ANGOON AIRPORT

Wetland Delineation Report

Prepared for

Alaska Department of
Transportation & Public Facilities
6860 Glacier Hwy.
P.O. Box 112506
Juneau, AK 99811-2506

August 2019

ESA

Table of Contents

A. LANDSCAPE SETTING AND LAND USE

The survey area is located within the city limits of Angoon, on Admiralty Island, in the Hoonah-Angoon Borough of Southeast Alaska (Appendix A, Figure 1). This site is on the western side of Admiralty Island, immediately north of Killisnoo Harbor (located adjacent to and outside the survey area) and southeast of Chatham Strait. Aukta Street, a maintained gravel road, forms the northeast boundary of the survey area, while Killisnoo Road forms the northwest boundary. The southern boundary is formed by a seemingly arbitrary line drawn from Aukta Street to the coast, and is located approximately two miles south of the junction of the two roads. The total survey area analyzed in this delineation report is 529 acres in size. Parcel ownership in the survey area includes private individuals, the City of Angoon, and Kootznoowoo, Inc. lands (Appendix A, Figure 2).

Land use in the survey area is primarily undeveloped natural forest with discrete areas of resource extraction and housing that are sporadically located around the perimeter. Human alterations and disturbance in and adjacent to the survey area include the presences of existing roads along the north and eastern borders, along with their associated maintenance activities; the existing Angoon City Dump, located just outside of the northeast corner, and its operations; and two recently expanded rock quarries – one along Killisnoo Road and the other along Aukta Street (Appendix A, Figure 3). Within each of these areas, vegetation, soil, and hydrology have all been substantially altered, causing the hydrology in adjacent areas to also become altered to some degree. The City Dump and two rock quarries ranged in size from 3 to 5 acres at the time of the 2018 survey. Stormwater from each of these altered features moves directly into the adjoining portion of the survey area, and may affect hydrology those areas. A few recreational cabins are located along the coast in the southwest-central portion of the survey area, and are situated in upland areas.

Outside of the survey area, land use is also mostly undeveloped natural forest with human-altered lands present in discrete locations. The City of Angoon is located approximately 1.5 miles to the north of the survey area, and the City's water reservoir, treatment plant, and pumping station are located approximately one mile southeast of the survey area, at the end of Aukta Street. The Angoon Ferry Terminal is located to the west of the survey area, at the end of Killisnoo Road. Low density development is present along both roads.

Although selective harvesting of trees has occurred in the survey area, logging does not appear to have altered the extent of wetlands or other water resources currently present. Anecdotal evidence and observations of spring-board notches indicate historical timber harvest occurred in the area, but no records have been identified that confirm the level of that harvest (Johnson 2013; SWCA 2012). The few trees that were observed being felled for firewood during the 2017 and 2018 surveys, were centuries old, according to growth rings, suggesting that if logging did occur, it was likely low-density and not widespread.

The topography of the survey area is diverse, with the western edge being formed by the coastline; areas of large, flat peat bogs are found throughout; and incised stream drainages and steep slopes leading up to small promontories are also present (Appendix A, Figure 4). Elevation rages from sea-level to a height of 212.8 feet Mean Sea-Level (msl). The average elevation of the survey area is 203.5 feet msl. In general, the survey area slopes downward from the northern end to the

southern end, and also from the eastern edge to the west (coast line), although microtopographic relief is varied throughout. Hydrology drains to the west and towards the coast.

The National Wetland Inventory (NWI) has mapped a mosaic of palustrine, emergent, and estuarine wetlands that cover the majority (408.1 acres) of the survey area (Appendix A, Figure 5) (USFWS 2018). The three wetland types specifically identified by NWI include: Freshwater Emergent Wetland (PSS4/EM1B), Freshwater Forested/Shrub Wetland (PFO4B), and Estuarine and Marine Wetland (E2AB1/USN) (Cowardin et al. 1979). At the time of this reporting, a soil survey map had not been developed for the survey area.

B. BACKGROUND

Environmental Science Associates (ESA) was contracted by Alaska Department of Transportation & Public Facilities (ADOT&PF) to delineate wetlands and waters in support of permitting for the proposed land-based Angoon Airport (Airport). The purpose of this report is to describe the extent of likely jurisdictional wetlands and waters in and surrounding the proposed Airport footprint in order to later determine project impacts. The survey area encompasses the limits of disturbance expected for proposed construction activity surrounding the proposed Airport. This area has evolved through time and as a result of refinement in understanding of the site and constraints it presents the design. The development history of the current survey area is described below, as it pertains to this water resource delineation.

In September 2016, a final Environmental Impact Statement (FEIS) for the proposed Angoon Airport was prepared in accordance with the National Environmental Policy Act. At the completion of the FEIS, federal agencies documented a Record of Decision (ROD) and selected the alternative called; "Airport 12a with Access 12a" (FAA 2016), referred to in this report as "Airport 12a". In 2014, in support of the EIS process, wetlands and waters were delineated within the Airport 12a footprint to inform decision-making for assessing alternatives (SWCA 2014) (Appendix A, Figure 6). The U.S. Army Corps of Engineers (USACE) issued concurrence on the 2014 delineation on August 4, 2014 (POA 2009-1254), in which they took jurisdiction over 128.43 acres of wetlands and 1.31 acres of waters of the U.S. Because in 2014, the Airport 12a survey area was based on a preliminary design, ADOT&PF recognized the need for more refined water resource surveys to support permitting, once project design had advanced. In 2017, ADOT&PF commissioned an additional water resource delineation that surveyed the area surrounding what had been surveyed in 2014 (Appendix A, Figure 6). ESA performed the delineation of this area in 2017.

As of January 2017, the initial environmental analysis supporting the Airport project had advanced to the design phase and was formally presented in a *Scoping Report* developed for the project (ADOT&PF 2018). As part of this phase, ADOT&PF refined the Airport 12a alignment based on new detailed geotechnical information. The alignment that ADOT&PF selected to move forward with, "Echo", extends partially outside and to the north of the already delineated area. ADOT&PF commissioned an additional water resource delineation that surveyed the area to the north of what had been surveyed in 2014 and 2017, in order to account for the entire area that maybe effected by construction of Echo (Appendix A, Figure 6). ESA performed this survey in 2018.

The survey area assessed by this water resource delineation report includes all three survey areas identified above (i.e., 2014, 2017, and 2018). Consolidating the survey areas into a single report is intended to streamline the jurisdictional determination review process, as well as the subsequent permitting process. Despite the 2014 survey having received a jurisdictional determination, including its survey area in this analysis is also intended to reaffirm its findings prior to its expiration. The approach used for verifying the current accuracy of the 2014 findings, and for combining the three delineations, is described in the following sections.

C. ALTERATIONS INFLUENCING WATER RESOURCES

The majority of survey area is undeveloped and consists of a matrix of undisturbed, mature bog forests and bog woodlands, and forested uplands. Site alterations that have affected the presence, location, or geographic boundaries of wetlands or other waters in the survey area include the following:

- **Aukta Street**, a maintained two-lane gravel road, defines the eastern boundary of the survey area. It is bordered on its west side (i.e.; the side of the road along the survey area) by electrical transmission lines and their corresponding, approximately 50-foot-wide utility right-of-way. The right-of-way is characterized by soils that have been disturbed and consists of compacted gravel fill overlying native soils. Vegetation in this area is disturbed and managed to maintain low growth. In some areas, a roadside drainage ditch is also present. As there are delineated wetlands that abut the survey area boundary formed by Aukta Street, the road and utility right-of-way have likely reduced the size of wetlands in this area. This road also provides the best access point for the reminder of the survey area, facilitating human access to cabins and harvesting firewood.

- **Killisnoo Road** is similar to Aukta Street in the type of alterations it has caused within the survey area. Killisnoo Road is a two-lane, paved road connecting the Angoon Ferry Terminal with the City of Angoon. It forms the northern boundary of the survey area. Some natural drainage features have been interrupted by its road prism, because of the relatively great topographic relief found in this portion of the survey area. At least one of these drainages has a culvert that collects hydrology from outside of the survey area, and shunts it into the survey area. A broad roadside drainage system spans along Killisnoo Road, along the survey area, and collects storm runoff from the road, the City Dump, and from some portions of the rock quarry located along the road. This hydrology drains directly into the survey area. The road itself, likely has displaced wetland, and the hydrology it concentrates likely increases stream flows and channelization, which increases drainage and further decreases the presences of wetland.

- The **Angoon City Dump** (located adjacent to the survey area, but not within it) and the **two rock quarries** (one located along Aukta Street and the other along Killisnoo Road) are each relatively large disturbance sites that act as catchments for stormwater, concentrating and sheeting surface hydrology to surrounding wetlands within the survey area. Each of these features ranges in size from 3 to 5 acres, and are characterized by extensive soil compaction and hardpan or bedrock exposed at the substrate surface, substantially increasing ponding of precipitation and runoff. Each of these features readily contributes sediment and/or contaminants to the increased stormflows, distributing them

into adjoining areas. These features likely have displaced wetland located within their footprints.

- A **dirt all-terrain vehicle (ATV) trail**, providing access to cabins located along the coast, extends northeast-to-southwest through the southeastern portion of the survey area. Although the area of the ATV trail is substantially disturbed, it maintains strong wetland characteristics. Wetlands are present throughout the length of the ATV trail. A parking lot fill-pad is present where the ATV trail adjoins Aukta Street. The fill-pad, composed of a prism of compacted gravel fill material, likely displaced wetland in the survey area when it was constructed in the 1980's.

D. PRECIPITATION ANALYSIS

The climate in the southeast region of Alaska is influenced primarily by wet North Pacific storms and receives the greatest precipitation in the State. At low elevations, winter precipitation falls as rain and snow, and lowlands are covered with temperate rain forest. Higher elevations receive primarily snow that nourishes glaciers that reach tidewater. Other seasons (spring, summer, fall) tend to also be wet, with precipitation falling mainly as rain. Angoon is considered one of the warmer and dryer locations in southeast Alaska, where it resides in a rain-shadow created by the outer Alexander Archipelago Islands. However, because weather stations are not located near Angoon, this claim cannot be verified.

Historic precipitation records and climate data were acquired from the Juneau International Airport WETS Station (USDA 2018a, 2018b) (Appendix B, Table 1), which is the nearest station providing usable data. It is located 54 miles to the north of the survey area and is in a generally comparable geographic position. Data from this station important for understanding the precipitation context of water resources in the survey area is discussed below:

- **Annual Precipitation**: Annual precipitation ranges between 54.9 and 66.4 inches, and averages 61.1 inches per-year.

- **Growing Season**: Based on this station record, which ranges from 1971 to 2018, the local growing season is from April 16 through October 16, at the 50 percent interval.

This report summarizes three field delineations that occurred at different times. Precipitation analysis of each is provided below, and is broken out by time interval:

Delineation 1: Field investigation occurred August 19 to 22, 2013; September 14 to 16, 2013

- **3 Months Prior to Delineation:** Recorded precipitation for this period (May, June, July) totaled 12.97 inches, which was 1.47 inches above average for that interval (Appendix B, Table 1). Precipitation for the month of May, three months prior to the delineation, was above average and above the normal range. Precipitation for June, two months prior to the delineation, was below average and within the normal range. Precipitation for July, the month prior to the delineation, was below average and within the normal range.

- **2 Weeks Prior to Delineation**: Precipitation fell during the two weeks prior to the delineation, and totaled 2.40 inches (Appendix B, Table 2); however, 1.18 inches of that total fell in a single day (18 Aug). Most of the two-week period was relatively dry.

- **During the Delineation**: Precipitation fell during around half of the days of the delineation; however, the largest daily total only reached 0.17 inch. Precipitation that fell was sporadic and light (Appendix B, Table 2).

- **Conclusion**: The timing of the field survey coincided with a relatively normal summer, following a somewhat normal spring. Most precipitation that fell during the year was rain. The two weeks prior to the delineation were relatively dry, although the day prior to the start was wet. Little precipitation fell during the delineation. It is for these reasons that **precipitation is not likely to have caused abnormal hydrologic conditions** during the 2014 delineation

Delineation 2: Field investigation occurred June 15 to 21, 2017

- **3 Months Prior to Delineation:** Recorded precipitation for this period (March, April, May) totaled 11.59 inches, which was 1.66 inches above average for that interval (Appendix B, Table 1). Precipitation for the month of March, three months prior to the delineation, was above average and above the normal range. Precipitation for April, two months prior to the delineation, was below average and below the normal range. Precipitation for May, the month prior to the delineation, was above average and above the normal range.
- **2 Weeks Prior to Delineation**: Precipitation fell during the two weeks prior to the delineation, however, it totaled less than a half-inch (Appendix B, Table 3).

- **During the Delineation**: Precipitation fell during all but one day of the delineation; however, only one of the daily totals surpassed one-half of an inch. Precipitation that fell the remaining days was sporadic and light (Appendix B, Table 3).

- **Conclusion**: Although the timing of the field survey coincided with a wet, late spring, precipitation for the season was within the normal range, as was the recorded precipitation for the water year. Most precipitation that fell during this period was rain. The two weeks prior to the delineation were relatively dry, and little precipitation fell during the delineation, despite it being a mostly daily occurrence. It is for these reasons that **precipitation is not likely to have caused abnormal hydrologic conditions** during the 2017 delineation.

Delineation 3: Field investigation occurred June 13 to 19, 2018

- **3 Months Prior to Delineation:** Recorded precipitation for this period (March, April, May) totaled 10.95 inches, which was 1.00 inch above average for that interval (Appendix B, Table 1). Precipitation for the month of March, three months prior to the delineation, was below average but within the normal range. Precipitation for April, two months prior to the delineation, was above average and within the normal range. Precipitation for May, the month prior to the delineation, was above average and above the normal range.

- **2 Weeks Prior to Delineation**: Precipitation fell during the two weeks prior to the delineation, and totaled 1.77 inches (Appendix B, Table 4). Only one day received more than one-half inch of rain.

- **During the Delineation**: Precipitation fell during all but two days of the delineation; however, the largest daily total only reached 0.16 inch. Precipitation that fell was sporadic and light (Appendix B, Table 4).

- **Conclusion**: The timing of the field survey coincided with a relatively normal spring, following a somewhat dry winter. Most precipitation that fell during the year was rain. The two weeks prior to the delineation were relatively dry, and little precipitation fell during the delineation, despite it being a mostly daily occurrence. It is for these reasons that **precipitation is not likely to have caused abnormal hydrologic conditions** during the 2018 delineation.

E. METHODS

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)* (Regional Supplement) (USACE 2007) and the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987). Wetlands in the survey area were classified using the U.S. Fish and Wildlife Service (USFWS) National Wetlands and Deepwater Habitats Classification System (Cowardin Classification) (Cowardin et al. 1979), as well as the Hydrogeomorphic method (HGM Classification) (Powell et al. 2003).

Two levels of investigation were conducted for the analysis of wetlands in the survey area: 1) a review of existing information, and 2) a formal on-site field delineation. Methods and resources used for each are discussed below.

a. Review of Existing Information

A review of existing reports, literature, maps, and other materials was conducted to identify site characteristics indicative of water resources in the survey area. Because the site has been the focus of study for multiple years, several insightful resources were available and referenced. These includes but are not limited to the following:

- *Angoon Airport Final Environmental Impact Statement* (FAA 2016), including *Appendix S: Angoon Airport Wetland and Waters Preliminary Jurisdiction Delineation* (SWCA 2014)
- *Angoon Airport Scooping Report* (ADOT&PF 2018)
- *Memorandum: Alternative 12a Stream 10 Realignment Feasibility Study* (ESA 2016)
- *Angoon Airport Reconnaissance Study* (R&M Engineering, Inc. 2004)
- *Angoon Airport Master Plan* (ADOT&PF 2007)
- Topographic contour lines derived from ADOT&PF LiDAR, collected in 2017

- Available aerial imagery (Google Earth Pro 2018)
- National Wetland Inventory (USFW 2018)

b. Field Delineation

As stated prior, this delineation report summarizes findings from 3 separate delineation efforts. Organizational details of each delineation are presented in the Table 1, below:

Table 1. Summary of Three Water Resource Delineations Composing this Report

Delineation	Field Dates	Conducted by	Submitted Individually for Jurisdictional Review?
1	August 19 to 22, 2013; September 14 to 16, 2013	SWCA Environmental Consultants	Yes (SWCA 2014)
2	June 15 to 21, 2017	Environmental Science Associates (ESA)	No
3	June 13 to 19, 2018	Environmental Science Associates (ESA)	No

Some methods from the 2014 delineation (SWCA 2014) were either unexplained or differed from those followed in 2017 and 2018, and are listed here. Plant indicator status was determined with the 2013 National Wetland Plant List for the Alaska Region (Lichvar 2013). 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 guidance (USDA-NRCS 2005, 2010). Despite these differences, findings from the 2014 delineation remain comparable to those from the subsequent delineations.

Prior to the on-site wetland and waterway delineations undertaken in 2017 and 2018, ESA staff reviewed all previous studies and actions related to the Angoon Airport, and used these to inform the delineation study design and expectations of the physical landscape.

The survey area was traversed by two field teams of two, who worked in tandem to observe and document vegetation, soils, and hydrology at select sampling locations. These locations included those shown by NWI to be wetland, and/or where there were potential indicators of wetland. If wetland conditions were documented, a paired upland plot was established in a nearby location suitable to facilitate the identification of the wetland boundary. Characteristics of the wetland boundary were carefully documented, including all diagnostic transitions in vegetation, soils, hydrology, and/or topography. All sample plots and boundaries were carefully mapped in the field using resource grade GPS units. These units were also used to collect field data and photograph important features. The spatial findings from the 2014 delineation were field verified in 2017 and 2018 and were found to be mostly accurate, and in need of only minimal updating. No supplemental data was collected for the 2014 survey area.

Vegetation was assessed, identified, and rated using various applicable sources, including: *Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants* (Hulten 1968), A*laska*

Trees and Shrubs; Second Edition (Viereck and Little 2007), *Flora of the Pacific Northwest* (Hitchcock and Cronquist 1976), and *The National Wetland Plant List: 2016 Wetland Ratings* (Lichvar et.al. 2016). Test pits were dug to a minimum of 16 inches, and soil color was quantified using Munsell Soil Color Charts (Munsell 2009). Soil texture and hydrology were assessed using guidance provided by the Regional Supplement (USACE 2007).

ESA also identified and delineated the ordinary high water mark (OHWM) of streams in the survey area to determine the extent of potentially jurisdictional water, following guidance established by USACE (USACE 2005).

c. Mapping Method

Spatial data (survey points and boundaries) were collected in the field during the 2017 and 2018 surveys using a Bad Elf GNSS Surveyor bluetooth receiver tethered to a tablet data collector. This data was collected at a mapping grade accuracy of sub-meter and was digitized in real-time into GIS shapefiles using ArcGIS version 10.4.1. Shapefiles were used to produce maps and identify spatial locations presented in this delineation report. All background layers, including the survey boundary, were georeferenced using NAD 1983 State Plane, Alaska Zone 1, FIPS5001 (U.S. feet). Background imagery was provided by ADOT&PF.

F. DELINEATED WATER RESOURCES

A total of 56 sample plots were recorded to document wetland and upland site conditions observed in 2013 (SWCA 2014), 44 sample plots (P100 to P126 and P200 to P218) were established during the 2017 field season, and 37 sample plots (P300 to P319 and P400 to P418) were established during the 2018 delineation. Jurisdictional determination datasheets for the sample plots collected during the 2017 and 2018 delineations are included in Appendix C.

Findings from the three delineations resulted in 4 wetland types being identified in the survey area, and 2 types of other waters. Each type of wetland and other waters are summarized in Table 2, below, and are discussed further in this section.

A total of 50 separate wetlands were delineated in the survey area, and 9 separate other waters were delineated. All water resources delineated in the survey area are summarized in Table 3, presented in *Section G. Conclusions*, and are mapped and presented in Appendix A, Figure 6.

Table 2. Wetland and Other Water Types Delineated in the Survey Area

Wet Habitat*	Cowardin Class	HGM Class	Delineated Size in Survey Area
Wetland Type			
Bog Forest	Palustrine, Forested, Needle-Leaved Evergreen, Saturated (PFO4B)	Slope Forest	159.1 acres
Bog Woodland	Palustrine, Forested, Broad-Leaved Deciduous, Saturated (PFO1B)	Slope Bog	131.5 acres
Fen	Palustrine, Emergent, Persistent, Permanently Flooded (PEM1H)	Slope Tidal	1.2 acres
Salt Marsh	Estuarine, Intertidal, Emergent, Persistent, Regularly Flooded (E2EM1N)	Estuarine Fringe Tidal	2.1 acres
Total			**294.0 acres**
Other Water Type			
Stream	Riverine, Lower Perennial, Unconsolidated Bottom (R2UB)	NA	8,825.6 linear feet
Intertidal Area	Estuarine, Subtidal, Unconsolidated Bottom (Tidal Pond), Regularly Flooded (E1UB1N)	NA	26.9 acres

*Water resource names used by the FEIS (FAA 2016)

a. Wetlands

1. Bog Forest

Bog forest is the predominant wetland type within the survey area. This wetland type covers 159.1 acres of the survey area and has a Cowardin class of *Palustrine, Forested, Needle-Leaved Evergreen, Saturated* (PFO4B), and a HGM class of *Slope Forest*. Multiple individual polygons of bog forest were delineated in the survey area (Table 3). This wetland is characterized by multiple vegetation strata including a canopy layer and a subcanopy that includes woody shrubs and herbaceous species. The shrub layer is relatively dense in some areas and excludes herbaceous growth. Tall woody cover (>5 feet) is generally more extensive than cover of herbaceous species, and patches of dense skunk cabbage (*Lysichiton americanus* – OBL) and oval-leaf blueberry (*Vaccinium ovalifolium* – FAC) are a typical feature of this wetland type.

