

Preliminary Wetland and Waterbody Mapping Report

West Susitna Access - Phase 2

Alaska Industrial Development & Export Authority

February 8, 2021

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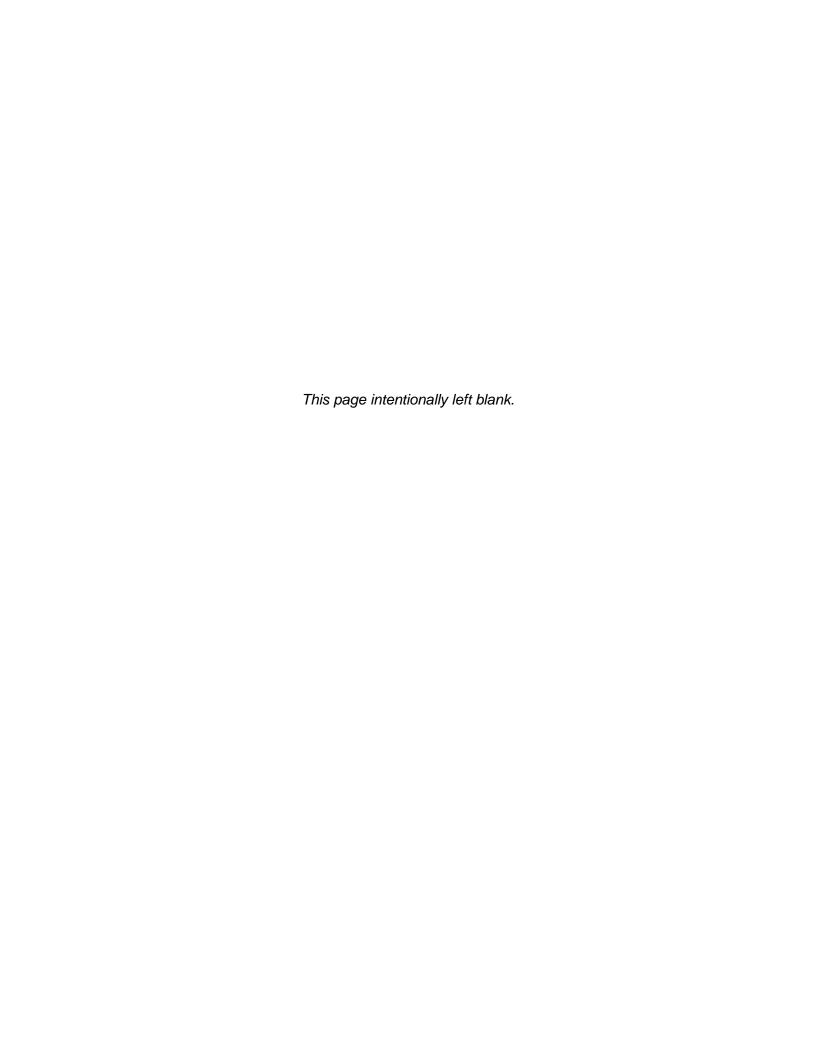


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Abbreviations and Acronyms

ADF&G Alaska Department of Fish and Game

AIDEA Alaska Industrial Development & Export Authority

APT Antecedent Precipitation Tool

CWA Clean Water Act

DEM Digital Elevation Model

GIS Geographic Information System

GPS global positioning system

HDR HDR Alaska, Inc.
HGM hydrogeomorphic
HUC hydrologic unit code

Lidar Light Detection and Ranging

MBI Michael Baker, Inc.

MSB Matanuska-Susitna Borough

NRCS Natural Resources Conservation Service

NWI National Wetlands Inventory

PJD Preliminary Jurisdictional Determination

USACE U.S. Army Corps of Engineers USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey



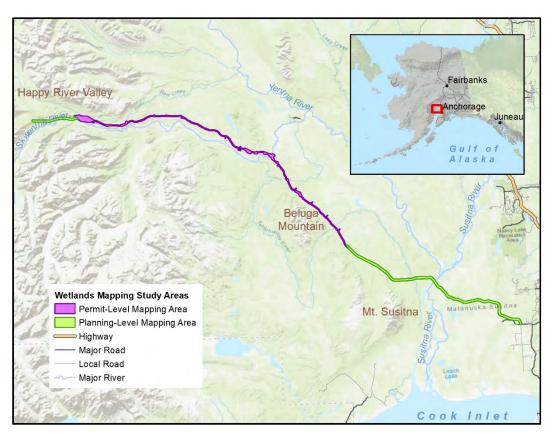
1.0 Introduction and Purpose

The Alaska Industrial Development & Export Authority (AIDEA) is undertaking pre-feasibility studies for an access road from the Point MacKenzie area to the Skwentna River valley to provide a surface access route to known resource-abundant areas on the west side of the Susitna River. Subject to final route determination, the West Susitna Access Project may require authorization from the U.S. Army Corps of Engineers (USACE) for work in wetlands or waterbodies. To assist in engineering and environmental planning, AIDEA contracted HDR Alaska, Inc. (HDR) to prepare planning-level wetland and waterbody mapping for Phase 2 of the project.

This report preliminarily identifies the boundaries of wetlands and waterbodies within the Phase 2 study area. Wetlands and waterbodies identified in this report are potentially subject to jurisdiction of the USACE under the authority of Section 404 of the Clean Water Act (CWA) of 1972 (as amended) or Section 10 of the Rivers and Harbors Act of 1899.

1.1. Study Area

The 20,605.6-acre Phase 2 study area (study area) investigated for this mapping effort consists of two areas that are differentiated based on availability of existing data and additional investigations performed in 2020. Figure 1 and Inset 1 show these two areas: Planning-Level Mapping Area and Permit-Level Mapping Area. This report presents the results of planning-level wetland mapping that HDR prepared in 2020 for the Planning-Level Mapping Area, along with



Inset 1. Study Area Location



field data collected by HDR in 2006 and 2020, and permit-level wetland mapping from other source's prepared in 2017.

The study area is located within Alaska's Matanuska-Susitna Borough (MSB; Inset 1), and consists of an approximately 2,000-foot-wide corridor along the 100-mile proposed road route, beginning at the Little Susitna River Access Road and heading northwest to near the confluence of the Happy and Skwentna Rivers. The proposed road route currently follows a portion of the proposed natural gas pipeline corridor for the Donlin Gold Project, approximately 57 miles between Beluga Mountain and Happy River.

The study area is located within the Cook Inlet and Alaska Range ecoregions (USACE 2007), and is found within the land descriptions (all in reference to the Seward Meridian) listed in Table 1.

