere, Nicole M (DFG)  
**Subject:** RE: Angoon Airport Stream 10 Realignment

Hi John –

As we discussed yesterday, we can accept this solution. However, as we also discussed, we will need to understand how ADOT&PF proposes to maintain the stream throughout time. As an example, none of the commitments made on the Haines airport in the late 80s have persisted over time, so a solution to prevent that scenario from happening in Angoon needs to accompany the drawings. Additionally, if FAA regulations require the stream be brushed for line of sight and preventing birds and mammals in close proximity to the runway, then you need to develop a brushing strategy that meets FAA guidelines while maintaining in-stream wood, bank stability, channel morphology, water temperatures, stream flow, water quality, adequate nutrient cycling, food sources, clean spawning gravels and sunlight.

Thanks. . .Jackie

---

**From:** Barnett, John C (DOT)  
**Sent:** Thursday, August 04, 2016 8:36 AM  
**To:** [Steve Brockmann@fws.gov](mailto:Steve_Brockmann@fws.gov); Timothy, Jackie L (DFG)  
**Subject:** Angoon Airport Stream 10 Realignment  
**Importance:** High

Good Morning Steve and Jackie,

This email summarizes our respective discussions yesterday regarding the realignment of Stream 10 at the Angoon Airport Project.

To minimize and avoid additional impacts to the surrounding wetlands and upland habitat in the vicinity of the Angoon Airport footprint, DOT&PF proposes to route the north tributary of Stream 10 around the proposed apron to a site upstream of the existing confluence with the south tributary. Stream 10 will then remain within its existing streambed and pass beneath the Airport RSA/Runway via a bottomless arch to protect the natural substrate. This proposal is illustrated on the attached drawing as a yellow line (ADOT&PF Proposed Option D). The bottomless arch would be constructed so that the footings would be installed at no less than 100% bank full width.

If this proposal is satisfactory, please respond with your concurrence or comments via email.

Thanks!

~~~~~

John C. Barnett

Design Group Environmental Lead
Engineering Assistant III
DOT&PF, Southcoast Region
6860 Glacier Hwy.
P.O. Box 112506
Juneau, Alaska USA 99811-2506
Phone (907) 465-4504

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Steve Brockmann
Southeast Alaska Coordinator
Juneau Field Office
U.S. Fish and Wildlife Service
3000 Vintage Blvd, Suite 201
Juneau, AK 99801

Office (907) 780-1181
cell (907) 723-7839
Fax (907) 586-7099

From: [Barnett, John C \(DOT\)](#)
To: [Timothy, Jackie L \(DFG\)](#); Steve_Brockmann@fws.gov
Cc: [Legere, Nicole M \(DFG\)](#); Leslie.Grey@faa.gov; [Amanda Childs](#); SCunningham@esassoc.com; [Skagerberg, Verne R \(DOT\)](#); [Brown, James L \(DOT\)](#)
Subject: RE: Angoon Airport Stream 10 Realignment
Date: Thursday, August 04, 2016 10:57:23 AM

Thanks Jackie – good comment.

I will work with you and Nichole to develop appropriate measures to protect the existing riparian habitat and general health of the stream. Once we have a preliminary design I will contact you to develop the necessary long-term strategies as well as any recommended construction BMP's.

Thanks again!

~~~~~  
**John C. Barnett**  
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**Sent:** Thursday, August 04, 2016 9:47 AM  
**To:** Barnett, John C (DOT); [Steve\\_Brockmann@fws.gov](mailto:Steve_Brockmann@fws.gov)  
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**Subject:** RE: Angoon Airport Stream 10 Realignment

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Thanks. . .Jackie

---

**From:** Barnett, John C (DOT)  
**Sent:** Thursday, August 04, 2016 8:36 AM  
**To:** [Steve\\_Brockmann@fws.gov](mailto:Steve_Brockmann@fws.gov); Timothy, Jackie L (DFG)  
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