The majority of bog forest wetland found within the survey area is situated on gentle slopes with a southwest aspect. These wetlands are interspersed by a mosaic of depressions and upland hummocks, and are often bordered by convex upland formations. Despite the presence of variable microtopography, slopes tend to be relatively shallow and range from a grade of 3 to 10 percent.

The majority of the bog forest wetland sample plots met the Dominance Test for hydrophytic vegetation indicators (Appendix C). A few sample plots did not meet the Dominance Test or the Prevalence Index, however, but in all of these cases, Problematic Hydrophytic Vegetation conditions were documented because FAC species occupied hydric soils. Dominant trees and shrubs of bog forest include western hemlock (*Tsuga heterophylla* – FAC), Sitka spruce (*Picea stichensis* – FACU), oval-leaf blueberry, Alaska blueberry (*Vaccinium alaskaense* – FAC), false azalea (*Menziesia ferrunginea* – FACU), and Devil's club (*Oplopanax horridus* – FACU). Buttressed Sitka spruce were common where they grew within bog forest, where they most often were associated to wetland/upland transitions on hummocks. Dominant emergent vegetation throughout the wetland consists of skunk cabbage and western lady fern (*Athyrium cyclosorum* –

FAC). Dominant vegetation observed in the herbaceous layer of the wetland include bogbean (*Menyanthes trifoliata* – OBL), field horsetail (E*quisetum arvense* – FAC), and two-leaved Soloman's seal (M*aianthemum dilatatum* – FAC).

The main source of hydrology in bog forest is high groundwater, which is perched by a restrictive layer of glacial till located at a depth of two to three feet below the surface. Numerous intermittent groundwater seeps and pockets of standing water were present throughout, but were not mapped separately because of their close integration with the wetland.

Most soils observed in bog forest consisted of saturated organic material and met the Histosol (A1) hydric soil indicator. Texture of the organic material varied throughout the soil profiles and included coarse or more fibric organics, mucky peat, and muck (dominated by sapric rather than fibric soil material). A few of the sample plots met the depth requirement (>16 inches) for a Histosol, but were not saturated for the entire profile during the field visit (Appendix C, sample plots 101 and 208). For these plots, the "Other" category was selected based on the expectation that the top 16 inches would be saturated earlier in the growing season. Two of the plots met the Histic Epipedon hydric soil indicator (sample plots 119 and 122). Hydrogen sulfide was the primary hydric soil indicator for sample plot 113 and was also detected at sample plot 122.

The transitions between wetlands and uplands were challenging to identify in certain portions of the survey area because upland hummocks were a common feature within these wetlands, and the seep-fed hydrology facilitates wetlands to span down slopes. In the northwest and northeast, slopes are steep and changes in topography are more distinct. The changes in landform along these wetland edges, such as near sample plot 202 and 208, generally coincide with a change in vegetation from hydrophytic-dominated understory in wetlands to a non-hydrophytic-dominated understory in uplands. In hilly patches of the east, southeast, and southwest portions of the survey area, such as near sample plots 123 and 112, several upslope groundwater seeps result in less correlation between topography and the hydrophytic-dominated understory. Near sample plot 124, in the west portion of the survey area, which leads into the coastal shoreline, wetland edges more closely coincide with the contours of the coastal drainages.

Bog forest wetland has received the most degradation from human use relative to the other wetlands delineated in the survey area. This is primarily due to it having the largest trees nearest to clearings (i.e.; bog woodland) of all wetland types. The trees are felled for firewood, and the adjacent clearing allows for relatively easy access. Firewood trees and pack-trails are typically located near the roads bordering the survey area, allowing ready access to vehicles. Bog forest also interfaces with the roads, City Landfill, and rock quarry along Killisnoo Road, and has been substantially altered in these areas. Four delineated wetlands have been altered by human activities in these areas; Wetlands B, J, L, and M.

Example photos of bog forest wetland are presented in Appendix D, and include Photos 6, 9, 10, 11, 12, 14, 25, and 30.

2. Bog Woodland

Bog woodland is the second wetland type observed, totaling 131.5 acres of the survey area. Bog woodland in the survey area has a Cowardin class of *Palustrine, Forested, Broad-Leaved Deciduous, Saturated* (PFO1B), and a HGM class of *Slope Bog*. Multiple individual polygons of

bog woodland were delineated in the survey area and are summarized in Table 3. Example sample plots for bog woodland include 56, 203, 205, and 214 (Appendix C).

Bog woodland in the survey area hosts extensive bryophyte cover (i.e., peat), which composes the dominant vegetative feature. This wetland type is distinguished from bog forest, in which it is often surrounded, by having less than 5 percent tree cover and less than 30 percent shrub cover, and having vegetation dominated by woody plants less than 20 feet tall. The most common plant species observed include Labrador tea (*Rhododendron groenlandicum* – FAC) and crowberry (*Empetrum nigrum* – FAC) (Appendix C). Other typical but less common species include cloudberry (*Rubus chamaemorus* – FACW), chamisso sedge (*Carex pachystachya* – FAC), shooting star (*Dodecatheon frigidum*, FACW), buck-bean (*Menyanthes trifoliate* – OBL), skunk cabbage, and bunch berry (*Cornus canadensis* – FACU), which occurs on hummocks and along the upland/wetland boundary. The most common coniferous species that are present along the edges include shore pine (*Pinus contorta* – FAC) and western hemlock (*Tsuga heterophylla* – FAC), which generally only grow to small, scraggly trees due to the nutrient-poor substrate of this wetland type. Broadleaf species of bog woodland including crabapple (*Malus fusca* – FACW) and dwarf birch (*Betula nana* – FAC).

Soils in bog woodland contained thick layers of saturated organic peats (fibrous histosols). The water table was generally within 12 inches of the soil surface. A high proportion of soils had a sulfidic odor. Drainage from bog woodlands tended to become channelized and exit these wetlands at their lowest elevation around their perimeter, and discharge hydrology to perennial streams.

Wetland hydrology originates upslope of bog woodland and consists primarily of groundwater. Bog forest surrounding bog woodland contains groundwater seeps which contribute to the saturated water regime. Primary wetland hydrology indicators observed in the field included saturated soils and a high water table.

Bog woodland is somewhat degraded by human access and extraction, but not to the level of bog forest. Trees in bog woodland are smaller than those in bog forest, making them less desirable. However, because bog woodland provides a clear pathway to areas of larger trees, including those in bog forest, pack-trails are often established through these areas. Harvesting of other plants by local Tlinkit also occurs in bog woodland. As with bog forest, bog woodland close to roads receives the most disturbance by humans.

Example photos of bog woodland wetland are presented in Appendix D, and include Photos 1, 2, 13, 16, 18, and 28.

3. Fen

One fen was delineated (Wetland G8), totaling 1.2 acres in size. Fen in the survey area has a Cowardin class of *Palustrine, Emergent, Persistent, Permanently Flooded* (PEM1H), and a HGM class of *Slope Tidal.* It is located in the northcentral portion of the survey area, between the tidal marsh and bog woodland. A few additional fens were observed within portions of bog woodland, but were not delineated separately because of being very small and highly integrated into their larger, surrounding wetland. Details for the fen wetland are provided in Table 3.

The delineated fen had extensive surface water and emergent plants, primarily Lyngbye's sedge (*Carex lyngbyei* – OBL), which was growing in almost a monocrop along the open water edge of the fen (see Appendix C, sample plot 404).

No woody vegetation grows in the fen, but woody species are found along its perimeter, and drop material into this wetland, providing additional habitat structure. Soils were muck, and peat and coarse material were largely absent. The geomorphic position of the fen is between the toe of a steep slope and the upper-most reaches of a tidal inlet. It is hydrologically connected upslope to a large perennial seep draining a bog woodland (Wetland G6), and is hydrologically connected downslope to an estuarine wetland and intertidal area (Wetland A10 and Water 1, respectively). The constant input of freshwater into the fen largely dilutes ocean water salinity, yet the fen remains tidally influenced. An example photo of fen wetland is presented in Appendix D as Photo 34.

4. Salt Marsh

A fringe of salt marsh was delineated during the survey as several individual polygons (Wetlands A1 through A10) (Table 3), and total 2.1 acres in size. Salt marsh wetland in the survey area has a Cowardin class of *Estuarine, Intertidal, Emergent, Persistent, Regularly Flooded* (E2EM1N), and a HGM class of *Estuarine Fringe Tidal.* This wetland type was found in the upper reaches of the intertidal area (described below in *Section b. Other Waters*), where it is located at the highest relative elevation of the inlet and where sediments have formed a mudflat between upland slopes and mean elevation of the marine waters. This area also coincides with some of the largest inputs of freshwater from upland sources, including from the fen (Wetland G8) and several seep wetlands. Salt marsh wetland is likely to be inundated somewhat regularly, and during conditions when high-tide and large freshwater flows co-occur and swell the water surface to relatively high elevations (during extreme high water of spring tides). Vegetation is dominated by emergent herbaceous species, with extensive coverage of Lyngbye's sedge. The presences of marine algae largely delineates the boundary between salt marsh and the intertidal area. Sample plots were not established within areas of salt marsh because they were located below the OHWM of the marine waters. An example photo of salt marsh wetland is presented in Appendix D, and includes Photo 24, which captures the upland/wetland boundary edge.

b. Other Waters

1. Streams

Streams are infrequent in the survey area, but occur predictably in areas topographically below wetlands, where they convey hydrology downslope towards the marine environment. A total of 8 streams were delineated in the survey area, and all have been classified as *Riverine, Lower Perennial, Unconsolidated Bottom* (R2UB), according to Cowardin.

Stream 10

The largest drainage within the survey area is Stream 10 (as it was named in the FEIS [FAA 2016]), which is a perennial stream. Diagnostic indicators of the OHWM of Stream 10 include bankfull benches, a distinct scour line, and transitions in soil character. Through most of its course within the survey area, its channel form is a single-thread, pool-riffle complex with an abundance of large woody debris and overhanging vegetation.

Stream 10 has two forks (Appendix A, Figure 6), which join within the survey area. The southern-most and largest fork (South Fork [SF]) originates upslope and outside of the survey area, and on the east side of Aukta Street. It enters the survey area through a 36 inch, corrugated bituminous metal culvert underlying the Aukta Street road prism. Once within the survey area, it meanders in a southwesterly direction. The reach located between the culvert outlet and confluence with the second fork, has an average bankfull width of 5 feet, with an average bankfull height of 3 feet. Its substrate is generally unconsolidated and composed of a mix of cobble and sediment. The second fork of Stream 10 originates in the northwest portion of the survey area, in bog woodland, where it is fringed by a thin, intermittent band of fen wetland. This fork flows south for approximately 2,000 feet before it joins the second fork. Example photos of Stream 10SF are presented in Appendix D, and include Photos 15 and 17.

The second fork of Stream 10 (the north fork [NF]) is a continuous and narrow, single-thread channel with an average bankfull width of 1.5 feet and an average bankfull height of 1 foot. Its substrate consists of sediment, muck, and organics from deposits of twigs, bark, and herbaceous litter. Habitat complexity is fairly low in the upper reaches of Stream 10, above the confluence of the forks, which is not unusual for a headwater stream with low sinuosity and flows. Example photos of Stream 10NF are presented in Appendix D, and include Photo 29.

Downstream of the confluence, Stream 10 widens and increases in depth. This lower reach is characterized by an average bankfull width of 8 feet with an average bankfull height of 2 feet. Substrate underling this reach is a mix of sand and medium-sized gravels with an interspersion of small cobbles (Appendix D, Photo 7). Instream habitat complexity is relatively high and includes the formation of point-bar deposits and a series of extended riffles.

Stream 10 reaches the marine environment of Killisnoo Harbor as subterranean flow through a barrier-bar formed along the coastal shoreline (Appendix B, Photo 26). This barrier bar is approximately 7-feet in height, composed of gravel, and completely plugs the mouth of the Stream 10. It is likely reworked annually by storm surge, as indicated by the lack of vegetation present. The gravel bar is a complete barrier to migratory fish.

Stream 11

Stream 11 originates from several small groundwater seeps within bog forest in the southwest portion of the survey area. It flows for approximately 800 feet before it enters Killisnoo Harbor. Stream 11 has an average bankfull width of 5 feet and an average bankfull height of 1.5 feet. Except for at its headwaters, Stream 11 is a continuous, single-thread channel form with frequent undercut banks and overhanging vegetation. Due to its short course and relatively flat gradient, substrate is relatively homogenous mix of fines and small gravels. Woody debris is extensive and diverse in Stream 11, and includes imbedded wood along the banks as well as a wide range of down wood in and across the channel. Indicators of the OHWM include a distinct sediment line impressed upon the stream banks, shelving, and a change in plant community dominated by skunk cabbage to bunch berry. An example photo of Stream 11 is presented in Appendix D, as Photo 3.

Streams 12, 13, 14, 15, 16

Streams 12, 13, 14, 15, and 16 are all small perennial waterways that originate from bog forest wetland, and are located on the western half of the survey area and low in the watershed. All emerge from subsurface sources and flow in a defined channel for their often short duration.

Stream 12 flows southwest from Wetland G15 for approximately 100 feet as a well-defined channel before it disappears into Wetland E. The average bankfull width is 2 feet with an average bankfull height of 1.5 feet. Indicators of the OHWM include scour marks, bank shelving, and a change in vegetation community from a hydrophytic plant community to upland. Stream 13 is the outflow from a small ponded area that drains subsurface to Killisnoo Harbor. The stream channel of Stream 13 averages 1-foot-wide and has a bankfull height of 0.5 foot. The primary OHWM indicators include scour marks and bank erosion. Streams 14, 15, and 16 are very similar to each other and to Streams 12 and 13. They all drain Wetland G15; flow through defined channels; have OHWM defined by scour marks, bank shelving, and vegetation community change; and all terminate by returning subsurface. Channels of each ranged from 1 to 2 feet bankfull width, to 0.5 to 1 foot bankfull height.

Stream 17

Stream 17 differs somewhat from the other streams in the survey area mainly because it flows down a steeper streambed gradient. In its short length of approximately 500 feet, it drops from an elevation of around 200 feet to sea-level – draining Wetlands G21 and G22 to the intertidal area (Waters 1). It is a perennial stream flowing through an incised, well defined channel. The average bankfull width is 2 feet with an average bankfull height of 2 feet. Indicators of the OHWM include scour marks, bank shelving, and an abrupt change in vegetation community from a hydrophytic plant community to upland.

2. Intertidal Area

The intertidal area within the survey area totals 26.9 acres in size, and is located topographically below the salt marsh (Wetlands A1 through A10). Although the intertidal area is a marine environment, a constriction across its inlet formed by raised bedrock disconnects it from waters of Killisnoo Harbor during tidal periods below high tide (Appendix D, Photo 33). While tidally disconnected, the relatively large volume of ocean water retained in the intertidal area allows it to maintain high salinity despite freshwater inputs from upslope sources, including the fen and other wetlands. The presences of marine algae, marine invertebrates, and halophytes at its upper edges such woody saltwort (*Salicornia depressa* – OBL) and goosetongue (*Plantago maritima* – FACW), are evidence that this feature is influenced more by marine conditions than freshwater conditions. An example photo of the intertidal area is presented in Appendix D, and includes Photo 33, which captures the site of tidal constriction.

c. Uplands

Uplands within the survey area are characterized by a larger closed canopy forest and lack hydric soils and hydrology indicators. The two most distinct upland landforms in the survey area are an oval nob in the northeast portion near P207 and a westward slope on the west side of Aukta Street and the far east portion of the survey area near P211. Upland landforms in other portions of the survey area are less pronounced. Western hemlock is the dominant tree species throughout the upland forests. On steep slopes and hilltops, the dense tree canopy restricts the shrub and herbaceous layers.

In the northwest and northeast portions of the survey area, near P201 and P210, respectively, the dominant understory species are field horsetail and red huckleberry (*Vaccinium parvifolium* – FACU). The dominant herbaceous layer in this area is bunch berry. On gentle slopes and at lower

elevations in the southeast and southwest portions of the survey area, near P110 and P115, the dominant understory species are Sitka spruce, Alaska blueberry, and oval-leaf blueberry.

Soils within the first several inches of the upland forests consistently contain a thick layer of coniferous leaf litter and duff. Soils below the first several inches of broken down bark and organic material are a mix of coarse material and loams. Upland sample plots with less than 50 percent canopy cover, such as P 206 and P120, tend to have moist but not saturated soils. Example photos of uplands are presented in Appendix D, and includes Photos 14, 20, and 21.

G. CONCLUSIONS

A total of 50 wetlands, 8 streams, and 1 intertidal area was identified and delineated within the proposed Angoon Airport survey area. Most of these water resources are anticipated to be considered Waters of the U.S. and regulated by the USACE under Section 404 of the Clean Water Act. All streams and the intertidal area are likely to be considered jurisdictional and Waters of the U.S. Of the wetlands, it is anticipated that all but 4 are likely to be considered jurisdictional.

Wetlands B, J, L, and M may not be jurisdictional because they are all highly altered and appear to be created in areas of upland, as is evident by their relatively high topographic positions on the top of a convex slopes. These water resources are also surrounded by upland.

Wetlands L and M are both isolated wetlands located within the rock quarry off of Killisnoo Road. Their presences are specifically due to the recent extraction of native rocky material below the water table elevation, causing the ponding of hydrology and deposition of sediments. Both features appeared to be newly created, had little vegetation at the time of the 2018 delineation, and had highly altered soils. Further, both features are less than a tenth-of-an-acre in size. Photos of each are presented in Appendix D as Photo 31 (Wetland M) and Photo 32 (Wetland L).

Wetlands B and J are both engineered roadside drainage ditches established in what was likely upland, as is indicated by the vegetation surrounding each to be nonhydrophytic, soils are not hydric, and wetland hydrology was absent. Vegetation in both is maintained, likely to ensure its stormwater drainage function, as well as to maintain a safety zone buffer for Killisnoo Road. Although Wetland B is isolated, Wetland J is not and is engineered to drain into the intertidal area near Wetland A3, forming a surface water connection to Waters of the U.S. The drainage, however, is too steep to allow passage of fish.

A summary of water resources delineated in the survey area, including their classification and likelihood of being jurisdictional, is provided in Table 3, below.

No fish were observed in any portion of the delineated streams, although Stream 10 has been reported to support Dolly Varden (*Salvelinus malma*) and resident coastal cutthroat trout (*Oncorhynchus clarkii*) (ESA 2016). No gradient measurements were taken of the streams during the delineation, but physical conditions are described in the *Memorandum: Alternative 12a Stream 10 Realignment Feasibility Study* (ESA 2016). Although some of the streams connect to marine or estuarine environments, they provide only limited habitat to anadromous fish. All streams that outflow to Killisnoo Harbor have obstructed outlets formed by gravel bars that have been built up and largely maintained by storm wave action. These streams, however, likely do gain

a surface water connection annually at seasonally high tide cycles or during storm surge. Although the streams that outlet to the estuarine waters of the intertidal area, drain freely, they are generally too steep to allow access by fish.

Table 3. Water Resources Delineated in the Survey Area; Likelihood of Jurisdictional is Indicated

Water Resource Name	Delineated Size	Wet Habitat*	Cowardin Class	HGM Class	Extends Beyond Survey Area**	Likely Jurisdictional?
Wetlands						
A1	0.7 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A10	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A2	0.4 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A3	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A4	0.4 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A5	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A6	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A7	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A8	0.05 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
A9	0.1 acre	Salt Marsh	E2EM1N	Estuarine Fringe Tidal	No	**Yes**
B	0.1 acre	Bog Forest	PFO4B	Slope Forest	No	No
C	0.006	Bog Forest	PFO4B	Slope Forest	No	**Yes**
D	1.0 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
E	0.2 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G1	67.0 acres	Bog Woodland	PFO1B	Slope Bog	No	**Yes**
G10	0.3 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G11	2.4 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G12	1.7 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G13	0.2 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G14	0.2 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G15	120.1 acres	Bog Forest	PFO4B	Slope Forest	Yes	**Yes**
G16	24.5 acres	Bog Woodland	PFO1B	Slope Bog	Yes	**Yes**
G17	0.7 acre	Bog Forest	PFO4B	Slope Forest	Yes	**Yes**
G18	0.3 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G19	2.7 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G2	2.7 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G20	14.5 acres	Bog Woodland	PFO1B	Slope Bog	Yes	**Yes**

Water Resource Name	Delineated Size	Wet Habitat*	Cowardin Class	HGM Class	Extends Beyond Survey Area**	Likely Jurisdictional?
G21	10.1 acres	Bog Forest	PFO4B	Slope Forest	Yes	**Yes**
G22	1.5 acres	Bog Woodland	PFO1B	Slope Bog	No	**Yes**
G23	0.1 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G24	0.6 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G25	1.5 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G3	0.6 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
G4	0.2 acre	Bog Woodland	PFO1B	Slope Bog	No	**Yes**
G5	2.7 acres	Bog Forest	PFO4B	Slope Bog	No	**Yes**
G6	14.3 acres	Bog Woodland	PFO1B	Slope Bog	Yes	**Yes**
G7	9.6 acres	Bog Woodland	PFO1B	Slope Bog	No	**Yes**
G8	1.2 acres	Fen	PEM1H	Slope Tidal	No	**Yes**
G9	0.8 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
I	1.5 acres	Bog Forest	PFO4B	Slope Forest	Yes	**Yes**
J	0.5 acre	Bog Forest	PFO4B	Slope Forest	No	No
K	0.8 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
L	0.09 acre	Bog Forest	PFO4B	Slope Forest	No	No
M	0.04 acre	Bog Forest	PFO4B	Slope Forest	No	No
N	2.2 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
O	0.02 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
P	0.1 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
Q	1.2 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
R	0.5 acre	Bog Forest	PFO4B	Slope Forest	No	**Yes**
S	3.0 acres	Bog Forest	PFO4B	Slope Forest	No	**Yes**
Other Waters						
11	681.3 ft.	Stream	R2UB	NA	No	**Yes**
12	104.3 ft.	Stream	R2UB	NA	No	**Yes**
13	63.8 ft.	Stream	R2UB	NA	No	**Yes**
14	37.0 ft.	Stream	R2UB	NA	No	**Yes**
15	110.2 ft.	Stream	R2UB	NA	No	**Yes**
16	403.7 ft.	Stream	R2UB	NA	No	**Yes**
17	492.4 ft.	Stream	R2UB	NA	No	**Yes**
10MF	2,088.0	Stream	R2UB	NA	No	**Yes**
10NF	2,487.5	Stream	R2UB	NA	No	**Yes**
10SF	2,357.3	Stream	R2UB	NA	Yes	**Yes**
Water 1	26.85	Intertidal Area	E1UB1N	NA	Yes	**Yes**

* Water resource names used by the FEIS (FAA 2016)

** Some water resources extend beyond the survey area boundary, in which case, only portions in the survey area were quantified

The findings of this water resource delineation deviates somewhat from the NWI established for the survey area, which indicates the presence of larger continuous areas of wetlands (Appendix A, Figure 4). Compared to the NWI wetland distribution, this survey delineated 114.2 fewer acres of wetland, and more stream. The primary reason for the difference is that forested wetlands (i.e.; bog forest and bog woodland) are difficult to accurately delineate from aerial imagery, resulting in them easily being inaccurately represented on NWI maps. In this case, it is very difficult to discern upland forest from bog forest on an aerial. Fen wetland is also more extensive in the NWI wetland distribution, which likely misidentified open areas of bog woodland as fen.