Table 1. Study Area Land Description

Township	Range	Section
Township 16 North	Range 4 West	Section 31
	Range 5 West	Sections 7 – 9, 16, 17, 21, 25 – 28, 35, and 36
	Range 6 West	Sections 5 – 12
	Range 7 West	Section 1
Township 17 North	Range 7 West	Sections 15 – 23, 25 – 27, 35, and 36
	Range 8 West	Sections 6 – 8, 13 – 17, and 21 – 24
	Range 9 West	Sections 1 and 2
Township 18 North	Range 9 West	Sections 7, 17 – 21, 27 – 29, and 33 – 36
	Range 10 West	Sections 1 and 12
Township 19 North	Range 10 West	Sections 6 – 8, 6, 17, 21, 22, 26, 27, 35, and 36
	Range 11 West	Sections 1 and 2
Township 20 North	Range 11 West	Sections 4, 5, 8, 9, 15, 16, 21, 22, 26, 27, and 34 – 36
Township 21 North	Range 11 West	Sections 29 – 33
	Range 12 West	Sections 7, 17 – 23, and 25 – 28
	Range 13 West	Sections 2 – 4 and 11 – 13
Township 22 North	Range 13 West	Sections 30 – 34
	Range 14 West	Sections 19 – 26
	Range 15 West	Sections 19 – 24 and 28 – 30
	Range 16 West	Sections 19, 20, and 24 – 30
	Range 17 West	Sections 13 – 16 and 20 – 25
	Range 18 West	Sections 20 – 24

Table 2 lists the U.S. Geological Survey (USGS) 12-digit hydrologic unit code (HUC) watersheds that are crossed by the study area.

Table 2. Watersheds Crossed by the Study Area

Watershed	HUC12	Watershed	HUC12
Red Creek	190205040702	Texas Creek	190205051104
Lower Happy River	190205041010	Bear Creek	190205051105
Portage Creek	190205041106	Upper Sucker Creek	190205051107
Shirley Lake-Skwentna River	190205041109	Wolverine Creek	190205051108
Skwentna River	190205041503	Lower Sucker Creek	190205051109
Lower Skwentna River	190205041504	Trail Creek	190205051110
Shell Creek	190205041508	Lower Alexander Creek	190205051111
Sevenmile Lake	190205041509	Diamond Lake-Little Susitna River	190205051207
Eightmile Creek	190205041510	Maguire Creek	190205051208
Canyon Lake-Skwentna River	190205041511	Horseshoe Lake-Little Susitna River	190205051209
Town of Susitna-Susitna River	190205051006	Cow Lake-Fish Creek	190205051302
Deep Creek	190205051101	Flat Horn Lake-Fish Creek	190205051303
Clear Creek	190205051102	Outlet Susitna River	190205051306
Toms Creek	190205051103		

Source: USGS 2020a

2.0 Methods

2.1. Previous Investigations

Several previous wetland investigations have been conducted within portions of the study area. The following sections briefly describe these investigations and how the data was referenced and/or incorporated into this mapping effort.

2.1.1. 2007 West Mat-Su Access Project

In 2007, HDR prepared a draft Preliminary Jurisdictional Determination (PJD) report for the West Mat-Su Access Project (HDR 2007). The study area for this project consisted of a 300-foot-wide corridor along several potential access routes; one of these investigated corridors overlaps with the study area between the Little Susitna River and Fish Creek.

The PJD included a field survey conducted on September 6 to 8, 2006, which collected information using Wetland Determination Forms from the 2006 Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (USACE 2006). This data was reevaluated prior to the 2020 field work using the updated methods in the 2007 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (2007 Regional Supplement, USACE 2007). All conclusions of the 2006 Wetland Determination Forms completed within the study area are supported using the current wetland delineation methodology.

The PJD also presents permit-level wetland and waterbody mapping for the West Mat-Su Access Project study area. Due to the age of the mapping provided in the PJD (14 years), this mapping was referenced during preparation of the preliminary mapping for this mapping effort (see Section 2.2 Preliminary Mapping) but was not incorporated into the revised mapping and is not presented in the results of this report.

2.1.2. Applicable Investigations

This project makes use of permit-level wetland and waterbody mapping from other applicable sources for approximately 57 miles from Beluga to Happy River. This mapping was updated in 2017 using field data collected in 2010, 2011, 2013, and 2016. This mapping consists of a 1,000-foot-wide corridor, as well as several materials sites. Wetlands and waterbodies were delineated using aerial imagery and other reference datasets, and classified according to wetland status, project vegetation type, and hydrogeomorphic (HGM) and Cowardin classifications. Waterbodies were delineated at a scale of 1:400 and vegetation boundaries at a scale of 1:1,200 to 1:1,500. This mapping has been incorporated without modification into the mapping presented in this report.

2.2. Preliminary Mapping

Prior to field work, HDR wetland scientists prepared preliminary wetland mapping of the Planning-Level Mapping Area using all available data sources. Scientists reviewed the following datasets in a Geographic Information System (GIS) to delineate wetlands and waterbodies in the study area:

- Color digital ortho-rectified aerial photography at 0.5-foot and 1-foot ground pixel resolution, acquired for the MSB (MSB 2019)
- Esri World Imagery high-resolution satellite and aerial imagery at 1-meter resolution or better (Esri 2020)
- Hillshade and 10-foot contours derived from high-resolution Light Detection and Ranging (Lidar) data for the west Susitna area, acquired by the Alaska Division of Geological and Geophysical Surveys (Daanen et al. 2020)
- Hillshade derived from Bare Earth Digital Elevation Model (DEM) at 1-meter resolution, acquired by the MSB (AeroMetric, Inc. 2011)
- West Mat-Su Access Project PJD (HDR 2007)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping (USFWS 2019; Figure 2)
- National Hydrography Dataset (USGS 2020b)
- Alaska Department of Fish and Game (ADF&G) Anadromous Waters Catalog (ADF&G 2019)
- Natural Resources Conservation Service (NRCS) soil survey mapping (NRCS 2020; Figure 2)

2.3. 2020 Field Work

On September 15, 16, 18, 23, and 29, 2020, HDR wetland scientists conducted an on-site investigation of wetlands and waterbodies within the Planning-Level Mapping Area of the study area. Soil conditions, hydrology, and plant communities were studied using methods described in the 1987 *Wetlands Delineation Manual* and the 2007 *Regional Supplement* (USACE 1987, 2007). The field work occurred within the USACE's recommended growing season for the ecoregions in which the study area is located (USACE 2007). Field work on September 15 was conducted within the Alaska Range ecoregion (May 24 to October 3). Field work on all other dates was conducted within the Cook Inlet ecoregion (May 8 to October 5).

Wetlands were identified where wetland scientists observed indicators of hydrophytic vegetation, wetland hydrology, and hydric soils. If any of the three requirements were not met under normal conditions, the site did not meet the USACE criteria for being classified as a wetland. Sites were characterized by completing standard USACE Wetland Determination Forms (2007 Regional Supplement). Photographs and observational data were collected at additional locations (Observation Points) to document sites that exhibited characteristics similar to those of areas where a data form had already been completed, or to document the presence (or absence) of a waterbody or stream.

Where feasible, wetland/upland boundaries were determined in the field by completing paired data plots. This process involved completing Wetland Determination Forms near observable transition zones between wetter and drier areas. A Wetland Determination Form was completed in the wetter area to verify its wetland status, and a second Wetland Determination Form was completed in the drier area to verify its upland status. The wetland/upland boundary between the two data plots was then identified and marked on field maps.

Wetland Determination Forms were completed at 56 sites (Appendix A). Observation Points were collected at an additional 98 locations (Appendix B). Locations of Wetland Determination Form sites and Observation Points were logged into a global positioning system (GPS)-enabled iPad. In total, field data were collected at 154 locations during the 5-day field event in September 2020.