Most wetlands delineated in the survey area are not bound by topography and often extend both across and down slopes. The geology of the site, with the predominant influence being past glacial action, has resulted in a restrictive layer – usually bedrock – being located at varying depths. Where it is close to the surface, subsurface hydrology becomes perched and produces a seep wetland, which most wetlands in the survey areas can be classified as. Wetland polygons generally match topographic contours for some of their perimeter, but also extend across elevations.

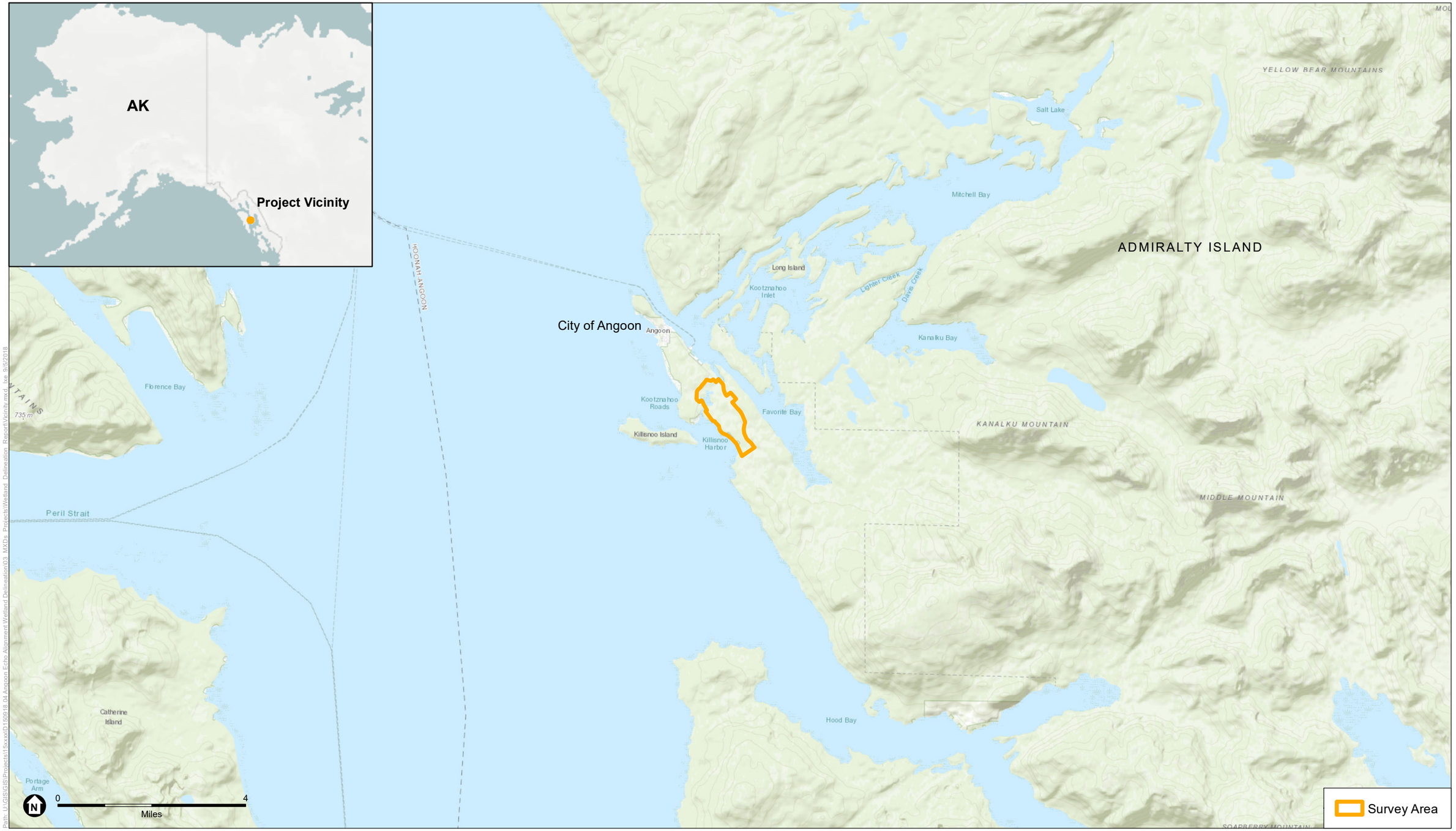
H. DISCLAIMER

This report documents the investigation, best professional judgement, and conclusions of the investigators. This should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and is not official until confirmed and approved by the appropriate regulatory agencies.

APPENDIX A

MAPS

Figure 1. Location Map



SOURCE: ESA, 2018; ADOT, 2016; USGS, 2006

D150918.04 Angoon Airport Wetland Delineation

Figure 1
Vicinity
Angoon, AK

ESA

Path: U:\GIS\GIS\Projects\15xxxx\D150918.04 Angoon Echo Alignment Wetland Delineation\03_MXDs_Projects\Wetland_Delineation_Report\Vicinity.mxd, lxe 9/5/2018

Figure 2. Tax Lot Map

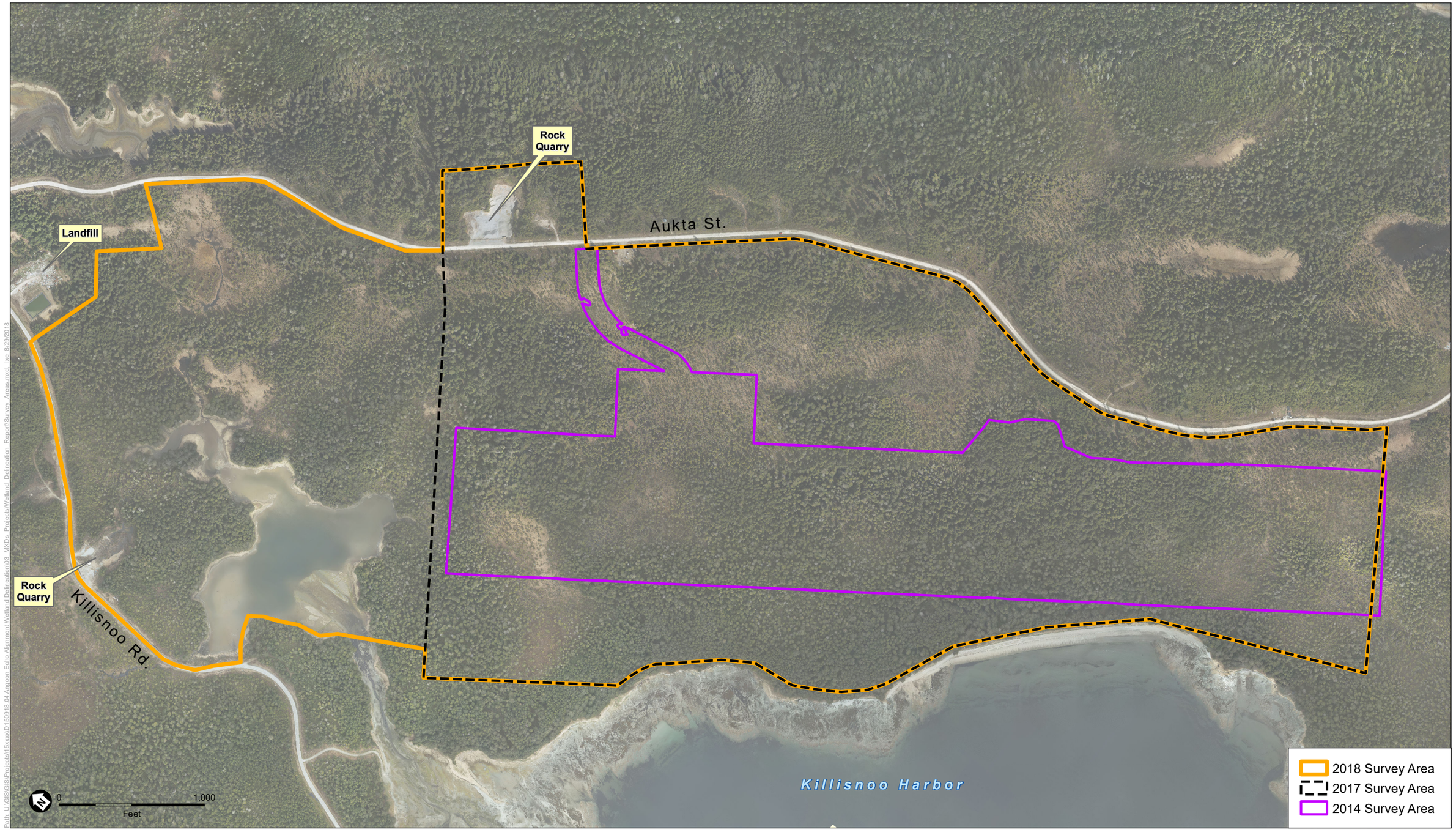
SOURCE: ESA, 2018; ADOT, 2016

D150918.04 Angoon Airport Wetland Delineation

ESA

Taxlots
Angoon, AK

Figure 3. Survey Area Map



Path: U:\GIS\GIS\Projects\15xxxx\D150918.04 Angoon Echo Alignment Wetland Delineation\03_MXDs Projects\Wetland Delineation Report\Survey Areas.mxd, lxe 8/29/2018

SOURCE: ESA, 2017, 2018; ADOT, 2016; SWCA, 2014

D150918.04 Angoon Airport Wetland Delineation

5
Survey Areas
Angoon, AK

ESA

Figure 4. Topographic Map

Killisnoo Harbor

0 1,000
Feet

Survey Area
Contour (5ft)

SOURCE: ESA, 2018; ADOT, 2016

D150918.04 Angoon Airport Wetland Delineation

ESA

Topographic
Angoon, AK

Path: U:\GIS\GIS\Projects\15xxxx\D150918.04 Angoon Echo Alignment Wetland Delineation\03 MXDs Projects\Wetland Delineation Report\Topo.mxd lxe 8/29/2018

Figure 5. National Wetlands Inventory Map

Path: U:\GIS\GIS\Projects\15xxxx\D150918.04 Angoon Echo Alignment Wetland Delineation\03_MXDs_Projects\Wetland_Delineation_ReportNWI.mxd_lxe_8/29/2018

SOURCE: ESA, 2018; AKDOT, 2016; USFWS, 2018

D150918.04 Angoon Airport Wetland Delineation

ESA

National Wetland Inventory
Angoon, AK

Figure 6. Water Resource Delineation Map with Photo Point Locations

SOURCE: ESA, 2017, 2018; ADOT, 2016; SWCA, 2014

D150918.04 Angoon Airport Wetland Delineation

ESA

Wetland Delineation
Angoon, AK

Path: U:\GIS\GIS\Projects\15xxxx\D150918.04 Angoon Echo Alignment Wetland Delineation\03_MXDs_Projects\Wetland_Delineation_Report\Wetland_Delineation_ReportWetland_Delineation.mxd, .lxe 9/12/2018

APPENDIX B

PRECIPITIATON ANALYSIS DATA

Table 1. WETS Table, Juneau International Airport Station

WETS Table

WETS Station: JUNEAU AIRPORT, AK								
Requested years: 1971 - 2018								
Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	32.0	22.7	27.3	5.43	3.94	6.40	13	26.8
Feb	34.8	24.0	29.4	3.96	2.43	4.80	10	16.4
Mar	39.1	27.1	33.1	3.46	2.50	4.08	11	12.5
Apr	48.2	33.0	40.6	3.06	2.10	3.65	9	1.4
May	56.4	40.2	48.3	3.43	2.36	4.09	9	0.0
Jun	61.8	46.4	54.1	3.48	2.62	4.06	9	0.0
Jul	64.0	49.6	56.8	4.59	3.36	5.39	11	0.0
Aug	63.0	48.8	55.9	5.84	4.19	6.89	13	0.0
Sep	55.9	44.1	50.0	8.21	6.44	9.46	16	0.0
Oct	47.1	37.5	42.3	8.26	6.47	9.53	17	1.0
Nov	37.6	28.6	33.1	5.81	3.96	6.94	13	13.7
Dec	33.3	24.6	29.0	5.55	3.73	6.63	13	19.4
Annual:					54.85	66.44		
Average	47.8	35.5	41.7	-	-	-	-	-
Total	-	-	-	61.08			145	91.2

GROWING SEASON DATES			
Years with missing data:	24 deg = 1	28 deg = 1	32 deg = 1
Years with no occurrence:	24 deg = 0	28 deg = 0	32 deg = 0
Data years used:	24 deg = 47	28 deg = 47	32 deg = 47
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	3/30 to 11/6: 221 days	4/16 to 10/16: 183 days	5/8 to 10/1: 146 days
70 percent *	3/23 to 11/13: 235 days	4/11 to 10/22: 194 days	5/3 to 10/6: 156 days
* Percent chance of the growing season occurring between the Beginning and Ending dates.			

STATS TABLE - total precipitation (inches)													
Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1936									8.52	20.43	16.10	6.12	51.17
1937	5.57	2.97	4.14	2.73	3.00	5.01	6.34	8.43			3.63		41.82
1938								4.92	13.23	10.63	12.04	11.68	52.50
1939	10.17												10.17
1940									M1.01				1.01
1941	M1.10	0.54	3.86	2.41	1.93	3.79	4.58	1.09	4.42		M5.54	M2.66	31.92
1942	5.87	2.74	3.18	3.16	M1.45		M6.31		4.59		M2.28		29.58
1943		M3.32	M0.77	M2.10			6.65	5.66	11.24	9.26	6.50	9.86	55.36

1944	4.55	1.76	5.75	3.65	4.27	3.04	3.72	4.71	3.69	12.39	7.52	4.43	59.48
1945	3.49	3.17	4.54	2.82	1.33	4.66	7.76	4.17	7.31	11.05	2.43	2.57	55.30
1946	4.24	2.03	3.50	3.11	1.25	1.08	6.61	5.52	4.90	10.52	7.31	2.47	52.54
1947	4.76	2.18	5.80	4.33	3.25	4.77	2.01	8.47	11.09	4.87	4.89	4.36	60.78
1948	6.77	1.14	4.16	0.27	4.39	2.52	5.54	3.39	11.51	M10.94	10.38	2.95	63.96
1949	7.33	4.03	M1.83	4.32	3.38	5.34	3.97	3.52	7.80	8.50	9.22	2.35	61.59
1950	0.94	2.22	1.29	2.09	3.38	1.08	7.07	4.95	7.32	3.28	2.13	3.43	39.18
1951	2.09	2.31	3.75	3.54	2.12	4.06	2.67	2.76	3.85	3.65	4.70	2.30	37.80
1952	3.50	2.85	3.32	3.72	6.19	2.44	3.71	5.90	10.84	13.29	7.11	2.86	65.73
1953	1.46	6.28	3.65	2.95	2.51	2.98	2.95	5.45	6.17	12.33	2.72	5.02	54.47
1954	2.01	4.22	1.49	1.95	2.98	1.48	3.50	1.11	5.03	6.32	5.67	5.42	41.18
1955	4.03	3.30	4.72	2.46	4.89	2.22	2.37	6.53	5.39	7.47	2.65	2.86	48.89
1956	2.83	4.05	4.69	3.00	4.83	3.42	2.96	9.99	4.59	6.50	11.22	9.89	67.97
1957	1.05	3.99	1.35	3.65	2.44	1.44	2.83	1.50	5.61	3.94	8.55	3.76	40.11
1958	4.90	2.00	1.20	1.96	4.13	2.65	4.31	4.20	5.06	9.39	4.31	7.45	51.56
1959	1.39	4.15	4.56	3.42	3.79	1.36	7.39	5.39	5.51	6.04	6.82	5.88	55.70
1960	3.86	2.05	4.84	3.13	1.52	3.51	4.31	4.77	8.47	8.95	4.97	7.39	57.77
1961	3.76	4.07	2.67	3.92	4.75	3.22	6.04	12.31	7.01	10.20	6.12	4.04	68.11
1962	6.99	0.96	5.00	1.99	2.85	4.75	4.75	5.21	9.75	7.39	4.03	8.16	61.83
1963	6.55	6.03	3.69	3.85	2.02	4.53	5.22	1.20	8.05	7.78	3.91	4.56	57.39
1964	3.19	8.48	4.38	4.04	4.35	3.37	6.94	3.48	2.59	7.35	4.89	5.22	58.28
1965	7.75	5.10	1.66	3.33	4.45	3.11	2.26	4.17	2.34	7.99	1.46	4.26	47.88
1966	4.34	3.13	6.36	2.08	6.33	1.74	3.91	6.37	8.20	6.97	4.39	4.48	58.30
1967	4.04	4.74	1.34	1.12	2.94	2.87	4.26	5.46	8.53	5.71	5.81	3.25	50.07
1968	3.25	5.30	3.85	3.25	1.45	1.95	4.60	2.39	10.14	4.60	5.34	1.90	48.02
1969	0.94	0.68	4.17	1.74	3.38	2.41	7.88	7.54	5.44	3.77	8.69	4.36	51.00
1970	2.37	3.35	4.08	3.69	3.92	2.97	5.01	7.47	9.86	5.87	2.01	2.58	53.18
1971	5.56	3.93	3.33	2.44	4.30	1.74	1.67	6.89	5.36	5.80	4.38	3.23	48.63
1972	3.73	2.71	4.19	3.62	4.03	3.98	1.15	8.62	6.24	8.49	3.35	3.56	53.67
1973	4.37	3.94	3.01	2.41	4.09	2.80	3.65	6.64	4.95	6.07	1.63	2.30	45.86
1974	2.37	6.23	1.15	2.59	1.66	4.92	3.12	5.78	5.96	15.25	7.79	7.03	63.85
1975	4.10	3.76	2.17	3.04	3.59	2.48	4.96	2.78	7.25	3.55	2.83	5.81	46.32
1976	8.19	4.82	3.61	2.14	3.42	3.37	2.48	3.16	8.32	6.19	5.15	5.56	56.41
1977	4.59	4.56	3.31	4.02	1.56	3.47	3.19	3.03	5.57	7.14	4.58	2.16	47.18