2.4. Wetland Mapping and Classification

Upon returning from the field, scientists analyzed field-collected data and updated the preliminary wetland mapping for the Planning-Level Mapping Area. GPS locations of field-visited sites were overlaid on the aerial photography and other data layers in GIS to identify and classify wetlands and waterbodies present within the study area. Aerial photography vegetation signatures from these field-visited sites were then extrapolated to similar locations throughout the study area, and wetland/upland boundaries were digitized into GIS at a scale of 1:3,000. Delineating wetlands from aerial photography includes the following methods:

- Vegetation clues: Scientists examine aerial photographs for saturation-adapted vegetation communities, indicative canopy structure and height, and presence of hydrophytic plant species.
- Evidence of soil saturation: A site's proximity to streams, open water habitat, and marshes
 can be indicative of shallow subsurface water. Scientists therefore look for visible evidence
 of wetland hydrology, including surface water and darker areas of photographs that
 indicate surface saturation.
- Topography: Evidence of topographic high points and sloped surfaces that would allow soils to drain supports the classification of those areas as upland. Topographic depressions, toes of slopes, and flat topography serve as indicators of potentially poor soil drainage.

Wetlands were classified based on a review of field notes, data forms, and site photographs. Mapped polygons identifying homogeneous wetland and waterbody areas in the GIS-based mapping were attributed with NWI mapping codes based on the USFWS' *Classification of*



Wetlands and Deepwater Habitats of the U.S. (Cowardin et al. 1979). Mapped polygons were also assigned an HGM class based on landscape position (Brinson 1993). Streams were mapped as polygons when a stream channel was visible on aerial imagery; otherwise, streams were mapped as line features.

2.5. Wetland Functions and Values

Wetlands provide services or functions that are considered valuable to society. The position and function of high-value wetlands in the landscape plays an integral role in overall watershed health. Data on functions and values was not collected during the September 2020 field investigation and a Functional Assessment was not prepared.

Wetlands within the study area that are likely high value were identified in GIS based on the permit-level wetland mapping described in Section 2.1.2 and the revised planning-level wetland mapping described in Section 2.4. High-value wetlands were considered to be those that are adjacent to and likely provide support for anadromous fish streams (identified from the ADF&G Anadromous Waters Catalog; ADF&G 2019); vegetated wetlands with permanently flooded or semi-permanently flooded hydrologic regimes; and wetlands and waterbodies within complexes with a high degree of heterogeneity (i.e., three or more vegetated wetland classes and hydrologic regimes present) that likely perform multiple functions to a moderate or high degree. These wetlands were selected because their characteristics and landscape position indicate that they are likely to perform important functions at a higher level, such as wildlife habitat, anadromous fish support, storm and floodwater storage, modification of streamflow, modification of water quality, and export of detritus. Anadromous streams and some permanently flooded ponds were also identified as high value. Streams mapped as linear features were not included in this preliminary assessment.

3.0 Summary of Wetland Indicators

The vegetation, hydrology, and soil conditions described below are based on the September 2020 field investigation within the Planning-Level Mapping Area described in Section 2.3. This section does not include data from the previous wetland investigations described in Section 2.1. Wetland conditions were documented at 25 of the 56 Wetland Determination Form sites visited in 2020. The remaining 31 sites were determined to be upland. Many of these upland sites met one or two of the three criteria required to determine wetland status. The completed Wetland Determination Forms, photographs taken at each site, and tables summarizing the data collected at each site are included in Appendix A.

Wetland scientists documented a total of 98 Observation Points in September 2020. Observational data collected at these points includes the wetland or upland status, a description of field indicators of wetland functions, a description of the vegetation community, and/or documentation of the presence of a waterbody or stream. Appendix B includes a table summarizing the data collected at each Observation Point and photographs. Figure 3 shows locations of all sites visited in the field.



3.1. Vegetation

Vegetation in the study area consists primarily of mixed paper birch and white spruce forests, alder-dominated scrub, black spruce peat bogs, ericaceous shrub bogs, and mesic herb meadows. Table 3 lists the dominant plant species observed at the 56 sites where Wetland Determination Forms were completed. The dominant plant species were identified using the "50/20 Rule" from the 2007 *Regional Supplement* (USACE 2007). Appendix A includes the Viereck Level IV (Viereck et al. 1992) vegetation communities documented at the Wetland Determination Form sites. Appendix A also includes a complete list of all plant species identified at Wetland Determination Form sites and their synonyms.

A total of 33 sites where Wetland Determination Forms were completed had plant communities dominated by hydrophytes. Of these, 17 sites were determined to have hydrophytic vegetation based on both the Dominance Test and Prevalence Index, while 15 were determined to be hydrophytic based on the Dominance Test alone. One site was determined to have problematic hydrophytic vegetation. All but eight locations with hydrophytic vegetation were determined to be wetland. Additionally, four locations were determined to be upland based on a lack of hydrophytic vegetation alone.

Table 3. Dominant Plants at Wetland Determination Form Sites

Species	Common Name Indicator Species Common Name Status ^a		Common Name	Indicator Status ^a	
Alnus incana	Speckled Alder	FAC	Lycopodium clavatum	Running Ground- Pine	FACU
Alnus viridis	Sitka Alder	FAC	Menziesia ferruginea	Fool's-Huckleberry	FACU
Athyrium cyclosorum	Western Lady Fern	FAC	Myrica gale	Sweetgale	OBL
Betula glandulosa	Resin Birch	FAC	Oplopanax horridus	Devil's Club	FACU
Betula kenaica	Kenai Birch	FACU	Picea glauca	White Spruce	FACU
Betula nana	Swamp Birch	FAC	Picea mariana	Black Spruce	FACW
Betula papyrifera	Paper Birch	FACU	Populus balsamifera	Balsam Poplar	FACU
Calamagrostis canadensis	Bluejoint	FAC	Populus tremuloides	Quaking Aspen	FACU
Carex aquatilis	Leafy Tussock Sedge	OBL	Pyrola asarifolia	Pink Wintergreen	FACU
Carex disperma	Soft-Leaf Sedge	FACW	Rhododendron groenlandicum	Rusty Labrador Tea	FAC
Carex leptalea	Bristly-Stalk Sedge	OBL	Rhododendron tomentosum	Marsh Labrador Tea	FACW
Carex limosa	Mud Sedge	OBL	Ribes glandulosum	Skunk Currant	FAC
Carex microchaeta	Alpine-Tundra Sedge	FAC	Ribes hudsonianum	Northern Black Currant	FAC
Carex pauciflora	Few-Flower Sedge	OBL	Rubus arcticus	Northern Blackberry	FAC
Carex spectabilis	Northwestern Showy Sedge	FACW	Rubus chamaemorus	Cloudberry	FACW
Chamaedaphne calyculata	Leatherleaf	FACW	Rubus idaeus	Common Red Raspberry	FACU
Chamaenerion angustifolium	Narrow-Leaf Fireweed	FACU	Rubus pedatus	Strawberry-Leaf Raspberry	FAC
Comarum palustre	Purple Marshlocks	OBL	Salix barclayi	Barclay's Willow	FAC