1978	1.71	1.50	1.84	2.19	2.86	3.18	3.98	4.39	3.07	13.00	3.90	4.46	46.08
1979	2.19	0.91	3.98	0.98	2.45	2.74	5.44	0.56	4.89	9.06	8.36	7.73	49.29
1980	3.44	2.83	2.75	5.32	2.53	4.37	6.49	5.61	7.91	11.26	7.10	2.27	61.88
1981	4.66	2.57	1.88	2.11	3.27	2.44	4.25	6.19	11.61	6.18	6.93	2.24	54.33
1982	3.74	1.42	2.52	2.44	5.10	1.86	1.73	5.97	5.10	7.97	2.10	1.17	41.12
1983	4.00	1.69	0.59	2.52	5.37	2.69	3.16	9.52	6.13	4.24	1.15	0.49	41.55
1984	6.06	M5.40	3.75	2.11	1.84	4.17	6.92	6.26	M3.39	6.69	5.99	5.10	57.68
1985	10.13	7.00	4.67	3.96	4.09	4.07	3.28	3.53	4.81	4.85	1.54	8.33	60.26
1986	7.00	3.25	6.08	2.98	2.54	2.76	2.38	6.89	2.40	M12.33	5.87	6.42	60.90
1987	3.99	3.13	2.12	2.08	2.60	6.02	2.54	4.54	8.92	10.36	7.17	5.32	58.79
1988	2.58	6.55	4.15	2.25	3.91	2.05	5.21	5.53	5.46	9.71	8.62	4.75	60.77
1989	6.77	0.07	1.33	0.87	3.44	1.10	3.81	2.82	7.29	6.37	6.23	6.78	46.88
1990	3.72	4.54	4.86	1.06	1.72	3.32	4.65	5.35	10.63	6.59	4.89	6.03	57.36
1991	4.16	6.55	4.41	4.73	4.72	3.41	4.85	9.60	15.14	8.63	9.63	9.32	85.15
1992	8.69	7.24	6.37	3.63	9.20	2.98	5.18	5.02	11.45	5.90	7.91	5.73	79.30
1993	9.11	8.09	3.50	1.94	2.19	4.92	2.25	3.20	8.44	9.00	11.06	7.89	71.59
1994	7.05	2.52	6.50	3.68	4.20	1.83	4.32	2.68	11.17	9.15	9.57	6.22	68.89
1995	1.94	2.76	3.01	2.08	2.85	3.45	4.36	5.01	7.43	6.04	2.93	4.58	46.44
1996	2.26	8.43	4.12	2.19	1.80	6.22	3.16	7.91	10.68	6.20	2.75	4.73	60.45
1997	2.73	8.17	3.91	4.41	3.25	3.51	10.36	3.93	8.26	7.85	4.63	13.61	74.62
1998	2.54	1.90	3.71	3.12	2.21	2.50	4.95	6.80	6.17	12.13	1.72	5.45	53.20
1999	8.14	2.66	2.58	7.48	5.69	2.69	4.10	6.77	10.62	12.19	5.77	10.30	78.99
2000	4.82	1.56	5.75	4.40	3.25	5.72	6.65	6.12	10.05	10.11	6.37	4.17	68.97
2001	7.43	4.40	3.33	2.19	5.19	1.65	7.26	3.66	8.37	7.80	3.62	4.49	59.39
2002	3.28	5.62	1.33	0.47	2.37	3.40	4.72	10.50	6.08	10.69	7.95	5.86	62.27
2003	5.68	1.44	3.56	0.86	2.90	3.74	3.44	4.53	11.41	4.44	6.21	5.92	54.13
2004	5.89	5.66	5.59	4.43	0.84	1.30	3.54	2.51	9.23	7.18	8.38	10.67	65.22
2005	5.90	6.12	4.18	2.94	0.89	3.00	5.25	6.58	9.92	9.12	13.38	6.74	74.02
2006	2.93	2.07	1.55	4.24	4.56	5.93	4.43	11.02	13.01	11.78	3.40	9.37	74.29
2007	6.25	3.00	4.81	2.99	4.27	1.85	6.71	2.35	9.09	11.67	3.15	3.75	59.89
2008	4.91	4.92	4.00	4.79	3.87	1.68	8.25	5.33	10.84	15.05	5.89	3.92	73.45
2009	9.38	3.89	2.95	2.17	2.67	2.83	2.35	7.30	8.92	5.65	7.20	3.95	59.26
2010	4.79	1.53	6.16	3.08	1.25	4.05	3.86	4.30	6.24	8.84	7.87	1.90	53.87
2011	5.26	5.65	1.28	1.83	2.82	4.50	3.51	10.72	8.58	7.39	7.68	7.44	66.66

2012	6.43	3.10	2.82	1.68	5.73	6.69	5.37	7.59	11.02	3.50	4.59	4.92	63.44
2013	7.70	6.61	2.36	6.37	5.33	3.19	4.45	4.90	7.53	10.09	6.69	8.52	73.74
2014	10.15	1.98	3.45	2.67	1.67	7.48	8.26	8.53	9.31	7.46	4.44	3.29	68.69
2015	11.98	3.62	4.52	7.18	0.52	4.66	10.40	8.92	11.51	7.21	12.02	2.42	84.96
2016	6.53	3.26	2.17	5.16	5.67	3.48	4.28	5.97	11.64	2.59	6.55	6.73	64.03
2017	6.27	4.31	4.44	1.96	5.19	3.86	7.04	8.46	8.30	9.33	2.34	8.07	69.57
2018	5.70	2.35	2.53	3.15	5.27	3.07	2.78	M4.10					28.95

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

Table 2. Precipitation Summary for 2014 Delineation

Climatological Data for JUNEAU AIRPORT, AK - August 2013

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2013-08-01	76	52	64.0	24	14	0.00	0.0	0
2013-08-02	74	50	62.0	22	12	0.00	0.0	0
2013-08-03	70	52	61.0	21	11	0.00	0.0	0
2013-08-04	59	55	57.0	17	7	0.55	0.0	0
2013-08-05	65	53	59.0	19	9	0.17	0.0	0
2013-08-06	71	51	61.0	21	11	0.00	0.0	0
2013-08-07	75	50	62.5	23	13	0.00	0.0	0
2013-08-08	62	56	59.0	19	9	0.24	M	0
2013-08-09	67	49	58.0	18	8	0.00	0.0	0
2013-08-10	69	46	57.5	18	8	0.00	M	0
2013-08-11	72	47	59.5	20	10	0.00	0.0	0
2013-08-12	78	49	63.5	24	14	0.00	0.0	0
2013-08-13	72	49	60.5	21	11	0.00	0.0	0
2013-08-14	72	56	64.0	24	14	0.00	0.0	0
2013-08-15	73	52	62.5	23	13	0.37	0.0	0
2013-08-16	62	53	57.5	18	8	0.25	0.0	0
2013-08-17	60	53	56.5	17	7	0.19	0.0	0
2013-08-18	56	50	53.0	13	3	1.18	0.0	0
2013-08-19	60	49	54.5	15	5	0.11	0.0	0
2013-08-20	57	52	54.5	15	5	0.11	0.0	0
2013-08-21	59	51	55.0	15	5	0.07	0.0	0
2013-08-22	60	50	55.0	15	5	T	0.0	0
2013-08-23	59	52	55.5	16	6	0.00	0.0	0
2013-08-24	56	52	54.0	14	4	0.40	0.0	0
2013-08-25	60	50	55.0	15	5	0.04	0.0	0
2013-08-26	65	47	56.0	16	6	0.07	0.0	0
2013-08-27	68	45	56.5	17	7	0.00	0.0	0
2013-08-28	68	47	57.5	18	8	0.00	0.0	0
2013-08-29	68	43	55.5	16	6	0.00	0.0	0
2013-08-30	57	46	51.5	12	2	0.14	0.0	0
2013-08-31	57	54	55.5	16	6	1.01	0.0	0
Average|Sum	65.4	50.4	57.9	562	252	4.90	0.0	0.0

Climatological Data for JUNEAU AIRPORT, AK - September 2013

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2013-09-01	57	54	55.5	16	6	1.30	0.0	0
2013-09-02	69	51	60.0	20	10	0.00	0.0	0
2013-09-03	67	49	58.0	18	8	0.04	0.0	0
2013-09-04	56	53	54.5	15	5	0.74	0.0	0
2013-09-05	60	53	56.5	17	7	0.04	0.0	0
2013-09-06	60	52	56.0	16	6	0.10	0.0	0
2013-09-07	63	56	59.5	20	10	0.74	0.0	0
2013-09-08	61	49	55.0	15	5	0.33	0.0	0
2013-09-09	62	46	54.0	14	4	0.00	0.0	0
2013-09-10	56	43	49.5	10	0	0.30	0.0	0
2013-09-11	64	51	57.5	18	8	T	0.0	0
2013-09-12	62	50	56.0	16	6	0.06	0.0	0
2013-09-13	61	42	51.5	12	2	T	0.0	0
2013-09-14	61	44	52.5	13	3	0.00	0.0	0
2013-09-15	64	39	51.5	12	2	0.10	0.0	0
2013-09-16	58	50	54.0	14	4	0.17	0.0	0
2013-09-17	53	49	51.0	11	1	0.35	0.0	0
2013-09-18	53	48	50.5	11	1	0.17	0.0	0
2013-09-19	50	46	48.0	8	0	0.91	0.0	0
2013-09-20	56	48	52.0	12	2	1.05	0.0	0
2013-09-21	51	47	49.0	9	0	0.42	0.0	0
2013-09-22	53	45	49.0	9	0	0.10	0.0	0
2013-09-23	56	46	51.0	11	1	T	M	0
2013-09-24	55	37	46.0	6	0	0.00	0.0	0
2013-09-25	53	32	42.5	3	0	0.07	0.0	0
2013-09-26	49	47	48.0	8	0	0.25	0.0	0
2013-09-27	49	45	47.0	7	0	0.20	0.0	0
2013-09-28	52	42	47.0	7	0	0.08	0.0	0
2013-09-29	52	39	45.5	6	0	T	0.0	0
2013-09-30	60	37	48.5	9	0	0.01	0.0	0
Average|Sum	57.4	46.3	51.9	363	91	7.53	0.0	0.0

Table 3. Precipitation Summary for 2017 Delineation

Climatological Data for JUNEAU AIRPORT, AK - June 2017

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2017-06-01	62	48	55.0	15	5	0.01	0.0	0
2017-06-02	66	48	57.0	17	7	0.01	0.0	0
2017-06-03	58	40	49.0	9	0	0.00	0.0	0
2017-06-04	61	36	48.5	9	0	0.02	0.0	0
2017-06-05	53	46	49.5	10	0	0.06	0.0	0
2017-06-06	64	49	56.5	17	7	0.01	0.0	0
2017-06-07	68	52	60.0	20	10	T	0.0	0
2017-06-08	73	52	62.5	23	13	0.00	0.0	0
2017-06-09	60	49	54.5	15	5	0.02	0.0	0
2017-06-10	56	49	52.5	13	3	0.01	0.0	0
2017-06-11	52	47	49.5	10	0	0.06	0.0	0
2017-06-12	53	45	49.0	9	0	0.12	0.0	0
2017-06-13	55	43	49.0	9	0	0.02	0.0	0
2017-06-14	63	41	52.0	12	2	0.06	0.0	0
2017-06-15	56	46	51.0	11	1	0.22	0.0	0
2017-06-16	50	43	46.5	7	0	0.39	0.0	0
2017-06-17	50	45	47.5	8	0	0.50	0.0	0
2017-06-18	67	49	58.0	18	8	0.00	0.0	0
2017-06-19	61	49	55.0	15	5	0.23	0.0	0
2017-06-20	55	48	51.5	12	2	0.63	0.0	0
2017-06-21	59	49	54.0	14	4	0.08	0.0	0
2017-06-22	63	45	54.0	14	4	0.09	0.0	0
2017-06-23	67	41	54.0	14	4	T	0.0	0
2017-06-24	60	51	55.5	16	6	0.43	0.0	0
2017-06-25	58	49	53.5	14	4	0.13	0.0	0
2017-06-26	54	50	52.0	12	2	0.17	0.0	0
2017-06-27	59	50	54.5	15	5	T	0.0	0
2017-06-28	65	50	57.5	18	8	0.00	0.0	0
2017-06-29	64	51	57.5	18	8	0.34	0.0	0
2017-06-30	56	50	53.0	13	3	0.25	0.0	0
Average|Sum	59.6	47.0	53.3	407	116	3.86	0.0	0.0

Table 4. Precipitation Summary for 2018 Delineation

Climatological Data for JUNEAU AIRPORT, AK - June 2018

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation	Snowfall	Snow Depth
2018-06-01	64	39	51.5	12	2	T	0.0	0
2018-06-02	58	41	49.5	10	0	0.07	0.0	0
2018-06-03	62	36	49.0	9	0	T	0.0	0
2018-06-04	50	46	48.0	8	0	0.64	0.0	0
2018-06-05	62	44	53.0	13	3	T	0.0	0
2018-06-06	61	45	53.0	13	3	0.01	0.0	0
2018-06-07	59	42	50.5	11	1	0.06	0.0	0
2018-06-08	61	43	52.0	12	2	0.04	0.0	0
2018-06-09	57	42	49.5	10	0	0.44	0.0	0
2018-06-10	52	44	48.0	8	0	0.22	0.0	0
2018-06-11	58	47	52.5	13	3	0.13	0.0	0
2018-06-12	64	47	55.5	16	6	0.00	0.0	0
2018-06-13	67	48	57.5	18	8	0.16	0.0	0
2018-06-14	52	48	50.0	10	0	0.11	0.0	0
2018-06-15	63	48	55.5	16	6	0.00	0.0	0
2018-06-16	56	49	52.5	13	3	0.15	0.0	0
2018-06-17	61	53	57.0	17	7	0.05	0.0	0
2018-06-18	74	54	64.0	24	14	T	0.0	0
2018-06-19	81	50	65.5	26	16	0.00	0.0	0
2018-06-20	85	55	70.0	30	20	0.00	0.0	0
2018-06-21	73	57	65.0	25	15	0.00	0.0	0
2018-06-22	68	54	61.0	21	11	0.00	0.0	0
2018-06-23	62	49	55.5	16	6	0.01	0.0	0
2018-06-24	61	51	56.0	16	6	0.02	0.0	0
2018-06-25	64	49	56.5	17	7	0.00	0.0	0
2018-06-26	59	49	54.0	14	4	0.09	0.0	0
2018-06-27	61	49	55.0	15	5	0.01	0.0	0
2018-06-28	61	50	55.5	16	6	T	0.0	0
2018-06-29	58	51	54.5	15	5	0.83	0.0	0
2018-06-30	62	50	56.0	16	6	0.03	0.0	0
Average|Sum	62.5	47.7	55.1	460	165	3.07	0.0	0.0

APPENDIX C

WETLAND DETERMINATION DATA FORMS

2017 Wetland Delineation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: 100
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hummocks
Local relief (concave, convex, none): Concave | Slope (%): 3-5
Subregion: Southeast Alaska | Lat: 57.474984 | Long: -134.558515 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0			
Hydric Soil Present?	Yes 0	No X	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes**	**No x**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	65	1	FAC
2.			0
3.			0
4.			0
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	70	1	FAC
2. Menziesia ferruginea	5		FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15
Herb Stratum			
1. Cornus canadensis	60	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12

Plot size (radius, or length x width) 5 ft radius | % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL

Sampling Point: 100

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10R 2.5/2	100					Organics	Decomposed
8-12	10R 3/2	100					Organics	with 25% silt
12-20	10R 3/4	100					Organics	Decomposed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P101
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): hummocks
Local relief (concave, convex, none): none | Slope (%): 2%
Subregion: Southeast Alaska | Lat: 57.475006 | Long: -134.558536 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes x No**

Remarks: 30 foot tree stratum radius, problematic vegetation: wetland hydrology present for dominant FAC vegetation types
Saturated and very dark, actively decomposing organic peat.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	1	FAC
2.			0
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	50	1	FAC
2. Menziesia ferruginea	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Herb Stratum			
1. Moneses uniflora	20	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	130	x 3=	390
FACU species	40	x 4=	160
UPL species	0	x 5=	0
Column Totals:	170 (A)		550 (B)

Prevalence Index = B/A = 3.235294118

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0
- ___ Morphological Adaptations[1] (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No**

Remarks: 30 foot tree stratum radius, problematic vegetation: wetland hydrology present for dominant FAC vegetation types

SOIL

Sampling Point: P101

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR2/1	100					Organic - pea	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- x Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? **Yes** X **No** ___

Remarks: Saturated and very dark, actively decomposing organic peat.
Expect saturation of greater than or equal to 16 inches earlier in the growing season.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 11.5		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): 4	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: 102
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): hillside
Local relief (concave, convex, none): none | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.474253 | Long: 134.554381 | Datum: NAD 83
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 0	No X		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No** x

Remarks:

Soil is moist to very moist but not saturated

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	40	1	FAC
2. Picea sitchensis	40	1	FACU
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Tsuga heterophylla	10		FAC
2. Oplopanax horridus	15		FACU
3. Vaccinium ovalifolium	50	1	FAC
4. Menziesia ferruginea	5		FACU
5.			0
6.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Cornus canadensis	50	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ____
% Cover of Wetland Bryophytes (Where applicable) ____ | Total Cover of Bryophytes ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	100	x 3=	300
FACU species	110	x 4=	440
UPL species	0	x 5=	0
Column Totals:	210 (A)		740 (B)

Prevalence Index = B/A = 3.523809524

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:

SOIL

Sampling Point: 102

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	100					organic/duff	
9-20	10YR 2/1	100					silt loam w/	30% peat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>20	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>20	

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil is moist to very moist but not saturated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 17-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P103
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Slope w/hummocks
Local relief (concave, convex, none): Concave | Slope (%): 3-5%
Subregion: Southeast Alaska | Lat: 57.474265 | Long: -134.5544 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0			
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X**	**No**

Remarks: 30 foot tree stratum radius
Expect greater than or equal to 16 inches of saturation earlier in the growing season.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	40	1	FAC
2. Picea sitchensis	20	1	FACU
3.			0
4.			0
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12
Sapling/Shrub Stratum			
1. Tsuga heterophylla	30	1	FAC
2. Vaccinium ovalifolium	40	1	FAC
3.			0
4.			0
5.			0
6.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Herb Stratum			
1. Lysichiton americanus	10	1	OBL
2. Cornus canadensis	1		FACU
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	11		
50% of total cover: 5.5	20% of total cover:		2.2

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 50 | Total Cover of Bryophytes 100

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks: 30 foot tree stratum radius

SOIL

Sampling Point: P103

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR2/1						Peat	
8-20	10YR2/1						Gr. slt loam	With organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? **Yes** X **No** ___

Remarks: Expect greater than or equal to 16 inches of saturation earlier in the growing season.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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 x	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 11		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): 8	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P104
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): Concave | Slope (%): 7
Subregion: Southeast Alaska | Lat: 57.472645 | Long: -134.554149 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X No**

Remarks: Problematic vegetation: falso azalea (M. ferruginea) is rooted on hummocks and doesn't reflect wetland conditions.
Plot is concave and has wetland hydrology and hydric soils.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	60	1	FAC
2. Picea sitchensis	20	1	FACU
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Menziesia ferruginea	20	1	FACU
2. Vaccinium alaskaense	40	1	FAC
3.			0
4.			0
5.			0
6.			0
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12
Herb Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0

Plot size (radius, or length x width) 5 ft radius | % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

- ___ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0
- ___ Morphological Adaptations[1] (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No**

Remarks: problematic vegetation: saturated conditions for FAC species

SOIL

Sampling Point: P104

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 2/1	100					Peat	More fibrous above
7-16	10YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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 X	No ___	Depth (Inches):	1
Water Table Present?	Yes X	No ___	Depth (Inches):	4
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P105
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): None | Slope (%): 8
Subregion: Southeast Alaska | Lat: 57.472807 | Long: -134.554246 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No** x

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	30	1	FAC
2. Picea sitchensis	35	1	FACU
3.			0
4.			0
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	30	1	FAC
2. Vaccinium parvifolium	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Herb Stratum			
1. Moneses uniflora	10	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
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 ____
% Cover of Wetland Bryophytes (Where applicable) ____ | Total Cover of Bryophytes ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** x

Remarks:

SOIL

Sampling Point: P105

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100					Peat	& sand
9-18	10YR 4/2	100					Sa lo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P106
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): None | Slope (%): 25
Subregion: Southeast Alaska | Lat: 57.470228 | Long: -134.548527 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___ **No** x

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	60	1	FACU
2. Tsuga heterophylla	20	1	FAC
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	15	1	FACU
2. Vaccinium alaskaense	30	1	FAC
3.			0
4.			0
5.			0
6.			0
Total Cover:	45		
50% of total cover: 22.5	20% of total cover:		9
Herb Stratum			
1. Rubus pedatus	30	1	FAC
2. Moneses uniflora	10		FACU
3. Streptopus amplexifolius	20	1	FACU
4. Gymnocarpium dryopteris	15	1	FACU
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks:

SOIL

Sampling Point: P106

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10R 3/2	100					Organics	Decomposed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P107
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): depression
Local relief (concave, convex, none): None | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.469736 | Long: -134.540081 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X** **No** ___

Remarks: Near beginning of ATV trail, wetland lobe extends into SWCA "upland."

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			0
2.			0
3.			0
4.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0
Sapling/Shrub Stratum			
1. Oplopanax horridus	5	1	FACU
2. Vaccinium alaskaense	10	1	FAC
3.			0
4.			0
5.			0
6.			0
Total Cover:	15		
50% of total cover: 7.5	20% of total cover:		3
Herb Stratum			
1. Athyrium cyclosorum	40	1	FAC
2. Lysichiton americanus	30	1	OBL
3. Tiarella trifoliata	5		FAC
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** ___

Remarks: Near beginning of ATV trail, wetland lobe extends into SWCA "upland."

SOIL

Sampling Point: P107

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100					Organic	peaty muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 x	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 6		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): 0	**Wetland Hydrology Present? Yes** X **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P108
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Terrace and
Local relief (concave, convex, none): None | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.469443 | Long: -134.546762 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___ **No** x

Remarks: Above swale near cabins

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	60	1	FACU
2. Tsuga heterophylla	10		FAC
3.			0
4.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	20	1	FAC
2. Menziesia ferruginea	5		FACU
3. Oplopanax horridus	2		FACU
4. Vaccinium vitis-idaea	10	1	FAC
5.			0
6.			0
Total Cover:	37		
50% of total cover: 18.5	20% of total cover:		7.4
Herb Stratum			
1. Streptopus amplexifolius	20	1	FACU
2. Cornus canadensis	20	1	FACU
3. Maianthemum dilatatum	10		FAC
4. Rubus pedatus	20	1	FAC
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: Above swale near cabins

SOIL

Sampling Point: P108

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Organic	Decomposed bark
10-18	2.5Y 6/1	50					Sa pebbles	
10-18	10YR 3/1	50					Organic	Charcoal, decomposed bark

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x Depth (Inches): NA

Water Table Present? Yes ___ No x Depth (Inches): >16

Saturation Present? Yes ___ No x Depth (Inches): >16

(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P109
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Depression
Local relief (concave, convex, none): Concave | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.469351 | Long: -134.546288 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X** **No**

Remarks: 6/18/2017. Wetland 98
Assume hydric soils based on the presence of saturation.
Expect water table to rise given more time.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	1	FAC
2.			0
3.			0
4.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Oplopanax horridus	25	1	FACU
2. Menziesia ferruginea	5		FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Herb Stratum			
1. Maianthemum dilatatum	30	1	FAC
2. Athyrium cyclosorum	20	1	FAC
3. Gymnocarpium dryopteris	20	1	FACU
4. Lysichiton americanus	5		OBL
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks: 6/18/2017. Wetland 98

SOIL

Sampling Point: P109

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Cl lo	
6-20	10YR 2/1	100					Gr sa lo	25% loam, pea gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? **Yes** X **No** ___

Remarks: Assume hydric soils based on the presence of saturation.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- X 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No X	Depth (Inches):	>18	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Expect water table to rise given more time.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P110
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Shoreline
Local relief (concave, convex, none): None | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.466943 | Long: -134.543671 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___	**No x**

Remarks: At sw end of wetl98, a-11; coralroot= 5%; no shrubs

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	50	1	FACU
2. Tsuga heterophylla	30	1	FAC
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0
Herb Stratum			
1. Maianthemum dilatatum	10	1	FAC
2. Moneses uniflora	3		FACU
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	13		
50% of total cover: 6.5	20% of total cover:		2.6

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No** ___

Remarks: At sw end of wetl98, a-11; coralroot= 5%; no shrubs

SOIL

Sampling Point: P110

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 3/2	100					Organic	decomposed bark
4-16	10YR 3/2	100					Sa	Coarse

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA
Water Table Present?	Yes ___	No x	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P111
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Swale
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.466998 | Long: -134.543589 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X** **No**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	30	1	FACU
2. Tsuga heterophylla	10	1	FAC
3.			0
4.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Sapling/Shrub Stratum			
1. Oplopanax horridus	40	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Herb Stratum			
1. Lysichiton americanus	30	1	OBL
2. Maianthemum dilatatum	5		FAC
3. Tiarella trifoliata	10	1	FAC
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	45		
50% of total cover: 22.5	20% of total cover:		9

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL

Sampling Point: P111

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Muck	
10-20	N 2.5/	100					Muck	With 20% sa gr

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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 x	Depth (Inches):	NA
Water Table Present?	Yes X	No ___	Depth (Inches):	5
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0

Wetland Hydrology Present? Yes X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P112
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Swale
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.465794 | Long: -134.537242 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X** **No**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	1	FAC
2.			0
3.			0
4.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Picea sitchensis	1		FACU
2. Menziesia ferruginea	5		FACU
3. Vaccinium alaskaense	80	1	FAC
4. Tsuga heterophylla	10		FAC
5.			0
6.			0
Total Cover:	96		
50% of total cover: 48	20% of total cover:		19.2
Herb Stratum			
1. Lysichiton americanus	30	1	OBL
2. Rubus pubescens	5		FACW
3. Cornus canadensis	5		FACU
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks:

SOIL

Sampling Point: P112

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	100					Peaty muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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 x	Depth (Inches):	NA
Water Table Present?	Yes X	No ___	Depth (Inches):	6
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0

Wetland Hydrology Present? Yes X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P113
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): None | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.466258 | Long: -134.53419 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0		
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X** **No**

Remarks: Southeast corner, dense thick veg, scrub-shrub edge of open peatland, cow parsnip

Very moist to surface,

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Malus fusca	8	1	FACW
2.			0
3.			0
4.			0
Total Cover:	8		
50% of total cover: 4	20% of total cover:		1.6
Sapling/Shrub Stratum			
1. Picea sitchensis	5	1	FACU
2. Menziesia ferruginea	3	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	8		
50% of total cover: 4	20% of total cover:		1.6
Herb Stratum			
1. Lysichiton americanus	35	1	OBL
2. Athyrium cyclosorum	20	1	FAC
3. Schedonorus pratensis	5		FACU
4. Equisetum arvense	20	1	FAC
5. Pteridium aquilinum	5		FACU
6. Maianthemum dilatatum	5		FAC
7. Cornus canadensis	5		FACU
8. Tiarella trifoliata	2		FAC
9. Heracleum maximum	3		FACU
10.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20

Plot size (radius, or length x width) 5 ft radius | % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks: Southeast corner, dense thick veg, scrub-shrub edge of open peatland, cow parsnip

SOIL

Sampling Point: P113

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Mu peat	
12-20	7.5YR 3/2	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 x	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 10		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): 6	**Wetland Hydrology Present? Yes** X **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Very moist to surface,

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P114
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Road prism
Local relief (concave, convex, none): | Slope (%):
Subregion: Southeast Alaska | Lat: 57.466416 | Long: -134.533911 | Datum: NAD 83
Soil Map Unit Name: None | 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	0	No	x			
Hydric Soil Present?	Yes	0	No	x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes	0	No	x	**within a Wetland?**	**Yes**	**No x**

Remarks: Edge of road prism, saturated organic soils to edge of prism, plants upland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			0
2.			0
3.			0
4.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0
Sapling/Shrub Stratum			
1. Rubus parviflorus	80	1	FACU
2. Picea sitchensis	10	1	FACU
3. Salix ovalifolia	5		FAC
4. Pteridium aquilinum	5		FACU
5.			0
6.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20
Herb Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0

Plot size (radius, or length x width) 5 ft radius | % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No x**

Remarks: Edge of road prism, saturated organic soils to edge of prism, plants upland

SOIL

Sampling Point: P114

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 3/2	100					Rock	With si lo, duff, road fil

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P115
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Terrace/hill slope
Local relief (concave, convex, none): None | Slope (%): 8
Subregion: Southeast Alaska | Lat: 57.470826 | Long: -134.540509 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___ **No** x

Remarks: Upland knob, extensive down wood and moss

Moist, but not saturated

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			#N/A
2.			#N/A
3. Picea sitchensis	20	1	FACU
4. Tsuga heterophylla	60	1	FAC
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1.			0
2.			0
3. Vaccinium ovalifolium	30	1	FAC
4. Menziesia ferruginea	20	1	FACU
5.			0
6.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Herb Stratum			
1. Cornus canadensis	40	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: Upland knob, extensive down wood and moss

SOIL

Sampling Point: P115

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					organic	Decomposed wood
8-18	10YR 4/6	100					Loam	With 20% organic material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Moist, but not saturated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P116
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): None | Slope (%): 10
Subregion: Southeast Alaska | Lat: 57.470583 | Long: -134.540812 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0			
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X**	**No**

Remarks: Several feet below upland, lush lady fern

Glistening along pit @ 10 inches, expect wt to appear after more time

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	1	FAC
2. Picea sitchensis	8		FACU
3.			0
4.			0
Total Cover:	58		
50% of total cover: 29	20% of total cover:		11.6
Sapling/Shrub Stratum			
1. Vaccinium vitis-idaea	25	1	FAC
2. Vaccinium ovalifolium	10	1	FAC
3. Oplopanax horridus	20		FACU
4. Menziesia ferruginea	10		FACU
5. Rubus spectabilis	2		FACU
6.			0
Total Cover:	67		
50% of total cover: 33.5	20% of total cover:		13.4
Herb Stratum			
1. Athyrium cyclosorum	35	1	FAC
2. Streptopus amplexifolius	5		FACU
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** ___

Remarks: Several feet below upland, lush lady fern

SOIL

Sampling Point: P116

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/1	100					Mucky peat	
15-18	10YR 3/2	100					Mucky peat	Sand & gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: Roots,

Depth (inches) ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- X 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No X	Depth (Inches):	>18	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Glistening along pit @ 10 inches, expect wt to appear after more time

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P119
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): None | Slope (%): 15
Subregion: Southeast Alaska | Lat: 57.471755 | Long: -134.540092 | Datum: NAD 83
Soil Map Unit Name: None | 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	X	No	x			
Hydric Soil Present?	Yes	X	No	0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes	X	No	0	**within a Wetland?**	**Yes** X	**No** ___

Remarks: Just west of road
Near the boundary, lower down is skunk cabbage and peat, saturated to the surface

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	40	1	FAC
2.			0
3.			0
4.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Sapling/Shrub Stratum			
1. Menziesia ferruginea	25	1	FACU
2. Vaccinium alaskaense	40	1	FAC
3. Tsuga heterophylla	25	1	FAC
4.			0
5.			0
6.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Herb Stratum			
1. Cornus canadensis	25	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** x

Remarks: Just west of road

SOIL

Sampling Point: P119

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 2/1	100					Organics	
13-19	N 5/	20	10YR 5/4				Sa cl lo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- x Histic Epipedon (A2)
- ___ Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? **Yes** X **No** _____

Remarks: Near the boundary, lower down is skunk cabbage and peat, saturated to the surface

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- X 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P120
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): None | Slope (%): 8-10
Subregion: Southeast Alaska | Lat: 57.471561 | Long: -134.540128 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___ **No** x

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	10	1	FAC
2. Picea sitchensis	25	1	FACU
3.			0
4.			0
Total Cover:	35		
50% of total cover: 17.5	20% of total cover:		7
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	60	1	FAC
2. Menziesia ferruginea	25	1	FACU
3. Vaccinium ovalifolium	5		FAC
4. Tsuga heterophylla	25	1	FAC
5. Picea sitchensis	25	1	FACU
6.			0
Total Cover:	140		
50% of total cover: 70	20% of total cover:		28
Herb Stratum			
1. Cornus canadensis	5	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	5		
50% of total cover: 2.5	20% of total cover:		1

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.43 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks:

SOIL

Sampling Point: P120

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR2/2	100					Humus	Very moist not saturated
14-20	10YR5/3	100					Sa Cl Lo	Moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA
Water Table Present?	Yes ___	No x	Depth (Inches):	>20
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>20

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P121
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): None | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.469957 | Long: -134.540052 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No** x

Remarks:

Moist, but not saturated

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	1	FAC
2.			0
3.			0
4.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Menziesia ferruginea	25	1	FACU
2. Vaccinium vitis-idaea	15		FAC
3. Vaccinium alaskaense	40	1	FAC
4.			0
5.			0
6.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Cornus canadensis	35	1	FACU
2. Rubus pedatus	25	1	FAC
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ____
% Cover of Wetland Bryophytes (Where applicable) ____ | Total Cover of Bryophytes ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

- x Dominance Test is >50%
- ____ Prevalence Index is ≤3.0
- ____ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: P121

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR2/2						Organic	Moist to very moist, not saturate

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: glacial till

Depth (inches) 17

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>17	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>17	**Wetland Hydrology Present?** **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Moist, but not saturated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P123
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): None | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.468791 | Long: -134.538676 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0			
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X**	**No**

Remarks: Moderate tree removal in the area in the past 5 years, more open canopy

Seepage at bottom of pit, expect WT to appear after more time

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	20	1	FAC
2. Picea sitchensis	10	1	FACU
3.			0
4.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Sapling/Shrub Stratum			
1. Menziesia ferruginea	30	1	FACU
2. Vaccinium alaskaense	40	1	FAC
3. Tsuga heterophylla	20	1	FAC
4.			0
5.			0
6.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Herb Stratum			
1. Athyrium cyclosorum	40	1	FAC
2. Cornus canadensis	25	1	FACU
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.57 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No**

Remarks: Moderate tree removal in the area in the past 5 years, more open canopy
West of ATV parking area, representative wetland plot of roadside area

SOIL

Sampling Point: P123

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- X 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Seepage at bottom of pit, expect WT to appear after more time

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P124
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside, west-facing slope
Local relief (concave, convex, none): Concave | Slope (%): 3-5
Subregion: Southeast Alaska | Lat: 57.470729 | Long: -134.549546 | Datum: NAD 83
Soil Map Unit Name: None | 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 X	No 0			
Hydric Soil Present?	Yes X	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes X	No 0	**within a Wetland?**	**Yes X**	**No**

Remarks: Southwest of stream 10, > 21, 9-21, 4-9, 1-4 tree sizes
Near a tree root wad tip-up, organic layer shallower likely because of tip up
Surface water 3' away in mud hole

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	30	1	FACU
2. Tsuga heterophylla	40	1	FAC
3.			0
4.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	35	1	FAC
2. Tsuga heterophylla	20	1	FAC
3. Sambucus racemosa	2		FACU
4. Vaccinium vitis-idaea	30	1	FAC
5. Vaccinium parvifolium	5		FACU
6.			0
Total Cover:	92		
50% of total cover: 46	20% of total cover:		18.4
Herb Stratum			
1. Lysichiton americanus	35	1	OBL
2. Athyrium cyclosorum	15	1	FAC
3. Tiarella trifoliata	5		FAC
4. Streptopus amplexifolius	2		FACU
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	57		
50% of total cover: 28.5	20% of total cover:		11.4

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.86 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No** ___

Remarks: Southwest of stream 10, > 21, 9-21, 4-9, 1-4 tree sizes

SOIL

Sampling Point: P124

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1			100			Mucky peat	
10-17	10YR 2/2			100			Mucky peat	With some gravels

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks: Near a tree root wad tip-up, organic layer shallower likely because of tip up

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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 x	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 6		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): 0	**Wetland Hydrology Present? Yes** X **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water 3' away in mud hole

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P125
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hummock on a slope
Local relief (concave, convex, none): None | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.470423 | Long: -134.549622 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___ **No** x

Remarks: Downslope of upland plot, extensive duff

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	35	1	FAC
2. Picea sitchensis	45	1	FACU
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	20	1	FAC
2. Tsuga heterophylla	40	1	FAC
3. Vaccinium parvifolium	20	1	FACU
4.			0
5.			0
6.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Gymnocarpium dryopteris	5	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	5		
50% of total cover: 2.5	20% of total cover:		1

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** x

Remarks: Downslope of upland plot, extensive duff

SOIL

Sampling Point: P125

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10R 3/3	40					Organic	Less decomposed wood
	10YR 2/1	60					Organic	Mixed matrix

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>18	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>18	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P126
Investigator(s): J.Barna, S.Hartung, L.Johnson, L.Mark | Landform (hillside, terrace, hummocks, etc.): Hillside
Local relief (concave, convex, none): Concave | Slope (%): 3-5
Subregion: Southeast Alaska | Lat: 57.46906 | Long: -134.539784 | Datum: NAD 83
Soil Map Unit Name: None | 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	X	No	0			
Hydric Soil Present?	Yes	X	No	0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes	X	No	0	**within a Wetland?**	**Yes** X	**No** ___

Remarks: On the edge of the study area boundary, west of lover's lane and north of ATV trail.

Water table rising, seeping along sides above 11"

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	20	1	FACU
2. Tsuga heterophylla	50	1	FAC
3.			0
4.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Sapling/Shrub Stratum			
1. Menziesia ferruginea	35	1	FACU
2. Oplopanax horridus	25	1	FACU
3. Vaccinium alaskaense	40	1	FAC
4.			0
5.			0
6.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20
Herb Stratum			
1. Lysichiton americanus	35	1	OBL
2. Athyrium cyclosorum	25	1	FAC
3. Maianthemum dilatatum	20		FAC
4. Cornus canadensis	15		FACU
5. Streptopus amplexifolius	10		FACU
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	105		
50% of total cover: 52.5	20% of total cover:		21

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.57 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: On the edge of the study area boundary, west of lover's lane and north of ATV trail.

SOIL

Sampling Point: P126

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 2/1	100					Organics	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- X Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 x	Depth (Inches):	NA
Water Table Present?	Yes X	No ___	Depth (Inches):	11
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0

Wetland Hydrology Present? Yes X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Water table rising, seeping along sides above 11"

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P200
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): flat
Local relief (concave, convex, none): none | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.475637 | Long: -134.558431 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x No**

Remarks: Characteristic plot - open sphagnum wetland

Expect WT to rise given more time.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	5	1	FACU
2. Tsuga heterophylla	10	1	FAC
3.			0
4.			0
Total Cover:	15		
50% of total cover: 7.5	20% of total cover:		3
Sapling/Shrub Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0
Herb Stratum			
1. Rhododendron groenlandicum	40	1	FAC
2. Rubus chamaemorus	30	1	FACW
3. Cornus canadensis	5		FACU
4. Empetrum nigrum	75	1	FAC
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	150		
50% of total cover: 75	20% of total cover:		30

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 40 | Total Cover of Bryophytes 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No**

Remarks: Characteristic plot - open sphagnum wetland

SOIL

Sampling Point: P200

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	5yr3/2	100					organic	Coarse organic
9-16	5yr4/3	100					organic	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- x 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)
- x 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): NA

Water Table Present? Yes ___ No x Depth (Inches): >16

Saturation Present? Yes x No ___ Depth (Inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Expect WT to rise given more time.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P201
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hillside hummok
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: | Long: | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No x**

Remarks: Veg a false positive indicator - soil and hydrology do not meet wetland criteria
Mixed soil, refusal @13" - glacial till with gravel/cobble beyond 13"
No hydro

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	90	1	FAC
2.			0
3.			0
4.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	80	1	FAC
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Cornus alba	75	1	FAC
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes 95

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No** ____

Remarks: Veg a false positive indicator - soil and hydrology do not meet wetland criteria

SOIL

Sampling Point: P201

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	5yr3/3	100					organic	duff
6-10	7.5yr3/2	100					silty,greasy	
10-13	7.5yr3/2	40					silty,greasy	
10-13	7.5yr4/2	30					organic	
10-13	7.5yr5/3	30					mineral	
>13							gravel	glacial till with gravel/cobble

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks: Mixed soil, refusal @13" - glacial till with gravel/cobble beyond 13"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA
Water Table Present?	Yes ___	No x	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydro

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P202
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): basin
Local relief (concave, convex, none): concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.478072 | Long: -134.559434 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x**	**No**

Remarks: Typical shrub wetland plot

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	70	1	FAC
2.			0
3.			0
4.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	40	1	FAC
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Herb Stratum			
1. Lysichiton americanus	20	1	OBL
2. Oplopanax horridus	15	1	FACU
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	35		
50% of total cover: 17.5	20% of total cover:		7

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 80 | Total Cover of Bryophytes 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks: Typical shrub wetland plot

SOIL

Sampling Point: P202

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr2/1	80					organic	greasy muck
0-10	10yr2/1	20					organic	greasy muck
10-16	10yr2/1	100					organic	greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- x Surface Water (A1)
- x High Water Table (A2)
- x 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)
- x Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (Inches):	2
Water Table Present?	Yes x	No ___	Depth (Inches):	Surface
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? Yes x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 17-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P203
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): muskeg
Local relief (concave, convex, none): none | Slope (%): slight
Subregion: Southeast Alaska | Lat: 57.476689 | Long: -134.556554 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x**	**No**

Remarks: Representative plot - PEM, muskage

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta	20	1	FAC
2. Tsuga heterophylla	10	1	FAC
3. Malus fusca	10	1	FACW
4.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Sapling/Shrub Stratum			
1. Cornus canadensis	5	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	5		
50% of total cover: 2.5	20% of total cover:		1
Herb Stratum			
1. Dodecatheon frigidum	10		FACW
2. Carex pachystachya	95	1	FAC
3. Lysichiton americanus	5		OBL
4. Menyanthes trifoliata	75	1	OBL
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	185		
50% of total cover: 92.5	20% of total cover:		37

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 50 | Total Cover of Bryophytes 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks: Representative plot - PEM, muskage

SOIL

Sampling Point: P203

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5yr3/2	100					organic	Coarse organic material
4-16	5yr4/3	100					organic	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- x Surface Water (A1)
- x High Water Table (A2)
- x 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)
- x 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)
- x Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes x No ___ Depth (Inches): 2

Water Table Present? Yes x No ___ Depth (Inches): Surface

Saturation Present? Yes x No ___ Depth (Inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes x No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P204
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hillside
Local relief (concave, convex, none): convex | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.482371 | Long: -134.548224 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___	**No x**

Remarks: Veg is a false positive indicator

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea sitchensis	10	1	FACU
2. Tsuga heterophylla	20	1	FAC
3.			0
4.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Sapling/Shrub Stratum			
1. Tsuga heterophylla	30	1	FAC
2. Picea sitchensis	20	1	FACU
3. Vaccinium vitis-idaea	40	1	FAC
4.			0
5.			0
6.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Herb Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 10
% Cover of Wetland Bryophytes ___ (Where applicable) | Total Cover of Bryophytes 40

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

- x Dominance Test is >50%
- ___ Prevalence Index is ≤3.0
- ___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No** ___

Remarks: Veg is a false positive indicator

SOIL

Sampling Point: P204

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5yr3/3	100					organic	Coarse organic material
12-16	10yr4/1	100					sandy silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P205
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): Muskeg
Local relief (concave, convex, none): none | Slope (%): slight
Subregion: Southeast Alaska | Lat: 57.481681 | Long: -134.550478 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x**	**No**

Remarks: Representative plot - PEM, muskeg
Expect at least 16 inches. Would be saturated earlier in the growing season.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status
1.				0
2.				0
3.				0
4.				0
	Total Cover:	0		
	50% of total cover: 0	20% of total cover:		0
Sapling/Shrub Stratum				
1. Cornus canadensis		25	1	FACU
2.				0
3.				0
4.				0
5.				0
6.				0
	Total Cover:	25		
	50% of total cover: 12.5	20% of total cover:		5
Herb Stratum				
1. Dodecatheon frigidum		10		FACW
2. Carex pachystachya		95	1	FAC
3. Lysichiton americanus		5		OBL
4. Menyanthes trifoliata		15		OBL
5.				0
6.				0
7.				0
8.				0
9.				0
10.				0
	Total Cover:	125		
	50% of total cover: 62.5	20% of total cover:		25