Species	Common Name	Indicator Status ^a	Species	Common Name	Indicator Status ^a
Cornus canadensis	Canadian Bunchberry	FACU	Salix barrattiana	Barratt's Willow	FACW
Cornus suecica	Dwarf Bog Bunchberry	FAC	Salix bebbiana	Gray Willow	FAC
Dryopteris expansa	Spreading Wood Fern	FACU	Sambucus racemosa	Red Elder	FACU
Empetrum nigrum	Black Crowberry	FAC	Spinulum annotinum	Interrupted Club- Moss	FACU
Equisetum arvense	Field Horsetail	FAC	Spiraea stevenii	Steven's Meadowsweet	FACU
Equisetum fluviatile	Water Horsetail	OBL	Urtica dioica	Stinging Nettle	FACU
Equisetum pratense	Meadow Horsetail	FACW	Vaccinium alaskaense	Alaska Blueberry	FAC
Equisetum sylvaticum	Woodland Horsetail	FAC	Vaccinium ovalifolium	Oval-Leaf Blueberry	FAC
Eriophorum scheuchzeri	White Cotton- Grass	OBL	Vaccinium vitis-idaea	Northern Mountain- Cranberry	FAC
Gymnocarpium dryopteris	Northern Oak Fern	FACU	Viburnum edule	Squashberry	FACU
Linnaea borealis	American Twinflower	FACU			

^a Wetland Indicator Status (USACE 2018a). FAC (Facultative): species equally likely to occur in wetlands and non-wetlands; FACU (Facultative Upland): species usually occurs in non-wetlands; FACW (Facultative Wetland): species usually occurs in wetlands; OBL (Obligate): species almost always occurs under natural conditions in wetlands.

3.2. Soils

Detailed NRCS soil mapping is available for approximately 78 percent of the study area (NRCS 2020). The most common soil types mapped within the study area are Strandline-Spenard-Kroto complex, 2 to 30 percent slopes (33.8 percent of the study area), and Benka silt loam, 0 to 3 percent slopes (5.8 percent of the study area). All other soil map units present each constitute less than 5 percent of the study area. Of the 44 soil types mapped, 12 types constituting 12.8 percent of the study area are rated as hydric soils.

Site-specific soil characteristics were documented at each of the 56 Wetland Determination Form sites. Hydric soil indicators were taken from the 2007 *Regional Supplement* and the NRCS *Field Indicators of Hydric Soils in the United States* (USACE 2007; NRCS 2018). Soil profile depths were recorded starting at the ground surface¹ in accordance with the *Field Book for Describing and Sampling Soils* (Schoeneberger et al. 2012); however, hydric soil indicators relevant to mineral soils (e.g., Alaska Gleyed, Alaska Redox, etc.) and hydrogen sulfide odor were evaluated starting from the top of the mineral soil surface.

Hydric soils documented during the September 2020 field effort were principally organic. Hydric soils were found at 29 of the 56 sites. All but four locations with hydric soil indicators were determined to be wetland. Appendix A summarizes hydric soil indicators observed at each site. The most common hydric soil indicator observed was the presence of a histosol (11 sites), followed by the presence of a histic epipedon (11 sites).

¹ The ground surface is considered to be the top boundary of the first layer, either mineral or organic, that can support plant/root growth. For all soil profile depths, zero was recorded at the ground surface.

3.3. Hydrology

The USACE Antecedent Precipitation Tool (APT) was used to determine the degree to which any recent climatic events (e.g., abnormally wet or dry conditions) may have influenced hydrology conditions during the time of the field investigation. The APT utilizes 30 years of data on precipitation, drought, and other climatic factors to determine "normal" conditions (Deters 2020). Two custom polygons were used in the assessment that were spatially representative of the two general locations where field work was performed within the study area boundaries.

Hydrologic indicators observed during each field visit would be expected to correlate with the APT output for the specific field day. For example, if precipitation is drier than normal, hydrologic indicators (such as high-water table) may not be present and could result in a false negative determination for wetland hydrology observed during that field day. Appendix C provides a detailed data set that provides the hydrologic conditions for all five days of the September 2020 field effort from the APT.

APT data is useful for generally correlating current site conditions with antecedent precipitation conditions for a particular timeframe. However, during field surveys, the wetland survey crews reviewed precipitation data for the three months prior to the field survey using the NRCS *Engineering Field Handbook* method (NRCS 1997), as well as conditions on the ground to make a determination on the data sheet regarding antecedent precipitation conditions. For example, APT outputs for September 23 and 29, 2020, were drier than normal; however, site conditions on the ground indicated normal conditions for these two days, based on field observation of primary hydrology indicators. Therefore, forms collected during these days were indicated as having normal conditions. The APT calculated that hydrologic conditions were normal for the remaining three field days (September 15, 16, and 18, 2020), which was consistent with field observations.

Evidence of wetland hydrology (at least one primary indicator or two secondary indicators) was documented at 35 of the 56 Wetland Determination Form sites. Of the 35 sites determined to have wetland hydrology, primary hydrology indicators were observed at 33 sites, while secondary indicators alone were observed at 2 sites. Evidence of wetland hydrology was observed at all 25 sites determined to be wetlands, and at 10 of the 31 sites determined to be upland. Appendix A shows the hydrology indicators observed at each site.

The primary indicators of wetland hydrology observed during the September 2020 field investigation were surface water, high water table, saturation, sediment deposits, drift deposits, and hydrogen sulfide odor. Secondary indicators included water-stained leaves, drainage patterns, oxidized rhizospheres, presence of reduced iron, stunted or stressed plants, microtopographic relief, and a positive FAC-neutral test.

Specific information regarding the different indicators observed at each site (e.g., depth to saturation within the soil pit) can be found on the Wetland Determination Forms included in Appendix A. These indicators are further described in the 2007 *Regional Supplement* (USACE 2007).



4.0 Wetland and Waterbody Mapping Results

Wetland scientists identified 3,152.2 acres of wetlands within the 20,605.6-acre study area. Wetland types include forested, scrub-shrub, and emergent wetlands. An additional 100.1 acres of waterbodies and 430.4 acres of perennial streams were mapped. The remaining 16,922.9 acres of the study area were determined to be upland. Wetland and waterbody classes found within the study area and acreages are provided by NWI classification in Table 4 and by HGM class in Table 5. Additionally, 453,139 linear feet of perennial and intermittent streams were mapped as line features, as summarized in Table 6.

Figure 3 displays wetland, upland, and waterbody boundaries; the boundaries between different wetland and waterbody types; and the linear paths of streams identified in the study area. It also shows the locations of the Wetland Determination Form sites and Observation Points collected in 2020 and the locations of 51 data points collected within the study area in 2006.