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 50 | Total Cover of Bryophytes 50

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1=	20
FACW species	10	x 2=	20
FAC species	95	x 3=	285
FACU species	25	x 4=	100
UPL species	0	x 5=	0
Column Totals:	150 (A)		425 (B)

Prevalence Index = B/A = 2.833333333

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
x Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks: Representative plot - PEM, muskeg

SOIL

Sampling Point: P205

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10yr2/1	100					organic	
11-20	10yr4/2	100					organic	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- x Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks: Expect at least 16 inches. Would be saturated earlier in the growing season.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- x High Water Table (A2)
- x 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 x	Depth (Inches): NA		
Water Table Present?	Yes x	No ___	Depth (Inches): 5		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches): 5	**Wetland Hydrology Present? Yes** x **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 16-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P206
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): flat
Local relief (concave, convex, none): | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.481553 | Long: -134.550748 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x				
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**			
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes**	**No**	**x**

Remarks: Upslope from muskage to the west

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Pinus contorta	5		FAC
2. Tsuga heterophylla	35	1	FAC
3.			0
4.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	85	1	FAC
2. Cornus canadensis	25	1	FACU
3. Vaccinium vitis-idaea	5		FAC
4.			0
5.			0
6.			0
Total Cover:	115		
50% of total cover: 57.5	20% of total cover:		23
Herb Stratum			
1. Pteridium aquilinum	20	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 15 | Total Cover of Bryophytes 15

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	125	x 3=	375
FACU species	45	x 4=	180
UPL species	0	x 5=	0
Column Totals:	170 (A)		555 (B)

Prevalence Index = B/A = 3.264705882

Hydrophytic Vegetation Indicators:

- Dominance Test is >50%
- Prevalence Index is ≤3.0
- 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No x**

Remarks: Upslope from muskage to the west

SOIL

Sampling Point: P206

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10yr5/4	100					organic	Coarse organic matter
9-12	10yr2/2	100					organic	Coarse organic matter
12-14	10yr2/1	100					organic	Greasy muck
14-16	10r4/1	100					gravel/clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA
Water Table Present?	Yes ___	No x	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P207
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hill
Local relief (concave, convex, none): | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.4799 | Long: -134.551653 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No x**

Remarks: 0
Refusal at 12"

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	90	1	FAC
2. Tsuga mertensiana	10		FAC
3.			0
4.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	25	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5
Herb Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) | Total Cover of Bryophytes 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	100	x 3=	300
FACU species	25	x 4=	100
UPL species	0	x 5=	0
Column Totals:	125 (A)		400 (B)

Prevalence Index = B/A = 3.2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No x**

Remarks:

SOIL

Sampling Point: P207

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5yr2.5/2	100					organic	
>12							gravel/cobble	refusal

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks: Refusal at 12"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P208
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hill toe
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.478475 | Long: -134.54763 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x** **No**

Remarks: Plot is a concave area and has wetland
Presence of hydric soil indicates wetland
Presence of hydrology indicates wetland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	90	1	FAC
2.			0
3.			0
4.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	80	1	FACU
2. Rubus spectabilis	15		FACU
3. Malus fusca	25		FACW
4. Oplopanax horridus	30	1	FACU
5.			0
6.			0
Total Cover:	150		
50% of total cover: 75	20% of total cover:		30
Herb Stratum			
1.			0
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 90 | Total Cover of Bryophytes 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	25	x 2=	50
FAC species	90	x 3=	270
FACU species	125	x 4=	500
UPL species	0	x 5=	0
Column Totals:	240 (A)		820 (B)

Prevalence Index = B/A = 3.416666667

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (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, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ___ No x

Remarks: Plot is a concave area and has wetland hydrology as well as hydric soils. The FACU shrubs, i.e., devil's club (Oplopanax horridus) and V. parvifo lium were growing on hummocks and therefore not influenced by wetland conditions.

SOIL

Sampling Point: P208

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10yr2/1	100					organic	Organic greasy mineral

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks: Presence of hydric soil indicates wetland

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- x High Water Table (A2)
- x 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 x	Depth (Inches): NA		
Water Table Present?	Yes x	No ___	Depth (Inches): 11		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches): 9	**Wetland Hydrology Present? Yes** x **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Presence of hydrology indicates wetland

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 18-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P209
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hill toe
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.4784 | Long: -134.547521 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No x**

Remarks: 0
0

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	90	1	FAC
2.			0
3.			0
4.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	80	1	FACU
2. Rubus spectabilis	15		FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	95		
50% of total cover: 47.5	20% of total cover:		19
Herb Stratum			
1. Cornus canadensis	75	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes ____ (Where applicable) | Total Cover of Bryophytes 90

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	90	x 3=	270
FACU species	160	x 4=	640
UPL species	0	x 5=	0
Column Totals:	250 (A)		910 (B)

Prevalence Index = B/A = 3.64

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No x**

Remarks:

SOIL

Sampling Point: P209

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5yr2.5/1	100					organic	Coarse material
7-16	10r2.5/1	100					silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x Depth (Inches): NA

Water Table Present? Yes ___ No x Depth (Inches): NA

Saturation Present? Yes ___ No x Depth (Inches): NA

(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 19-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P210
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hill
Local relief (concave, convex, none): convex | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.47944 | Long: -134.546789 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___	**No x**

Remarks: Veg a false positive indicator; fuzzy vacininum species present
Fill material present - mixed soil conditions - not significantly disturbed

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			0
2.			0
3.			0
4.			0
Total Cover:	0		
50% of total cover: 0	20% of total cover:		0
Sapling/Shrub Stratum			
1. Tsuga heterophylla	15	1	FAC
2. Picea sitchensis	10	1	FACU
3. Vaccinium uliginosum	15	1	FAC
4.			0
5.			0
6.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Herb Stratum			
1. Equisetum arvense	95	1	FAC
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	95		
50% of total cover: 47.5	20% of total cover:		19

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 0 | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No** ___

Remarks: Veg a false positive indicator; fuzzy vacininum species present

SOIL

Sampling Point: P210

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5yr2.5/2	100					organic	Coarse organic
8-16	2.5yr2.5/2	40					organic	
8-16	10r4/1	60					gravel/clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No x

Remarks: Fill material present - mixed soil conditions - not significantly disturbed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x Depth (Inches): NA

Water Table Present? Yes ___ No x Depth (Inches): >16

Saturation Present? Yes ___ No x Depth (Inches): >16

(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 19-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P211
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): slope
Local relief (concave, convex, none): convex | Slope (%): 1
Subregion: Southeast Alaska | Lat: | Long: | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ____ **No x**

Remarks: 0
Plot near wetland boundary

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	1	FAC
2.			0
3.			0
4.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	65	1	FACU
2. Oplopanax horridus	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Herb Stratum			
1. Cornus canadensis	85	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 0 | Total Cover of Bryophytes 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	80	x 3=	240
FACU species	170	x 4=	680
UPL species	0	x 5=	0
Column Totals:	250 (A)		920 (B)

Prevalence Index = B/A = 3.68

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No x**

Remarks:

SOIL

Sampling Point: P211

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10r3/3	100					organic duff	Coarse organic
8-14	2.5yr2.5/1	100					muck	Greasy
14-16	10r4/1	100					gravel/clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No x

Remarks: Plot near wetland boundary

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA
Water Table Present?	Yes ___	No x	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P212
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): basin
Local relief (concave, convex, none): concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.476387 | Long: -134.5447 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0			
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x**	**No**

Remarks: 0

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	1	FAC
2.			0
3.			0
4.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	30	1	FAC
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Herb Stratum			
1. Lysichiton americanus	80	1	OBL
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
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) 60 | Total Cover of Bryophytes 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

1 Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks:

SOIL

Sampling Point: P212

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5yr2.5/1	100					muck	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- x Surface Water (A1)
- x High Water Table (A2)
- x 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 x	No ___	Depth (Inches): 1
Water Table Present?	Yes x	No ___	Depth (Inches): Surface
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches): Surface

Wetland Hydrology Present? Yes x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P213
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hill toe
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.474902 | Long: -134.546263 | Datum: NAD 83
Soil Map Unit Name: None | 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	0	No	x			
Hydric Soil Present?	Yes	0	No	x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes	0	No	x	**within a Wetland?**	**Yes** ___	**No** **x**

Remarks: 0
Soil is mixed but doesn't appear disturbed - consistent with veg and hydrology

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	90	1	FAC
2.			0
3.			0
4.			0
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	30	1	FACU
2. Oplopanax horridus	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Herb Stratum			
1. Cornus canadensis	20	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 0 | Total Cover of Bryophytes 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	90	x 3=	270
FACU species	70	x 4=	280
UPL species	0	x 5=	0
Column Totals:	160 (A)		550 (B)

Prevalence Index = B/A = 3.4375

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No** **x**

Remarks:

SOIL

Sampling Point: P213

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5yr2.5/1	100					organic	
5-9	2.5yr3/2	100					silt loam	
9-13	7.5yr2.5/1	100					muck	
13-16	7.5yr4/2	100					sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes ___ No x

Remarks: Soil is mixed but doesn't appear disturbed - consistent with veg and hydrology

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	0	
Water Table Present?	Yes ___	No x	Depth (Inches):	NA	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	NA	**Wetland Hydrology Present? Yes ___ No x**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P214
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): muskeg
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.474618 | Long: -134.544229 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x** **No**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	30	1	FAC
2.			0
3.			0
4.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Sapling/Shrub Stratum			
1. Lysichiton americanus	40	1	OBL
2. Carex aquatilis	15	1	OBL
3.			0
4.			0
5.			0
6.			0
Total Cover:	55		
50% of total cover: 27.5	20% of total cover:		11
Herb Stratum			
1. Menyanthes trifoliata	35	1	OBL
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	35		
50% of total cover: 17.5	20% of total cover:		7

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 85 | Total Cover of Bryophytes 85

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks:

SOIL

Sampling Point: P214

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	dark	100					muck	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- x Surface Water (A1)
- x High Water Table (A2)
- x 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 x	No ___	Depth (Inches): 3	
Water Table Present?	Yes x	No ___	Depth (Inches): Surface	
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches): Surface	**Wetland Hydrology Present? Yes** x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P215
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hummok
Local relief (concave, convex, none): convex | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.473085 | Long: -134.544917 | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x			
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**		
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** ___	**No x**

Remarks: Soil appears mixed but not disturbed

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	1	FAC
2. Picea sitchensis	30	1	FACU
3.			0
4.			0
Total Cover:	110		
50% of total cover: 55	20% of total cover:		22
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	80	1	FACU
2. Oplopanax horridus	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20
Herb Stratum			
1. Cornus canadensis	70	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 0 | Total Cover of Bryophytes 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	80	x 3=	240
FACU species	200	x 4=	800
UPL species	0	x 5=	0
Column Totals:	280 (A)		1040 (B)

Prevalence Index = B/A = 3.714285714

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No x**

Remarks:

SOIL

Sampling Point: P215

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5yr2.5/1	100					organic duff	
8-13	7.5yr3/4	100					organic	
13-16	5yr2.5/2	70					sand loam	
13-16	7.5yr3/3	30					muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes ___ No x

Remarks: Soil appears mixed but not disturbed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x Depth (Inches): NA

Water Table Present? Yes ___ No x Depth (Inches): >16

Saturation Present? Yes ___ No x Depth (Inches): >16

(includes capillary fringe)

Wetland Hydrology Present? Yes ___ No x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 20-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P216
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): hummok
Local relief (concave, convex, none): convex | Slope (%): 0
Subregion: Southeast Alaska | Lat: | Long: | Datum: NAD 83
Soil Map Unit Name: None | 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 0	No x		
Hydric Soil Present?	Yes 0	No x	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes 0	No x	**within a Wetland?**	**Yes** **No x**

Remarks: Mosaic - 10% wetland, 90% upland - plot taken in upland portion (representative); bryophyte present at surface but not at depth
Decayed wood forms a large portion of probe, peat is not a significant component - inconsistent with wetland soils in survey area
Absences of wetland hydrology likely a confirming characteristic

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	80	1	FAC
2. Picea sitchensis	30	1	FACU
3.			0
4.			0
Total Cover:	110		
50% of total cover: 55	20% of total cover:		22
Sapling/Shrub Stratum			
1. Vaccinium parvifolium	80	1	FACU
2. Oplopanax horridus	20	1	FACU
3.			0
4.			0
5.			0
6.			0
Total Cover:	100		
50% of total cover: 50	20% of total cover:		20
Herb Stratum			
1. Cornus canadensis	70	1	FACU
2.			0
3.			0
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 0 | Total Cover of Bryophytes 80

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	80	x 3=	240
FACU species	200	x 4=	800
UPL species	0	x 5=	0
Column Totals:	280 (A)		1040 (B)

Prevalence Index = B/A = 3.714285714

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** **No x**

Remarks: Mosaic - 10% wetland, 90% upland - plot taken in upland portion (representative); bryophyte present at surface but not at depth

SOIL

Sampling Point: P216

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5yr2.5/1	100					organic duff	Decomposing wood/veg
8-13	7.5yr3/4	100					organic	Decomposing wood
13-16	5yr2.5/2	70					organic	Decomposing wood
13-16	7.5yr3/3	30					muck	Greasy muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks: Decayed wood forms a large portion of probe, peat is not a significant component - inconsistent with wetland soils in survey area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- 0 High Water Table (A2)
- 0 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 x	Depth (Inches):	NA	
Water Table Present?	Yes ___	No x	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (Inches):	>16	**Wetland Hydrology Present?** **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Absences of wetland hydrology likely a confirming characteristic

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 21-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P217
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): muskeg
Local relief (concave, convex, none): concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.472578 | Long: -134.544263 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x No**

Remarks: Plot taken in "lovers lane", veg disturbed but not significantly so
0

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	30	1	FAC
2.			0
3.			0
4.			0
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Sapling/Shrub Stratum			
1. Lysichiton americanus	40	1	OBL
2.			0
3.			0
4.			0
5.			0
6.			0
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8
Herb Stratum			
1. Vaccinium vitis-idaea	15	1	FAC
2. Cornus canadensis	15	1	FACU
3. Rubus chamaemorus	45	1	FACW
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 0
% Cover of Wetland Bryophytes (Where applicable) 85 | Total Cover of Bryophytes 85

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x No**

Remarks: Plot taken in "lovers lane", veg disturbed but not significantly so

SOIL

Sampling Point: P217

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	2.5yr3/2	100					muck	Greasy mucky
9-16	5yr2/3	40					muck	Greasy mucky
9-16	2.5yr2.5/1	60					muck	Greasy mucky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- x High Water Table (A2)
- x 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 x	Depth (Inches): NA		
Water Table Present?	Yes x	No ___	Depth (Inches): 7		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches): Surface	**Wetland Hydrology Present? Yes** x **No** ___	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport | Borough/City: Hoonah / Angoon | Sampling Date: 21-Jun-2017
Applicant/Owner: ADOT & PF | Sampling Point: P218
Investigator(s): J.Barna, L.Johnson | Landform (hillside, terrace, hummocks, etc.): muskeg
Local relief (concave, convex, none): | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.4734 | Long: -134.543753 | Datum: NAD 83
Soil Map Unit Name: None | 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 x	No 0		
Hydric Soil Present?	Yes x	No 0	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes x	No 0	**within a Wetland?**	**Yes x** **No**

Remarks: Representative sample of forest/shrub wetland
Top 14" undecomposed sphagnum
0

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	20	1	FAC
2.			0
3.			0
4.			0
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4
Sapling/Shrub Stratum			
1. Pinus contorta	5		FAC
2. Empetrum nigrum	75	1	FAC
3.			0
4.			0
5.			0
6.			0
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Rubus chamaemorus	60	1	FACW
2. Cornus canadensis	20		FACU
3. Rhododendron groenlandicum	45	1	FAC
4.			0
5.			0
6.			0
7.			0
8.			0
9.			0
10.			0
Total Cover:	125		
50% of total cover: 62.5	20% of total cover:		25

Plot size (radius, or length x width) 5 ft radius | % Bare Ground
% Cover of Wetland Bryophytes (Where applicable) 99 | Total Cover of Bryophytes 99

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1=	0
FACW species	0	x 2=	0
FAC species	0	x 3=	0
FACU species	0	x 4=	0
UPL species	0	x 5=	0
Column Totals:	0 (A)		0 (B)

Prevalence Index = B/A = #DIV/0!

Hydrophytic Vegetation Indicators:

x Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No**

Remarks: Representative sample of forest/shrub wetland

SOIL

Sampling Point: P218

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5yr2.5/3	80					organic	
0-5	2.5yr3/2	20					organic	
5-9	7.5yr4/4	100					organic	
9-14	5yr5/8	100					organic	
14-16	7.5yr3/3	100					muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Mat

Hydric Soil Indicators:

- x 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches) ___

Hydric Soil Present? Yes x **No** ___

Remarks: Top 14" undecomposed sphagnum

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- 0 Surface Water (A1)
- x High Water Table (A2)
- x 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)
- x 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 x	Depth (Inches):	NA
Water Table Present?	Yes x	No ___	Depth (Inches):	Surface
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? Yes x **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

2018 Wetland Delineation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 301u
Investigator(s): J.Barna, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): Concave | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.480797 | Long: -134.566649 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Logs in area but not cut locally. Area without vegetation is abundant with debris.
Very sandy soils
None

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Rubus spectabilis	65	X	FACU
2. Vaccinium ovalifolium	5		FAC
3.			
4.			
5.			
6.			
Total Cover:	70		
50% of total cover:	35	20% of total cover:	14
Herb Stratum			
1. Phalaris canariensis	30	X	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	30		
50% of total cover:	15	20% of total cover:	6

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Logs in area but not cut locally. Area without vegetation is abundant with debris.

SOIL

Sampling Point: 301u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	Organic rootmat	100					Organic	Grass roots
5-12	10yr6/1	95	10yr4/2	5	C	M	Silty sand	
12-16	10yr4/1	100					Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks: Very sandy soils

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: None

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 302w
Investigator(s): J.Barna, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): Concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.480853 | Long: -134.566577 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 x	No ___	
Hydric Soil Present?	Yes x	No ___	**Is the Sampled Area**
Wetland Hydrology Present?	Yes x	No ___	**within a Wetland?** **Yes X** **No ___**

Remarks: Logs in area but not cut locally

Small channel of flowing water

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:		20% of total cover:	
Herb Stratum			
1. Elymus alaskanus	80	X	FACU
2. Deschampsia brevifolia	40	X	OBL
3.			
4.		.	
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	120		
50% of total cover: 60		20% of total cover:	24

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1=	40
FACW species		x 2=	
FAC species		x 3=	
FACU species	80	x 4=	320
UPL species		x 5=	
Column Totals:	120 (A)		360 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
X Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes x** **No ___**

Remarks: Logs in area but not cut locally

SOIL

Sampling Point: 302w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	Organic rootmat	100					Organic	Grass roots
1-4	10yr2/1	100					Silty loam	
4-13	10yr5/2	95	5yr5/8	5			Sand loam	
13-16	10yr5/2	90	5yr5/8	10			Sand loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- x Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- X 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 X	Depth (Inches):	NA	
Water Table Present?	Yes ___	No X	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	Surface	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Small channel of flowing water

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 303u
Investigator(s): J.Barna, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope toe
Local relief (concave, convex, none): Concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.481713 | Long: -134.565003 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 x	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** ___ **No** x

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	85	X	FAC
2. Alnus viridis	5		FAC
3.			
4.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:	20% of total cover:		

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 60
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** x **No** ___

Remarks:

SOIL

Sampling Point: 303u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	Organic	100					Organic	Duff

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks:

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 X	Depth (Inches):	NA	
Water Table Present?	Yes ___	No X	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16	**Wetland Hydrology Present?** **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 304w
Investigator(s): J.Barna, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Broad channel
Local relief (concave, convex, none): Concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.482589 | Long: -134.565156 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks:

Seep fed

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	85	X	FAC
2. Alnus viridis	5		FAC
3.			
4.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:	20% of total cover:		
Herb Stratum			
1. Lysichiton americanus	80	x	OBL
2.			
3.			
4.			
5.			
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 40
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks:

SOIL

Sampling Point: 304w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	Organic	100					Organic	
2-12	10yr2/2	70	10yr5/1	30	C	M	Muck	
12-16	10yr3/2	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol or Histel (A1)
___ Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
___ Thick Dark Surface (A12)
___ Alaska Gleyed (A13)
___ Alaska Redox (A14)
___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
X High Water Table (A2)
X 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)
X Sparsely Vegetated Concave Surface (B8)
___ Marl Deposits (B15)
X 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)
X Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ___ Depth (Inches): 2
Water Table Present? Yes X No ___ Depth (Inches): 14
Saturation Present? Yes X No ___ Depth (Inches): 0-14
(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Seep fed

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 305u
Investigator(s): J.Barna, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill top
Local relief (concave, convex, none): Convex | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.483064 | Long: -134.565617 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: In forest next to quarry
Refusal at 8

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	60	X	FAC
2. Picea sitchensis	70	X	FACU
3.			
4.			
Total Cover:	130		
50% of total cover: 65	20% of total cover:	26	
Sapling/Shrub Stratum			
1. Sambucus racemosa	40	X	FACU
2. Rubus parviflorus	40	X	FACU
3.			
4.			
5.			
6.			
Total Cover:	80		
50% of total cover: 40	20% of total cover:	16	
Herb Stratum			
1. Geum macrophyllum	20	X	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	20		
50% of total cover: 10	20% of total cover:	4	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 30
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	80	x 3=	240
FACU species	150	x 4=	600
UPL species		x 5=	
Column Totals:	230 (A)		840 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: In forest next to quarry

SOIL

Sampling Point: 305u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr3/3	100					Gravely loam	
8	Refusal							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks: Refusal at 8

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 306u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Basin-bottom of former pond
Local relief (concave, convex, none): Concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.483233 | Long: -134.565586 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X 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 X	No ___		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes X** **No ___**

Remarks:
Bottom of recently drained pond; drained year ago

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Salix scouleriana	40	X	FAC
2. Alnus viridis	10	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	50		
50% of total cover:	25	20% of total cover:	10
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:		20% of total cover:	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 70
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks:

SOIL

Sampling Point: 306u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	Sand	100					Sand	
8	Refusal							Bedrock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks: Bottom of recently drained pond; drained year ago

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 X	Depth (Inches): ___
Water Table Present?	Yes ___	No X	Depth (Inches): >16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches): >16

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 307w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Basin-bottom of former pond
Local relief (concave, convex, none): Concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.483203 | Long: -134.565304 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X 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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks:
Bottom of recently drained pond; drained year ago - hydro soils not yet developed

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Salix scouleriana	40	X	FAC
2. Alnus viridis	20	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	60		
50% of total cover: 30		20% of total cover:	12
Herb Stratum			
1. Carex flava	20	X	OBL
2. Phalaris arundinacea	20	X	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	40		
50% of total cover: 20		20% of total cover:	8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 70
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks:

SOIL

Sampling Point: 307w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr3/6	100					Silt	
8-16	10yr2/1	100					Silty muck	Organic present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: Sediment

Depth (inches): 5

Hydric Soil Present? Yes X No ___

Remarks: Bottom of recently drained pond; drained year ago - hydro soils not yet developed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Surface Soil Cracks (B6)
- X Inundation Visible on Aerial Imagery (B7)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (Inches):	3	
Water Table Present?	Yes ___	No X	Depth (Inches):	>16	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	0-6	

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 308u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Forest slope
Local relief (concave, convex, none): Concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.482737 | Long: -134.562525 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks:
In forest patch
Saturated below 12"

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	85	X	FAC
2.			
3.			
4.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Sapling/Shrub Stratum			
1. Rubus spectabilis	20	X	FACU
2. Oplopanax horridus	15	X	FACU
3.			
4.			
5.			
6.			
Total Cover:	35		
50% of total cover: 17.5	20% of total cover:		7
Herb Stratum			
1. Cornus canadensis	80	X	FACU
2.			
3.			
4.			
5.			
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 ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks:

SOIL

Sampling Point: 308u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	Organic	100					Organic	
12-16	10yr2/1	100					Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks: In forest patch

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 X	Depth (Inches): ___
Water Table Present?	Yes ___	No X	Depth (Inches): >16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches): >16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturated below 12”

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 309u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Forest slope
Local relief (concave, convex, none): Convex | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.48162 | Long: -134.562332 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X	No ___		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks:
In forest patch
Saturated below 12"

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	85	X	FAC
2.			
3.			
4.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	60	X	FAC
2. Vaccinium vitis-idaea	30	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Herb Stratum			
1. Cornus canadensis	25	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes 80

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No** ___

Remarks:

SOIL

Sampling Point: 309u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	Organic	100					Organic	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks: In forest patch

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 X Depth (Inches): _____
Water Table Present? Yes ___ No X Depth (Inches): >16
Saturation Present? Yes ___ No X Depth (Inches): >16
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturated below 12”

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 310u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Forest edge/road edge
Local relief (concave, convex, none): Convex | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.482413 | Long: -134.567002 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation X 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 X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** **No X**

Remarks:
Refusal at 10"

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Alnus viridis	60	X	FAC
2. Salix scouleriana	30	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	90		
50% of total cover: 45		20% of total cover:	18
Herb Stratum			
1. Epilobium anagallidifolium	25	X	FAC
2. Equisetum arvense	10	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	35		
50% of total cover: 17.5		20% of total cover:	7

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks:

SOIL

Sampling Point: 310u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10yr3/2	100					Silt loam	
4-10	10yr4/3	40					Silt loam	
4-10	Gravel	60					Gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks: Refusal at 10”

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 X Depth (Inches): _____
Water Table Present? Yes ___ No X Depth (Inches): >16
Saturation Present? Yes ___ No X Depth (Inches): >16
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 311w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Road edge/ditch
Local relief (concave, convex, none): Concave | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.482411 | Long: -134.567101 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation X 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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes** ___ **No X**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Alnus viridis	30	X	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover:	30		
50% of total cover: 15		20% of total cover:	6
Herb Stratum			
1. Equisetum arvense	25	X	FAC
2. Deschampsia elongata	70	X	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	95		
50% of total cover: 47.5		20% of total cover:	19

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No** ___

Remarks:

SOIL

Sampling Point: 311w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10yr3/1	95	10yr5/2	5	C	M	Silt loam	
4-12	10yr3/1	80	10yr5/2	15	C	M	Silt loam	Some gravel/sand
			7.5yr4/6	5	C	M	Silt loam	Some gravel/sand
12-16	10yr3/1	100					Silt loam	Some gravel/sand

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- x Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** **X** **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (Inches):	2	
Water Table Present?	Yes X	No ___	Depth (Inches):	6	
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	6	**Wetland Hydrology Present?** **Yes** **X** **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 10-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 312w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Edge drainage channel
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.484594 | Long: -134.563758 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: On edge of stream
Next to stream channel

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Lysichiton americanus	40	X	OBL
2. Athyrium cyclosorum	20	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	60		
50% of total cover: 30		20% of total cover:	12
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:		20% of total cover:	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) 60 | Total Cover of Bryophytes 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: On edge of stream

SOIL

Sampling Point: 312w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10yr3/1	100					Silt loam	Organics 0-4"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks: Next to stream channel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (Inches):	13
Water Table Present?	Yes X	No ___	Depth (Inches):	Surface
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 10-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 313u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill slope
Local relief (concave, convex, none): Concave | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.484608 | Long: -134.56392 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** **No X**

Remarks: Slope above stream

Saturation may be perched from evening rain, plot 4' abovestream channel

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	70	x	FAC
2.			
3.			
4.			
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14
Sapling/Shrub Stratum			
1. Vaccinium ovalifolium	40	X	FAC
2. Oplopanax horridus	20	X	FACU
3.			
4.			
5.			
6.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12
Herb Stratum			
1. Cornus alba	40	x	FAC
2. Equisetum arvense	20	x	FAC
3. Dryopteris expansa	30	x	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) 60 | Total Cover of Bryophytes 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Slope above stream

SOIL

Sampling Point: 313u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	Organic	100					Organic	
13-20	10yr3/1	100					Loam	Organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	No	
Water Table Present?	Yes ___	No X	Depth (Inches):	13	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	13	**Wetland Hydrology Present?** **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturation may be perched from evening rain, plot 4' abovestream channel

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 10-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 314w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Rock quarry basin
Local relief (concave, convex, none): Concave | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.483691 | Long: -134.564024 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation X Soil X 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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Recently cleared ground. Areas without vegetation are abundanct with duff, leaf litter, and debris.
Open rock quarry/former pond

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Lysichiton americanus	40	X	OBL
2. Athyrium cyclosorum	20	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	60		
50% of total cover: 30		20% of total cover:	12
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:		20% of total cover:	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Recently cleared ground. Areas without vegetation are abundanct with duff, leaf litter, and debris.

SOIL

Sampling Point: 314w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	Organic	100					Organic	
6-18	10yr2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks: Open rock quarry/former pond

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 X	No ___	Depth (Inches):	4
Water Table Present?	Yes X	No ___	Depth (Inches):	Surface
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? **Yes** **X** **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 10-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 315u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill slope in quarry
Local relief (concave, convex, none): Concave | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.483657 | Long: -134.564045 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation X Soil X 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 X
Hydric Soil Present? Yes ___ No X
Wetland Hydrology Present? Yes ___ No X
Is the Sampled Area within a Wetland? **Yes** ___ **No X**

Remarks:

Disturbed area in rock quarry

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover:		20% of total cover:	
Herb Stratum			
1.			
2. Oplopanax horridus	10		FACU
3. Dryopteris expansa	10		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	20		
50% of total cover: 10		20% of total cover:	4

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 80
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: ___ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: ___ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks:

SOIL

Sampling Point: 315u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	Rock	100					Rock	Disturbed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	No
Water Table Present?	Yes ___	No X	Depth (Inches):	No
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	No

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Disturbed area in rock quarry

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 11-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 316w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill top
Local relief (concave, convex, none): Concave | Slope (%): None
Subregion: Southeast Alaska | Lat: 57.486243 | Long: -134.561592 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Wetland patch

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Lysichiton americanus	40	X	OBL
2. Athyrium cyclosorum	20	X	FAC
3. Cornus alba	15	X	FAC
4.			
5.			
6.			
Total Cover:	75		
50% of total cover:	37.5	20% of total cover:	15
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:		20% of total cover:	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Wetland patch

SOIL

Sampling Point: 316w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr2/1	100					Muck	
6-16	Organic	100					Organic	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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 X No ___ Depth (Inches): None

Water Table Present? Yes X No ___ Depth (Inches): Surface

Saturation Present? Yes X No ___ Depth (Inches): Surface

(includes capillary fringe)

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 10-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 317u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill top
Local relief (concave, convex, none): Concave | Slope (%): None
Subregion: Southeast Alaska | Lat: 57.486318 | Long: -134.56149 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks:

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	80	X	FAC
2. Malus fusca	5		FACW
3.			
4.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	25	X	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5
Herb Stratum			
1. Streptopus amplexifolius	40	X	FACU
2. Oplopanax horridus	10		FACU
3. Dryopteris expansa	10		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 80
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No** ___

Remarks:

SOIL

Sampling Point: 317u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	Organic	100					Organic	
13-16	10yr2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	No	
Water Table Present?	Yes ___	No X	Depth (Inches):	No	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	13	**Wetland Hydrology Present?** **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 12-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 318u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Toe road fill slope
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.485102 | Long: -134.563975 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)
Are Vegetation X Soil X 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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: At edge of maintained road shoulder
At toe of road prism

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Rubus parviflorus	85	X	FACU
2. Alnus viridis	25	X	FAC
3.			
4.			
5.			
6.			
Total Cover:	110		
50% of total cover: 55		20% of total cover:	22
Herb Stratum			
1.			
2. Equisetum arvense	10	X	FAC
3. Dryopteris expansa	30	X	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	40		
50% of total cover: 20		20% of total cover:	8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	35	x 3=	105
FACU species	115	x 4=	460
UPL species		x 5=	
Column Totals:	150 (A)		565 (B)

Prevalence Index = B/A = 3.77

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No x**

Remarks: At edge of maintained road shoulder

SOIL

Sampling Point: 318u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	Organic	100					Organic	
2-8	10yr2/2	100					Silt loam	
8-16	10yr2/2	80					Silt loam	
8-16	Cobble/gravel	20					Cobble/gravel	Roadfill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** **X**

Remarks: At toe of road prism

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 X	Depth (Inches):	No
Water Table Present?	Yes ___	No X	Depth (Inches):	No
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	No

Wetland Hydrology Present? **Yes** ___ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 11-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 319w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Flat
Local relief (concave, convex, none): Concave | Slope (%): None
Subregion: Southeast Alaska | Lat: 57.484677 | Long: -134.564604 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Wetland patch

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Vaccinium uliginosum	10	X	FAC
2.			
3.			
4.			
Total Cover:	10		
50% of total cover: 5	20% of total cover:		2
Sapling/Shrub Stratum			
1. Lysichiton americanus	60	X	OBL
2. Athyrium cyclosorum	40	X	FAC
3. Cornus alba	15	X	FAC
4. Rubus spectabilis	2		FACU
5.			
6.			
Total Cover:	117		
50% of total cover: 58.5	20% of total cover:		23.4
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:			
50% of total cover:	20% of total cover:		

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) 30 | Total Cover of Bryophytes 30

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Wetland patch

SOIL

Sampling Point: 319w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10yr2/1	100					Muck	
8-16	Organic	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (Inches):	None
Water Table Present?	Yes X	No ___	Depth (Inches):	Surface
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 400
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Open terrace
Local relief (concave, convex, none): Flat | Slope (%): 1-2
Subregion: Southeast Alaska | Lat: 57.486243 | Long: -134.554111 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Mysteryherb white flower. 5 %. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
	Total Cover:			
	50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum				
1. Rhododendron groenlandicum		10	x	FAC
2. Viburnum edule		25	x	FACU
3. Picea sitchensis		10	x	FACU
4.				
5.				
6.				
	Total Cover:	45		
	50% of total cover:	22.5	20% of total cover:	9
Herb Stratum				
1. Carex pachystachya		70	x	FAC
2. Potentilla glaucophylla		20	x	FACW
3. Equisetum arvense		1		FAC
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total Cover:	91		
	50% of total cover:	45.5	20% of total cover:	18.2

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Mysteryherb white flower. 5 %. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

,

SOIL

Sampling Point: 400

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/2	100					Peat	Partially decomposed
								Roots and plant fiber

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 6		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface	**Wetland Hydrology Present?**	**Yes X No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 401u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): terrace
Local relief (concave, convex, none): Flat | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.486481 | Long: -134.553739 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** **No X**

Remarks: 50% of plot is on road bed

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Picea sitchensis	10	X	FACU
2. Alnus viridis	3		FAC
3. Salix sitchensis	15	X	FAC
4. Vaccinium ovalifolium	1		FAC
5.			
6.			
Total Cover:	29		
50% of total cover: 14.5		20% of total cover:	5.8
Herb Stratum			
1. Equisetum arvense	35	X	FAC
2. Taraxacum officinale	1		FACU
3. Chamaenerion angustifolium	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	41		
50% of total cover: 20.5		20% of total cover:	8.2

Plot size (radius, or length x width) 5 ft radius | % Bare Ground 50
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1=
FACW species	x 2=
FAC species	x 3=
FACU species	x 4=
UPL species	x 5=
Column Totals: (A)	(B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: 50% of plot is on road bed

SOIL

Sampling Point: 401u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 yr 3/2							Road fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X Depth (Inches): NA
Water Table Present? Yes ___ No X Depth (Inches): >16
Saturation Present? Yes ___ No X Depth (Inches): >16
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 402u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hummock
Local relief (concave, convex, none): Convex | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.486774 | Long: -134.555349 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Soil moist

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Picea sitchensis	10		FACU
2. Tsuga heterophylla	50	X	FAC
3.			
4.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:	12	
Sapling/Shrub Stratum			
1. Tsuga heterophylla	5		FAC
2. Menziesia ferruginea	45	X	FACU
3. Vaccinium ovalifolium	40	X	FAC
4. Picea sitchensis	10		FACU
5.			
6.			
Total Cover:	100		
50% of total cover: 50	20% of total cover:	20	
Herb Stratum			
1. Cornus canadensis	50	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:	10	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	90	x 3=	270
FACU species	105	x 4=	420
UPL species		x 5=	
Column Totals:	195 (A)		690 (B)

Prevalence Index = B/A = 3.54

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 402u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5 YR 2.5/2	100						
8-11	10 YR 4/1	100					Silt clay loam	Mixed with other soil, 10 YR 2/1
11-20	7.5 YR 4/6	100						7.5 YR 5/6 4/6

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches): NA
Water Table Present?	Yes ___	No X	Depth (Inches): >16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches): >16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soil moist

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 403u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hillock
Local relief (concave, convex, none): None | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.484236 | Long: -134.559296 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Moist but not saturated

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	60	X	FAC
2.			
3.			
4.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12
Sapling/Shrub Stratum			
1. Menziesia ferruginea	50	X	FACU
2. Vaccinium parvifolium	10		FACU
3. Vaccinium ovalifolium	20	X	FAC
4.			
5.			
6.			
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Cornus canadensis	40	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	40		
50% of total cover: 20	20% of total cover:		8

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	80	x 3=	240
FACU species	100	x 4=	400
UPL species		x 5=	
Column Totals:	180 (A)		640 (B)

Prevalence Index = B/A = 3.56

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 403u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/2	100					)rganic, fibrou	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Moist but not saturated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 404w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): Concave | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.484295 | Long: -134.559486 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: N/A
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Shrubs on the fringe, sedge and water parsley in the center. Areas without vegetative cover are abundant with duff, leaf litter, and debris. hydric soil indicators for problem soils: Alaska redox with 2.5Y hue --2.5Y hue with chroma of 3 or less and 10 percent or more Plot taken on edge of fen wetland and not fully within it

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
50% of total cover:		20% of total cover:	
Sapling/Shrub Stratum			
1. Picea sitchensis	5	X	FACU
2. Rubus spectabilis	10	X	FACU
3.			
4.			
5.			
6.			
Total Cover:	15		
50% of total cover: 7.5		20% of total cover:	3
Herb Stratum			
1. Carex lyngbyei	50	X	OBL
2. Oenanthe sarmentosa	20		OBL
3. Maianthemum dilatatum	20		FAC
4. Equisetum arvense	10		FAC
5. Cornus canadensis	5		FACU
6.			
7.			
8.			
9.			
10.			
Total Cover:	105		
50% of total cover: 52.5		20% of total cover:	21

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1=	70
FACW species		x 2=	
FAC species	30	x 3=	90
FACU species	20	x 4=	80
UPL species		x 5=	
Column Totals:	120 (A)		240 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
X Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Shrubs on the fringe, sedge and water parsley in the center. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 404w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5 Y 4/1	60	5YR 4/4	40	C	M	Silt clay	
4-20	2.5 Y 4/1	75	7.5 YR 4/6	25	C	M	Silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** **X** **No** _____

Remarks: hydric soil indicators for problem soils: Alaska redox with 2.5Y hue --2.5Y hue with chroma of 3 or less and 10 percent or more redox concentrations in pore linings with chroma and value of 4 or more. Although the redox concentrations are not on the pore linings, the tech description explains that this indicators is common inwetland fringe transition areas.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (A1)
X High Water Table (A2)
X 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)
X Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (Inches): NA
Water Table Present?	Yes	X	No	___	Depth (Inches): 13
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (Inches): 6

Wetland Hydrology Present? **Yes** **X** **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Plot taken on edge of fen wetland and not fully within it

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 405u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hill
Local relief (concave, convex, none): None | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.484548 | Long: -134.56002 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Moist but not saturated

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	50	X	FAC
2. Picea sitchensis	3		FACU
3.			
4.			
Total Cover:	53		
50% of total cover: 26.5	20% of total cover:		10.6
Sapling/Shrub Stratum			
1. Menziesia ferruginea	50	X	FACU
2. Vaccinium parvifolium	10		FACU
3. Vaccinium ovalifolium	20	X	FAC
4. Sorbus sitchensis	5		FACU
5.			
6.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Herb Stratum			
1. Cornus canadensis	40	X	FACU
2. Maianthemum dilatatum	10		FAC
3. Streptopus amplexifolius	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	55		
50% of total cover: 27.5	20% of total cover:		11

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	80	x 3=	240
FACU species	113	x 4=	452
UPL species		x 5=	
Column Totals:	193 (A)		692 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 405u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	5YR 3/2	100					)rganic, fibrou	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Moist but not saturated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 406w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.484088 | Long: -134.560066 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Expect watertable to rise after more time

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	X	FAC
2.			
3.			
4.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Tsuga heterophylla	30	X	FAC
2. Vaccinium ovalifolium	25	X	FAC
3. Oplopanax horridus	10		FACU
4.			
5.			
6.			
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13
Herb Stratum			
1. Lysichiton americanus	50	X	OBL
2. Gymnocarpium dryopteris	10		FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	15		FAC
5. Streptopus amplexifolius	10		FACU
6.			
7.			
8.			
9.			
10.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 406w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (Inches): NA
Water Table Present?	Yes	X	No	___	Depth (Inches): 12
Saturation Present? (includes capillary fringe)	Yes	X	No	___	Depth (Inches): Surface

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Expect watertable to rise after more time

#NAME?