Table 4. Mapping Summary by NWI Type

NWI Code ^a	Description	Plann	ing-Level Mapping A	Permit-Level Mapping Area	Total Phase 2 Study Area	
		Representative Data Form Sites	Representative Observation Points	Acres ^b	Acres ^b	Acres ^b
Forested Wet	lands			245.2	376.9	622.0
PFO1/4B	Saturated, broad-leaved, deciduous/needle-leaved, evergreen forested wetland	-	-	10.9	145.8	156.7
PFO1/4C	Seasonally flooded, broad-leaved, deciduous/needle-leaved, evergreen forested wetland	-	-	-	3.9	3.9
PFO1/EM1B	Saturated, broad-leaved, deciduous forested/persistent emergent wetland	-	515	9.8	1.6	11.4
PFO1/SS1B	Saturated, broad-leaved, deciduous forested/broad-leaved, deciduous scrub-shrub wetland	555, 579	535, 544, 573, 580	27.3	18.0	45.3
PFO1/SS1C	Seasonally flooded, broad-leaved, deciduous forested/broad-leaved, deciduous scrub-shrub wetland	508, 528	-	11.1	3.0	14.0
PFO1/SS4B	Saturated, broad-leaved, deciduous forested/needle-leaved, evergreen scrub-shrub wetland	-	-	4.9	-	4.9
PFO1A	Temporarily flooded, broad-leaved, deciduous forested wetland	-	-	-	0.4	0.4
PFO1B	Saturated, broad-leaved, deciduous forested wetland	-	-	-	12.3	12.3
PFO4/1A	Temporarily flooded, needle-leaved, evergreen/broad-leaved, deciduous forested wetland	-	-	-	0.7	0.7
PFO4/1B	Saturated, needle-leaved, evergreen/broad-leaved, deciduous forested wetland	-	-	-	43.8	43.8
PFO4/SS1B	Saturated, needle-leaved, evergreen forested/broad-leaved, deciduous scrub-shrub wetland	513, 572, 584	589	85.8	118.0	203.7
PFO4/SS1C	Seasonally flooded, needle-leaved, evergreen forested/broad-leaved, deciduous scrub-shrub wetland	520	588, 590	13.1	1.0	14.1
PFO4/SS3B	Saturated, needle-leaved, evergreen forested/broad-leaved, evergreen scrub-shrub wetland	585	-	1.8	-	1.8
PFO4/SS4B	Saturated, needle-leaved, evergreen forested/needle-leaved, evergreen scrub-shrub wetland	-	-	65.1	-	65.1
PFO4/SS4C	Seasonally flooded, needle-leaved, evergreen forested/needle-leaved, evergreen scrub-shrub wetland	587	-	6.6	-	6.6
PFO4B	Saturated, needle-leaved, evergreen forested wetland	-	-	8.9	19.7	28.7
PFO4C	Seasonally flooded, needle-leaved, evergreen forested wetland	-	-	-	8.5	8.5
Scrub-Shrub	Wetlands			1,209.0	751.9	1,961.0
PSS1/4B	Saturated, broad-leaved, deciduous/needle-leaved, evergreen scrub-shrub wetland	042	-	49.2	20.4	69.6



NWI Code ^a	Description	Plann	ing-Level Mapping A	Permit-Level Mapping Area	Total Phase 2 Study Area	
		Representative Data Form Sites	Representative Observation Points	Acres ^b	Acres ^b	Acres ^b
PSS1/4C	Seasonally flooded, broad-leaved, deciduous/needle-leaved, evergreen scrub-shrub wetland	-	-	4.8	0.1	4.8
PSS1/EM1A	Temporarily flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland	-	-	-	68.9	68.9
PSS1/EM1Ab	Temporarily flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland, beaver modified	-	-	-	0.5	0.5
PSS1/EM1B	Saturated, broad-leaved, deciduous scrub-shrub/persistent emergent wetland	043a, 504, 547	048, 053, 518, 538, 552	151.8	118.0	269.8
PSS1/EM1C	Seasonally flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland	-	035, 519, 532, 533, 542, 582	325.8	197.5	523.3
PSS1/EM1Cb	Seasonally flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland, beaver modified	-	-	5.0	5.9	10.9
PSS1/EM1F	Semi-permanently flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland	-	-	14.9	6.8	21.6
PSS1/EM1Fb	Semi-permanently flooded, broad-leaved, deciduous scrub- shrub/persistent emergent wetland, beaver modified	-	-	3.6	-	3.6
PSS1/FO1A	Temporarily flooded, broad-leaved, deciduous scrub- shrub/broad-leaved, deciduous forested wetland	-	-	-	3.9	3.9
PSS1/FO1B	Saturated, broad-leaved, deciduous scrub-shrub/broad-leaved, deciduous forested wetland	-	-	-	20.0	20.0
PSS1/FO1C	Seasonally flooded, broad-leaved, deciduous scrub- shrub/broad-leaved, deciduous forested wetland	-	-	-	1.8	1.8
PSS1/FO4Ab	Temporarily flooded, broad-leaved, deciduous scrub- shrub/needle-leaved, evergreen forested wetland, beaver modified	-	-	-	1.6	1.6
PSS1/FO4B	Saturated, broad-leaved, deciduous scrub-shrub/needle-leaved, evergreen forested wetland	-	-	-	27.9	27.9
PSS1/FO4C	Seasonally flooded, broad-leaved, deciduous scrub- shrub/needle-leaved, evergreen forested wetland	-	-	-	0.1	0.1
PSS1A	Temporarily flooded, broad-leaved, deciduous scrub-shrub wetland	-	-	1.0	50.8	51.8
PSS1Ab	Temporarily flooded, broad-leaved, deciduous scrub-shrub wetland, beaver modified	-	-	-	5.5	5.5
PSS1B	Saturated, broad-leaved, deciduous scrub-shrub wetland	522	043b, 046, 052, 512, 554	58.9	133.7	192.6
PSS1C	Seasonally flooded, broad-leaved, deciduous scrub-shrub wetland	015, 040, 501	-	56.6	31.1	87.7
PSS1Cb	Seasonally flooded, broad-leaved, deciduous scrub-shrub wetland, beaver modified	-	-	-	10.7	10.7



NWI Code ^a	Description	Plann	ing-Level Mapping A	Permit-Level Mapping Area	Total Phase 2 Study Area	
		Representative Data Form Sites	Representative Observation Points	Acres ^b	Acres ^b	Acres b
PSS1F	Semi-permanently flooded, broad-leaved, deciduous scrub- shrub wetland	-	014	0.7	-	0.7
PSS3/EM1C	Seasonally flooded, broad-leaved, evergreen scrub- shrub/persistent emergent wetland	-	530	0.9	-	0.9
PSS4/1B	Saturated, needle-leaved, evergreen/broad-leaved, deciduous scrub-shrub wetland	045	-	119.2	46.7	166.0
PSS4/1C	Seasonally flooded, needle-leaved, evergreen/broad-leaved, deciduous scrub-shrub wetland	-	-	21.5	-	21.5
PSS4/EM1B	Saturated, needle-leaved, evergreen scrub-shrub/persistent emergent wetland	-	-	105.9	-	105.9
PSS4/EM1C	Seasonally flooded, needle-leaved, evergreen scrub- shrub/persistent emergent wetland	-	051	38.9	-	38.9
PSS4B	Saturated, needle-leaved, evergreen scrub-shrub wetland	592	050	250.2	-	250.2
Emergent Wet				416.3	152.9	569.1
PEM1/2F	Semi-permanently flooded, persistent/nonpersistent emergent wetland	-	-	-	1.8	1.8
PEM1/2H	Permanently flooded, persistent/nonpersistent emergent wetland	-	-	-	0.1	0.1
PEM1/FO1B	Saturated, persistent emergent/broad-leaved, deciduous forested wetland	-	-	-	6.0	6.0
PEM1/SS1B	Saturated, persistent emergent/broad-leaved, deciduous scrub-shrub wetland	593	033, 531, 540	22.9	2.8	25.7
PEM1/SS1C	Seasonally flooded, persistent emergent/broad-leaved, deciduous scrub-shrub wetland		507, 511, 521, 527	127.0	23.8	150.8
PEM1/SS1Cb	Seasonally flooded, persistent emergent/broad-leaved, deciduous scrub-shrub wetland, beaver modified	-	-	-	0.3	0.3
PEM1/SS1F	Semi-permanently flooded, persistent emergent/broad- leaved, deciduous scrub-shrub wetland	-	581	5.8	16.6	22.3
PEM1/SS4B	Saturated, persistent emergent/needle-leaved evergreen scrub-shrub wetland	-	591	17.3	-	17.3
PEM1/UBF	Semi-permanently flooded, persistent emergent/unconsolidated bottom wetland	-	-	10.1	-	10.1
PEM1A	Temporarily flooded, persistent emergent wetland	-	-	0.4	19.2	19.6
PEM1B	Saturated, persistent emergent wetland	016, 028	021	23.1	16.2	39.4
PEM1C	Seasonally flooded, persistent emergent wetland	-	001, 049, 505, 510, 545	149.6	38.0	187.6
PEM1Cb	Seasonally flooded, persistent emergent wetland, beaver modified	-	-	1.4	9.3	10.7