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 407u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): Convex | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.483371 | Long: -134.557048 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** **No X**

Remarks: Slope between open peatland. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Slightly moist

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	75	X	FAC
2.			
3.			
4.			
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15
Sapling/Shrub Stratum			
1. Menziesia ferruginea	10		FACU
2. Cornus alba	35	X	FAC
3. Vaccinium ovalifolium	10		FAC
4. Oplopanax horridus	10		FACU
5.			
6.			
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13
Herb Stratum			
1. Cornus canadensis	50	X	FACU
2. Maianthemum dilatatum	20	X	FAC
3. Streptopus amplexifolius	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Slope between open peatland. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 407u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 2/2	100					)rganic, fibrou	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slightly moist

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 408w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Terrace, base of slope
Local relief (concave, convex, none): None | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.483314 | Long: -134.557277 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes X** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	20	X	FAC
2.			
3.			
4.			
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4
Sapling/Shrub Stratum			
1. Tsuga heterophylla	15	X	FAC
2. Vaccinium ovalifolium	10		FAC
3. Oplopanax horridus	10		FACU
4. Cornus alba	10		FAC
5. Ribes bracteosum	20	X	FAC
6.			
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13
Herb Stratum			
1. Lysichiton americanus	40	X	OBL
2. Gymnocarpium dryopteris	10		FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	15		FAC
5. Streptopus amplexifolius	10		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 ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 408w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 6		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 409u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): Convex | Slope (%): 5
Subregion: Southeast Alaska | Lat: 57.4836 | Long: -134.554563 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Side of knob. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

Slightly moist

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	75	X	FAC
2.			
3.			
4.			
Total Cover:	75		
50% of total cover: 37.5	20% of total cover:		15
Sapling/Shrub Stratum			
1. Menziesia ferruginea	5	X	FACU
2. Vaccinium parvifolium	5	X	FACU
3. Vaccinium ovalifolium	10	X	FAC
4. Oplopanax horridus	2		FACU
5.			
6.			
Total Cover:	22		
50% of total cover: 11	20% of total cover:		4.4
Herb Stratum			
1. Cornus canadensis	5	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	5		
50% of total cover: 2.5	20% of total cover:		1

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	85	x 3=	255
FACU species	17	x 4=	68
UPL species		x 5=	
Column Totals:	102 (A)		323 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Side of knob. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 409u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 2/2	100					)rganic, fibrou	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Slightly moist

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 410w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Base of knob
Local relief (concave, convex, none): None | Slope (%): 1
Subregion: Southeast Alaska | Lat: 57.48393 | Long: -134.554531 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	25	1	FAC
2.			
3.			
4.			
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5
Sapling/Shrub Stratum			
1. Tsuga heterophylla	15	1	FAC
2. Vaccinium ovalifolium	10	1	FAC
3. Oplopanax horridus	15	1	FACU
4. Cornus alba	10	1	FAC
5.			
6.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Herb Stratum			
1. Lysichiton americanus	30	1	OBL
2. Gymnocarpium dryopteris	5		FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	25	1	FAC
5. Maianthemum dilatatum	5		FAC
6.			
7.			
8.			
9.			
10.			
Total Cover:	70		
50% of total cover: 35	20% of total cover:		14

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 410w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- ___ Thick Dark Surface (A12)
- ___ Alaska Gleyed (A13)
- ___ Alaska Redox (A14)
- ___ Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 3		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 411w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.481871 | Long: -134.556388 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	40	1	FAC
2. Picea sitchensis	10	1	FACU
3.			
4.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:	10	
Sapling/Shrub Stratum			
1. Tsuga heterophylla	15	1	FAC
2. Vaccinium ovalifolium	45	1	FAC
3. Oplopanax horridus	15	1	FACU
4. Rubus spectabilis	5	1	FACU
5. Menziesia ferruginea	5		FACU
6.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:	17	
Herb Stratum			
1. Lysichiton americanus	20	1	OBL
2. Gymnocarpium dryopteris	5		FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	25	1	FAC
5. Maianthemum dilatatum	5		FAC
6.			
7.			
8.			
9.			
10.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:	12	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 63 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 411w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (Inches):	N/A
Water Table Present?	Yes X	No ___	Depth (Inches):	5
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches):	Surface

Wetland Hydrology Present? **Yes** **X** **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 412u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hummock
Local relief (concave, convex, none): Flat | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.481652 | Long: -134.556328 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No		
Hydric Soil Present?	Yes	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes	No X	**within a Wetland?**	**Yes** **No X**

Remarks: In area recently cleared for trail. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	60	X	FAC
2.			
3.			
4.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12
Sapling/Shrub Stratum			
1. Tsuga heterophylla	5		FAC
2. Oplopanax horridus	30	X	FACU
3. Menziesia ferruginea	15		FACU
4. Vaccinium ovalifolium	30	X	FAC
5. Vaccinium parvifolium	2		FACU
6.			
Total Cover:	82		
50% of total cover: 41	20% of total cover:		16.4
Herb Stratum			
1. Streptopus amplexifolius	5		FACU
2. Cornus canadensis	15	X	FACU
3. Athyrium cyclosorum	30	X	FAC
4. Gymnocarpium dryopteris	10		FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	60		
50% of total cover: 30	20% of total cover:		12

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: In area recently cleared for trail. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 412u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 yr 2/2							Road fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X Depth (Inches): NA
Water Table Present? Yes ___ No X Depth (Inches): >16
Saturation Present? Yes ___ No X Depth (Inches): >16
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 413w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Slope
Local relief (concave, convex, none): Concave | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.481604 | Long: -134.554399 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

In a mosaic, upland hummocks

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	50	x	FAC
2. Picea sitchensis	5		FACU
3.			
4.			
Total Cover:	55		
50% of total cover: 27.5	20% of total cover:		11
Sapling/Shrub Stratum			
1. Tsuga heterophylla	10		FAC
2. Vaccinium ovalifolium	45	x	FAC
3. Oplopanax horridus	15	x	FACU
4. Menziesia ferruginea	10		FACU
5.			
6.			
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Lysichiton americanus	5		OBL
2. Streptopus amplexifolius	10	'	FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	35	x	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	55		
50% of total cover: 27.5	20% of total cover:		11

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 413w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (Inches): NA
Water Table Present?	Yes X	No ___	Depth (Inches): 4
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In a mosaic, upland hummocks

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 414u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hummock
Local relief (concave, convex, none): Flat | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.481657 | Long: -134.554295 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	25	X	FAC
2. Picea sitchensis	10	X	FACU
3.			
4.			
Total Cover:	35		
50% of total cover: 17.5	20% of total cover:	7	
Sapling/Shrub Stratum			
1. Tsuga heterophylla	5		FAC
2. Oplopanax horridus	2		FACU
3. Menziesia ferruginea	55	X	FACU
4. Vaccinium ovalifolium	30	X	FAC
5. Vaccinium parvifolium	10		FACU
6.			
Total Cover:	102		
50% of total cover: 51	20% of total cover:	20.4	
Herb Stratum			
1.			
2. Cornus canadensis	40	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	40		
50% of total cover: 20	20% of total cover:	8	

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	60	x 3=	180
FACU species	127	x 4=	508
UPL species		x 5=	
Column Totals:	187 (A)		688 (B)

Prevalence Index = B/A = 3.68

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 414u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 yr 2/2							Road fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

___ Alaska Color Change (TA4)[4]
___ Alaska Alpine Swales (TA5)
___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X Depth (Inches): NA
Water Table Present? Yes ___ No X Depth (Inches): >16
Saturation Present? Yes ___ No X Depth (Inches): >16
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 415
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hummock
Local relief (concave, convex, none): Flat | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.4839 | Long: -134.552534 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: In area recently cleared for trail; mystery herb 5 leaves 5%. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	20	X	FAC
2.			
3.			
4.			
Total Cover:	20		
50% of total cover: 10	20% of total cover:		4
Sapling/Shrub Stratum			
1.			
2.			
3. Picea sitchensis	5		FACU
4. Vaccinium ovalifolium	50	X	FAC
5. Rubus spectabilis	35	X	FACU
6.			
Total Cover:	90		
50% of total cover: 45	20% of total cover:		18
Herb Stratum			
1.	5		
2. Cornus canadensis	45	X	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	70	x 3=	210
FACU species	85	x 4=	340
UPL species		x 5=	
Column Totals:	155 (A)		550 (B)

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: In area recently cleared for trail; mystery herb 5 leaves 5%. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 415

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 yr 2/2	100						Road fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches): NA
Water Table Present?	Yes ___	No X	Depth (Inches): >16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches): >16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 416w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Base of slope
Local relief (concave, convex, none): Concave | Slope (%): 3
Subregion: Southeast Alaska | Lat: 57.483872 | Long: -134.552763 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x** **No ___**

Remarks: Logged area, cut logs, 5-leaf mystery herb. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

In a mosaic, upland hummocks

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tsuga heterophylla	50	X	FAC
2.			
3.			
4.			
Total Cover:	50		
50% of total cover: 25	20% of total cover:		10
Sapling/Shrub Stratum			
1. Picea sitchensis	5		FACU
2. Vaccinium ovalifolium	45	X	FAC
3. Oplopanax horridus	15		FACU
4. Menziesia ferruginea	10		FACU
5. Rubus spectabilis	5		FACU
6.			
Total Cover:	80		
50% of total cover: 40	20% of total cover:		16
Herb Stratum			
1. Lysichiton americanus	5		OBL
2. Gymnocarpium dryopteris	15	X	FACU
3. Cornus canadensis	5		FACU
4. Athyrium cyclosorum	40	X	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	65		
50% of total cover: 32.5	20% of total cover:		13

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: Logged area, cut logs, 5-leaf mystery herb. Areas without vegetative cover are abundant with duff, leaf litter, and debris.

SOIL

Sampling Point: 416w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (Inches): NA
Water Table Present?	Yes X	No ___	Depth (Inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface

Wetland Hydrology Present? **Yes** **X** **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: In a mosaic, upland hummocks

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 417w
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Terrace
Local relief (concave, convex, none): Concave | Slope (%): 2
Subregion: Southeast Alaska | Lat: 57.47892 | Long: -134.559957 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X	No ___		
Hydric Soil Present?	Yes X	No ___	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes X	No ___	**within a Wetland?**	**Yes x** **No ___**

Remarks: > 2 large snags - 15" several small snags, 5 leaf mystery herb, moss & down wood

hummocks

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	50	x	FAC
2. Picea sitchensis	5		FACU
3.			
4.			
Total Cover:	55		
50% of total cover: 27.5	20% of total cover:		11
Sapling/Shrub Stratum			
1. Tsuga heterophylla	10		FAC
2. Vaccinium ovalifolium	60	x	FAC
3.			
4. Menziesia ferruginea	15		FACU
5.			
6.			
Total Cover:	85		
50% of total cover: 42.5	20% of total cover:		17
Herb Stratum			
1. Lysichiton americanus	20	x	OBL
2. Maianthemum dilatatum	5	x	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	25		
50% of total cover: 12.5	20% of total cover:		5

Plot size (radius, or length x width) 5 ft radius | % Bare Ground ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ___	x 1= ___
FACW species ___	x 2= ___
FAC species ___	x 3= ___
FACU species ___	x 4= ___
UPL species ___	x 5= ___
Column Totals: ___ (A)	___ (B)

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes X** **No ___**

Remarks: > 2 large snags - 15" several small snags, 5 leaf mystery herb, moss & down wood

SOIL

Sampling Point: 417w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** **X** **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X 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 X	Depth (Inches): NA		
Water Table Present?	Yes X	No ___	Depth (Inches): 8		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (Inches): Surface	**Wetland Hydrology Present?**	**Yes X No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: hummocks

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Angoon Airport - Echo Alignment | Borough/City: Hoonah / Angoon | Sampling Date: 7-Jun-2018
Applicant/Owner: ADOT & PF | Sampling Point: 418u
Investigator(s): J.Barna, L.Johnson, S.Hartung, R.Gutierrez | Landform (hillside, terrace, hummocks, etc.): Hummock
Local relief (concave, convex, none): Flat | Slope (%): 0
Subregion: Southeast Alaska | Lat: 57.478784 | Long: -134.559915 | Datum: NAD 83
Soil Map Unit Name: None | NWI classification: PFO4B
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 X		
Hydric Soil Present?	Yes ___	No X	**Is the Sampled Area**	
Wetland Hydrology Present?	Yes ___	No X	**within a Wetland?**	**Yes** ___ **No X**

Remarks: 5 leaf mystery herb 20%; 100% moss cover

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Tsuga heterophylla	30	X	FAC
2.			
3.			
4.			
Total Cover:	30		
50% of total cover: 15	20% of total cover:		6
Sapling/Shrub Stratum			
1.			
2. Menziesia ferruginea	30	X	FACU
3. Vaccinium parvifolium	15	X	FACU
4. Vaccinium ovalifolium	50	X	FAC
5.			
6.			
Total Cover:	95		
50% of total cover: 47.5	20% of total cover:		19
Herb Stratum			
1.			
2. Cornus canadensis	10	X	FACU
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 ___
% Cover of Wetland Bryophytes (Where applicable) ___ | Total Cover of Bryophytes ___

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1=	
FACW species		x 2=	
FAC species	80	x 3=	240
FACU species	55	x 4=	220
UPL species		x 5=	
Column Totals:	135 (A)		460 (B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ 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, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ___ **No X**

Remarks: 5 leaf mystery herb 20%; 100% moss cover

SOIL

Sampling Point: 418u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10 yr 2/2	100						Road fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: 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 Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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 X	Depth (Inches):	NA
Water Table Present?	Yes ___	No X	Depth (Inches):	>16
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (Inches):	>16

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX D:

GROUND LEVEL COLOR PHOTOGRAPHS

Photo: 1	**Bog woodland in the northwest portion of the site; Wetland G20 (2017)**

Photo: 2	**Bog woodland in the northeast portion of survey area, showing the headwaters of Stream 10NF; Wetland G1 (2017)**

Photo: 3	**Typical bog forest in the southwest portion of survey area; skunk cabbage and devil's club in the foreground; Wetland G15 (2017)**

Photo: 4	**Stream 11 in the northwest portion of survey area, looking downstream (2017)**

Photo: 5	**Upland forest near sample plot 102 with false azalea in the foreground (2017)**

Photo: 6	**Bog forest with pockets of skunk cabbage, hummocks, downed wood and blueberry bushes; Wetland G15 (2017)**

Photo: 7	**The downstream reach of Stream 10MF; looking towards coastline and barrier bar, which are just beyond extent of the photo (2017)**

Photo: 8	**Wetland E (bog forest) in the southwest portion of survey area with mix of fern and devil's club (2017)**

Photo: 9	**Wetland G15 (bog forest) with mature trees, standing water, and dense emergent vegetation, east of coast, at the south end of survey area (2017)**

Photo: 10	**Typical bog forest wetland conditions of Wetland G15, located upslope of the shoreline in the southwest portion of the survey area (2017)**

Photo: 11	**Dense understory of devil's club and *Vaccinium* spp. in bog forest wetland (Wetland G15) in the southern end of the survey area (2017)**

Photo: 12	**The wetland boundary of Wetland G15 in the southeast portion of survey area, formed by the road prism and indicated by the yellow line (2017)**

Photo: 13	**Jacob's ladder along with sedges and grasses in the bog woodland (Wetland G16) at the southeast end of the survey area (2017)**

Photo: 14	**Upland forest looked similar to wetland forest, but lacks saturated soils, hydrophytic vegetation, and hydric soils (2017)**

Photo: 15	**Stream 10MF, Wetland G15 is on right side of photo, upland is on the left (2017)**

Photo: 16	**Bog forest/upland boundary with skunk cabbage in the foreground; taken in the northeast portion of the survey area (2017)**

Photo: 17	**Waters of the U.S. with skunk cabbage, looking at Stream 10MF braiding (2017)**

Photo: 18	**Bog woodland Wetland G1 in the northeast portion of the survey area (2017)**

Photo: 19	**Steep upland feature located next to rock quarry northeast of Aukta Street (20170**

Photo: 20	**Convex forested upland feature located south of Aukta Street, looking northeast (2017)**

Photo: 21	**Toe of steep upland forested hill, looking southeast and uphill (2017)**

Photo: 22	**Near southern terminus of roadside ditch – Wetland B – along Killisnoo Road, looking north (2018)**

Photo: 23	**Within bog forest of Wetland N, near toe of slope of the rock quarry, looking east (2018)**

Photo: 24	**Toe of steep upland slope and near edge of salt marsh Wetland A4 (visible in upper right of photo), looking northwest (2018)**

Photo: 25	**Within bog forest Wetland I near toe of gradual upland slope, looking northwest (2018)**

Photo: 26	**Bog forest Wetland G15 above Stream 10MF, looking northeast (2018)**

Photo: 27	**Bog forest adjacent to Stream 10MF near outlet into Killisnoo Harbor, looking northeast (2018)**

Photo: 28	**Bog woodland of Wetland G6 with open water in background, looking northeast (2018)**

Photo: 29	**On border of bog forest (Wetland G11) and bog woodland (Wetland G1), next to Stream 10NF, looking east (2018)**

Photo: 30	**Skunk cabbage and organic muck soils within bog forest of Wetland K, next to intertidal area, looking north (2018)**

Photo: 31	**Ponded surface water within excavated portion of rock quarry (Wetland M) located along Killisnoo Road, looking east (2018)**

Photo: 32	**Silty wetland area (Wetland L), looking southwest (2018)**

Photo: 33	**Taken outside survey area and along intertidal area at low tide, looking northeast towards Water 1, location of tidal constriction (2018)**

Photo: 34	**Within fen Wetland (G8), on edge of open water, looking northwest (2018)**

APPENDIX E

LITERATURE CITED

Cowardin, L.M., V. Carter, F.C. Golet, E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. (Version 04DEC98). Online source: http://www.npwrc.usgs.gov/resource/1998/classwet/classwet.htm.

Environmental Laboratory (USACE). 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.

Environmental Science Associates (ESA). 2016. Memorandum: Angoon Airport – Alternative 12a Stream 10 Realignment Feasibility Study. Prepared for: State of Alaska Department of Transportation & Public Facilities. 9 November 2016.

Federal Aviation Administration (FAA). 2016. Final Environmental Impact Statement and Section 4(f) Evaluation; Angoon Airport. September 2016.

Google Earth Pro. 2018. Aerial Imagery of the Project Study Area. Accessed: 24 June 2018.

Hitchcock, C.L. and A. Cronquist. 1976. Flora of the Pacific Northwest. University of Washington Press, Seattle, WA. 730 pp.

Hulten, E. 1968. Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants. Stanford, California: Stanford University Press.

Johnson, A. 2013. Discussion About Past Timber Harvest in Vicinity of Proposed Location of Airport 12a. Personal communication between Alvin Johnson, Angoon resident, and Stacey Reed, Wetland Scientist, SWCA Environmental Consultants, September 15, 2013.

Lichvar, R.W. 2013. National Wetland Plant List, Website Version 3.1. Accessed: September 2013. Available: http://rsgisias.crrel.usace.army.mil/NWPL/.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 Wetland Ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X. Online source: http://www.phytoneuron.net/.

Munsell® Soil Color Charts (Munsell). 2009. Year 2009 Revised Edition. Gretag/Macbeth Publishing, NY.

Natural Resources Conservation Service – United States Department of Agriculture (NRCS-USDA). 2008. Hydrogeomorphic Wetland Classification System: An Overview and Modification to Better Meet the Needs of the Natural Resources Conservation Service. Technical Note No. 190–8–76. February 2008.

Pojar, J. and A. MacKinnon. 2004. Plants of the Pacific Northwest Coast Washington Oregon BC & Alaska; 2nd Edition. Lone Pine Publishing. Redmond, Washington.

Powell, J., D. D'Amore, R. Thompson, T. Brock, P. Huberth, B. Bigelow, and M.T. Walter. 2003. Wetland Functional Assessment Guidebook Operational Draft Guidebook for Assessing the Functions of Riverine and Slope River Proximal Wetlands in Coastal Southeast & Southcentral Alaska Using the HGM Approach. Prepared for: State of Alaska, Department of Environmental Conservation. Juneau, AK. June 2003.

R&M Engineering, Inc. (2004). Angoon Airport Reconnaissance Study. Accessed: http://dot.alaska.gov/sereg/projects/angoon_airport/assets/2004_Recon_Study/2004_recon_study.pdf.

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson (editors). 2002. Field Book for Describing and Sampling Soils, Version 2.0. Lincoln, Nebraska: U.S. Department of Agriculture Natural Resources Conservation Service, National Soil Survey Center.

State of Alaska Department of Transportation & Public Facilities (ADOT&PF). 2018. Angoon Airport Scooping Report. Prepared for: Alaska Department of Transportation & Public Facilities, Southcoast Region, Design & Engineering Services. March 2018.

State of Alaska Department of Transportation & Public Facilities (ADOT&PF). 2007. Angoon Airport Master Plan.

SWCA Environmental Consultants (SWCA). 2012. Cultural Resources Existing Conditions Technical Report for Angoon Airport Environmental Impact Statement. Prepared for Federal Aviation Administration and Alaska Department of Transportation and Public Facilities. Salt Lake City, Utah: SWCA.

SWCA Environmental Consultants (SWCA). 2014. 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 and the Alaska Department of Transportation and Public Facilities. Prepared by SWCA Environmental Consultants. January 2014.

U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification. December 7, 2005.

U.S. Army Corps of Engineers (USACE). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0). Wetlands Regulatory Assistance Program, ERDC/EL TR-07-24. U.S. Army Corps of Engineers Research and Development Center, Vicksburg, MS. September 2007.

U.S. Department of Agriculture (USDA). 2018a. USDA Field Office Climate Data; WETS Table. WETS Station: Juneau International Airport, AK. Accessed: 24 August 2018. Available: https://efotg.sc.egov.usda.gov/.

U.S. Department of Agriculture (USDA). 2018b. USDA Field Office Climate Data; Daily Precipitation Reports. WETS Station: Juneau International Airport, AK. Accessed: 24 August 2018. Available: https://efotg.sc.egov.usda.gov/.

U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS). 2005. Field Indicators of Hydric Soils in Alaska, A User Guide. Compiled by J.P. Moore, edited by P. Taber. Accessed: October 2013. Available: ftp://ftp-fc.sc.egov.usda.gov/AK/soils/AKFieldIndicators.pdf

U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS). 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. Edited by L.M. Vasilas, G.W. Hurt, and C.V. Noble. Accessed October 2013. Available: ftp://ftpfc.sc.egov.usda.gov/NSSC/Hydric_Soils/FieldIndicators_v7.pdf.

U.S. Fish and Wildlife Service (USFWS). 2018. National Wetlands Inventory Website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Accessed: 1 August 2018. Available: http://www.fws.gov/wetlands/.

Viereck, L.A. and E.L. Little, Jr. 2007. Alaska Trees and Shrubs; Second Edition. Snowy Owl Books; University of Alaska Press. Fairbanks, Alaska.

X-Rite. 2000. Year 2000 Revised Washable Edition, Munsell Soil Color Charts. Grand Rapids, Michigan: X-Rite.