NWI Code ^a	Description	Plann	ing-Level Mapping Ar	Permit-Level Mapping Area	Total Phase 2 Study Area	
		Representative Data Form Sites	Representative Observation Points	Acres ^b	Acres ^b	Acres ^b
PEM1F	Semi-permanently flooded, persistent emergent wetland	-	012, 032, 035, 546	52.8	15.8	68.5
PEM1Fb	Semi-permanently flooded, persistent emergent wetland, beaver modified	-	-	5.8	0.5	6.3
PEM1H	Permanently flooded, persistent emergent wetland	-	-	-	2.2	2.2
PEM2/AB3H	Permanently flooded, nonpersistent emergent/rooted vascular aquatic bed wetland	-	-	-	0.3	0.3
Aquatic Bed	Vetlands			-	0.1	0.1
PAB3H	Permanently flooded, rooted vascular aquatic bed wetland	-	-	-	0.1	0.1
			Total Wetlands	1,870.5	1,281.7	3,152,2
Lakes				-	9.3	9.3
L1UBH	Permanently flooded, unconsolidated bottom, limnetic lake	-	-	-	9.3	9.3
Ponds				54.1	36.4	90.8
PAB3/UBH	Permanently flooded, rooted vascular aquatic bed/unconsolidated bottom pond	-	-	-	1.9	1.9
PAB3/UBHb	Permanently flooded, rooted vascular aquatic bed/unconsolidated bottom pond, beaver pond	-	-	-	0.2	0.2
PUB/AB3H	Permanently flooded, unconsolidated bottom/rooted vascular aquatic bed pond	-	-	-	0.1	0.1
PUB/EM2Hb	Permanently flooded, unconsolidated bottom/nonpersistent emergent pond, beaver modified	-	-	-	0.8	0.8
PUBF	Semi-permanently flooded, unconsolidated bottom pond	-	-	-	0.0	0.0
PUBH	Permanently flooded, unconsolidated bottom pond	-	006, 013, 559, 568	40.4	20.6	61.0
PUBHb	Permanently flooded, unconsolidated bottom pond, beaver modified	-	-	13.7	12.7	26.4
Streams				193.7	237.1	430.7
R2UBH	Permanently flooded, lower perennial stream with an unconsolidated bottom	-	-	125.7	0.4	126.1
R2UBHb	Permanently flooded, lower perennial stream with an unconsolidated bottom, beaver modified	-	-	-	1.0	1.0
R2USC	Seasonally flooded, lower perennial stream with an unconsolidated shore	-	-	1.8	-	1.8
R3UBH	Permanently flooded, upper perennial stream with an unconsolidated bottom	-	See Table 6	30.2	233.3	263.5
R3UBHb	Permanently flooded, upper perennial stream with an unconsolidated bottom, beaver modified	-	-	1.7	2.3	4.0
R3USC	Seasonally flooded, upper perennial stream with an unconsolidated shore	-	-	33.9	-	33.9



NWI Code ^a	Description	Plann	Planning-Level Mapping Area			Total Phase 2 Study Area
		Representative Data Form Sites	Representative Observation Points	Acres ^b	Acres ^b	Acres ^b
PSS1/USA	Temporarily flooded, broad-leaved, deciduous scrub- shrub/unconsolidated shore gravel bar	-	031	0.3	-	0.3
			Total Waterbodies	247.7	282.7	530.4
		Total Wetland	Is and Waterbodies	2,118.2	1,564.5	3,682.7
Uplands						
U	Upland	002, 004, 011, 017, 023, 037, 054, 500, 503, 506, 509, 514, 516, 529, 534, 546, 550, 551, 556, 561, 570, 574, 577, 583, 586, 594, 595, 596, 597, 598	005, 007, 008, 010, 019, 024, 025, 026, 029, 030, 036, 038, 041, 044, 047, 502, 517, 524, 541, 543, 548, 553, 562, 565, 575, 576, 578	8,647.8	8,275.1	16,922.9
		1 222, 00., 000	Total Uplands	8,647.8	8,275.1	16,922.9
			Total Mapped Area	10,766.0	9,839.5	20,605.6

 ^a Cowardin et al. 1979
 ^b Total acreage presented may not reflect the sum of the individual cells due to rounding.

Table 5. Wetland and Waterbody Mapping Summary by HGM Class

HGM Class ^a	Planning-Level Mapping Area (Acres b)	Permit-Level Mapping Area (Acres ^b)	Total Phase 2 Study Area (Acres ^b)
	Wetlands	(*13.33)	(10.00)
Depressional	10.6	108.7	119.4
Flat	762.9	58.3	821.2
Lacustrine Fringe	-	3.1	3.1
Riverine	362.3	355.3	717.5
Slope	734.6	756.4	1,491.0
Total Wetlands	1,870.5	1,281.7	3,152.2
	Waterbodies		
Depressional	0.6	25.4	26.1
Flat	24.2	-	24.2
Lacustrine	-	9.3	9.3
Riverine	13.6	10.9	24.5
Riverine Channel	190.8	237.1	427.8
Slope	18.6	-	18.6
Total Waterbodies	247.7	282.7	530.4
Total Wetlands and Waterbodies	2,118.2	1,564.5	3,682.7

^a Brinson 1993

^b Total acreage presented may not reflect the sum of the individual cells due to rounding.

Table 6. Stream Mapping Summary

NWI Code ^a	Description	Planning-Level Map	pping Area	Permit-Level Mapping Area	Total Phase 2 Study Area	
		Representative Observation Points	Linear Feet b	Linear Feet b	Linear Feet b	
R2UBH °	Permanently flooded, lower perennial stream with an unconsolidated bottom	-	19,253	-	19,253	
R3UBH °	Permanently flooded, perennial stream with an unconsolidated bottom	003, 018, 020, 027, 034, 039, 523, 525, 526, 539, 549, 557, 558, 560, 563, 564, 566, 567, 569, 571	158,859	180,270	339,128	
R4SBC	Seasonally flooded, intermittent streambed	-	59,734	35,024	94,758	
		Total Streams	237,845	215,294	453,139	

^a Cowardin et al. 1979

^b Total linear feet presented may not reflect the sum of the individual cells due to rounding. ^c Does not include lengths of streams mapped as polygons presented in Table 4.

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4.1. High-Value Wetlands

A total of 803.4 acres of wetlands and 474.2 acres of waterbodies have been preliminarily identified as high-value wetlands (Figure 4). Table 7 presents high-value wetlands and waterbodies by NWI type and HGM class. The majority of wetlands identified as high value are riverine, flat, and slope. The Final Environmental Impact Statement prepared for the Donlin Gold Project contains descriptions of wetlands that occur within the region by HGM class (USACE 2018b).

Riverine wetlands within the study area identified as high value consist of wetlands adjacent to anadromous streams included in the *Anadromous Waters Catalog* (ADF&G 2019). Functions and values provided by these wetlands include support for anadromous fish populations, storm and floodwater storage, and stream flow modification. Flat wetlands identified as high value include wetland complexes with a high degree of community diversity and interspersion. Functions and values provided by these wetlands include sediment and nutrient retention, storm and floodwater storage, and wildlife habitat. Slope wetlands identified as high value include wetlands with flooded or semi-permanently flooded hydrologic regimes, and wetlands that provide baseflow support to anadromous streams and other high-value complexes. Functions and values provided by these wetlands include groundwater discharge, streamflow support, export of detritus, and wildlife habitat. Anadromous streams and waterbodies were also identified as high value.

The preliminary results presented in Table 7 are based solely on a high-level review of wetland and waterbody mapping in GIS and should be validated by a full functional assessment using a methodology approved for use within the geographic region.

Table 7. High-Value Wetlands and Waterbodies Summary

HGM Class ^a	NWI Code(s) b	Acres ^c
Wetlands		
Depressional	PABH3H, PEM1/2F, PEM1/2H, PEM1/SS1F, PEM1C, PEM1F, PEM1H, PSS1/EM1B, PSS1/EM1C	36.0
Flat	PEM1/SS1C, PEM1/SS4B, PEM1/UBF, PEM1C, PEM1F, PSS1/EM1C, PSS1/EM1F, PSS1/EM1F, PSS4/EM1B, PSS4/EM1B, PSS4/EM1C, PSS4B	235.5
Lacustrine Fringe	PEM1C, PEM1F	3.1
Riverine	PEM1/SS1C, PEM1A, PEM1B, PEM1C, PEM1Cb, PEM1F, PEM1Fb, PEM2/AB3H, PFO4/SS1B, PFO4B, PSS1/EM1A, PSS1/EM1Ab, PSS1/EM1B, PSS1/EM1C, PSS1/EM1Cb, PSS1/EM1Fb, PSS1/FO1A, PSS1A, PSS1B, PSS1C, PSS1Cb	391.2
Slope	PEM1/SS1B, PEM1/SS1C, PEM1/SS1F, PEM1B, PEM1C, PEM1F, PFO1/4B, PFO4/SS1B, PFO4/SS1C, PFO4C, PSS1/4B, PSS1/EM1B, PSS1/EM1C, PSS1/EM1F, PSS1/FO4B, PSS1B, PSS1C, PSS4/1B, PSS4/EM1B	137.5
	Total Wetlands	803.4
	Waterbodies	
Depressional	PAB3/UBH, PUB/AB3H, PUBH, PUBHb	12.7
Flat	PUBH	23.9
Lacustrine	L1UBH	3.5
Riverine	PUBH/EM2Hb, PUBH, PUBHb	11.8
Riverine Channel	R2UBH, R2UBHb, R2USC, R3UBH, R3UBHb, R3USC	420.7

HGM Class ^a	NWI Code(s) ^b	Acres ^c
Slope	PUBH	1.6
	Total Waterbodies	474.2
	Total High-Value Wetlands and Waterbodies	1,227.6

^a Brinson 1993

5.0 References

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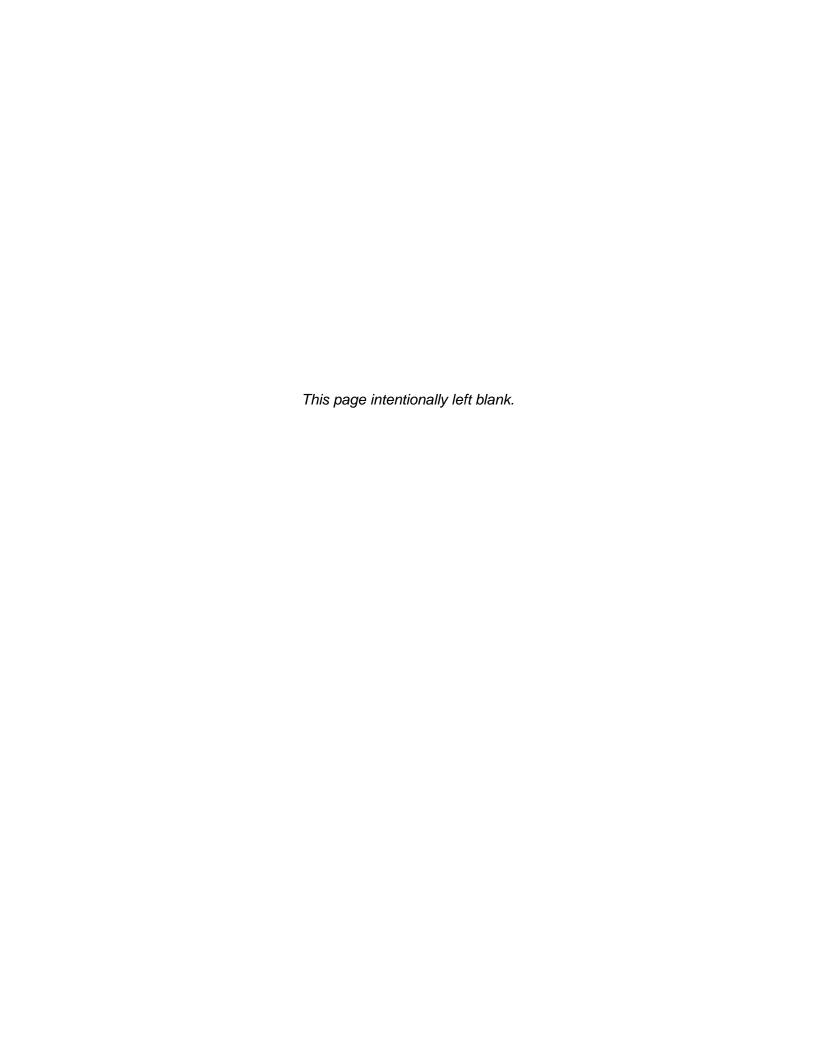
^b Cowardin et al. 1979. See Table 4 for full descriptions.

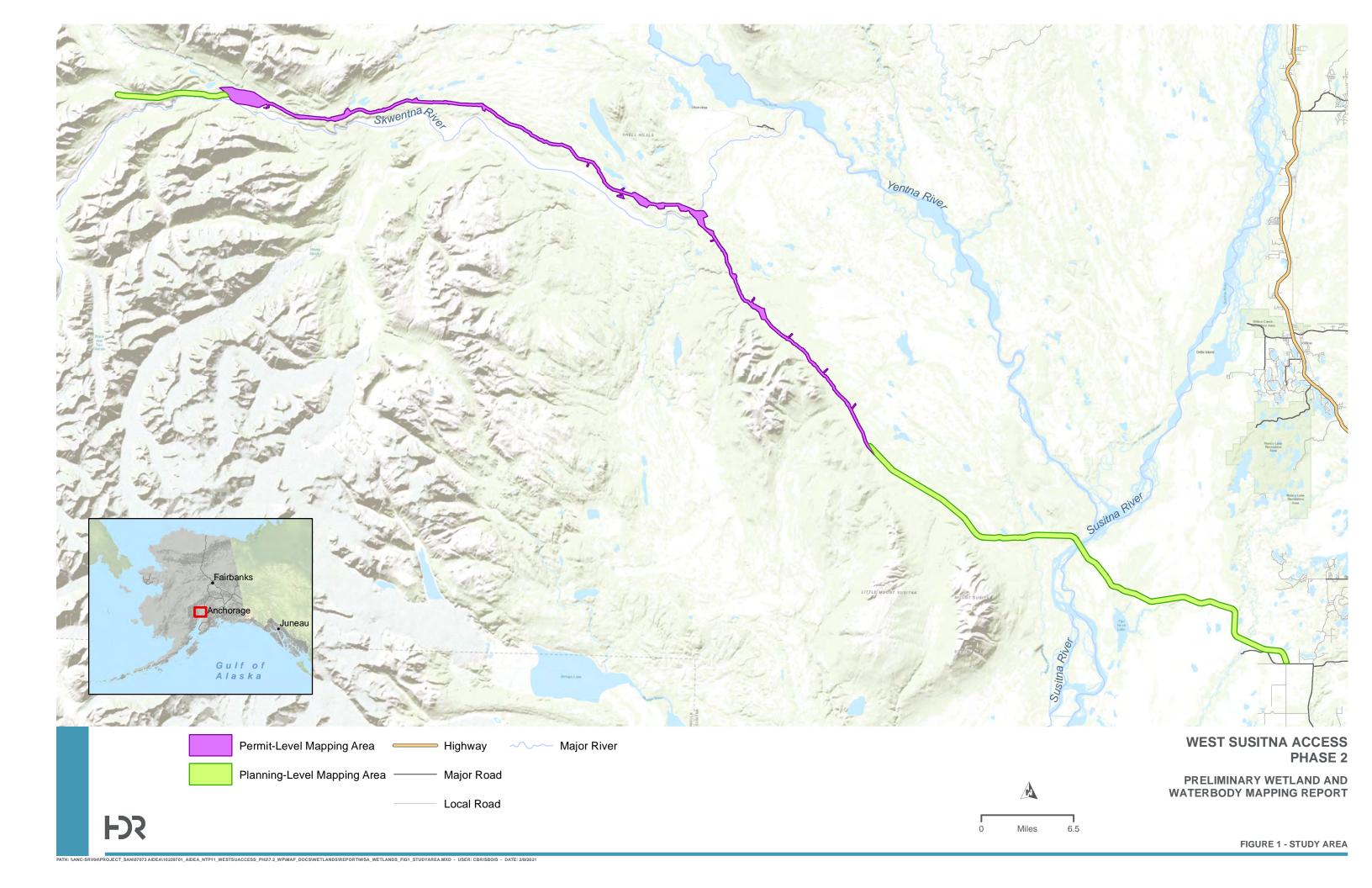
^c Total acreage presented may not reflect the sum of the individual cells due to rounding.

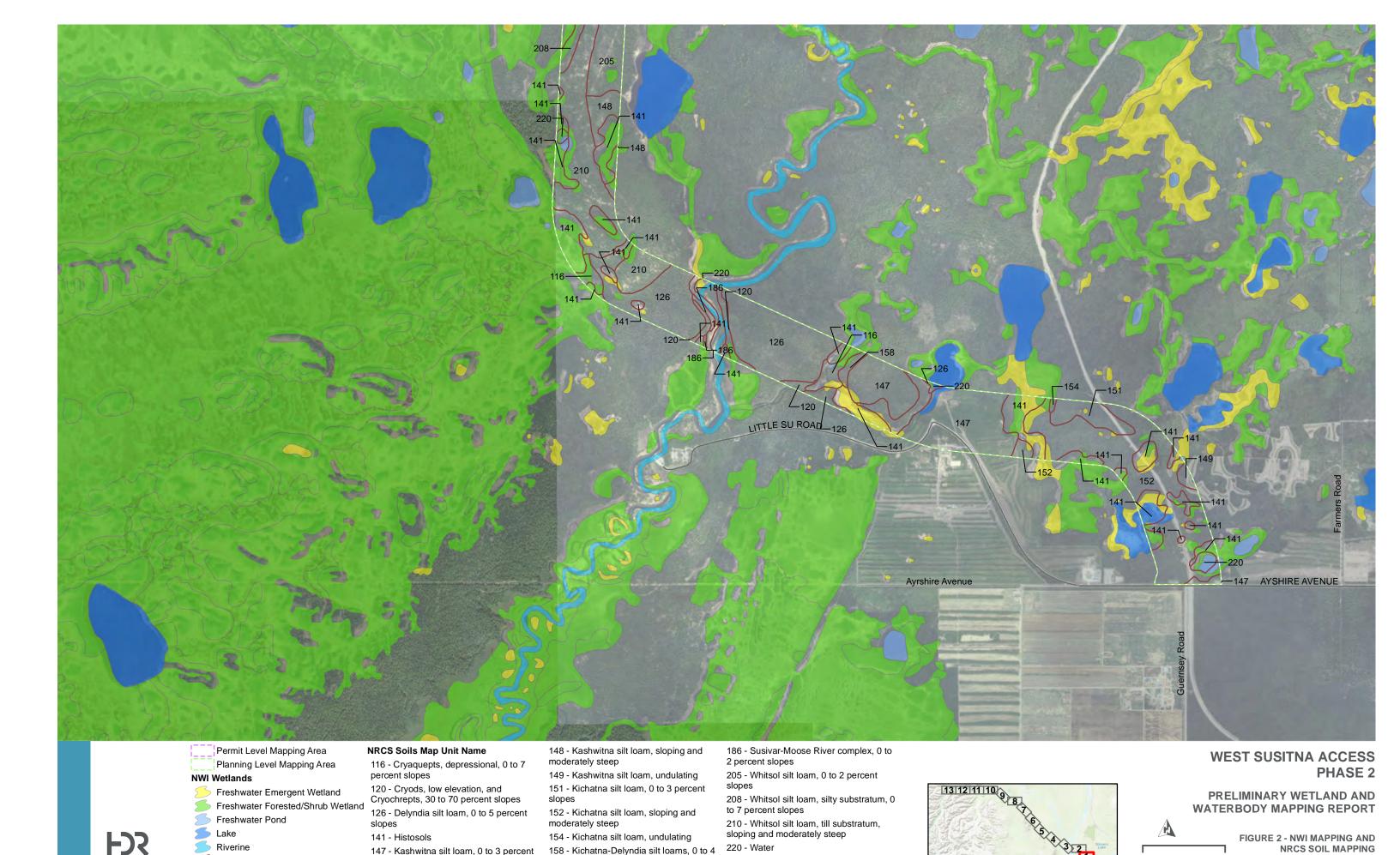
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Figures





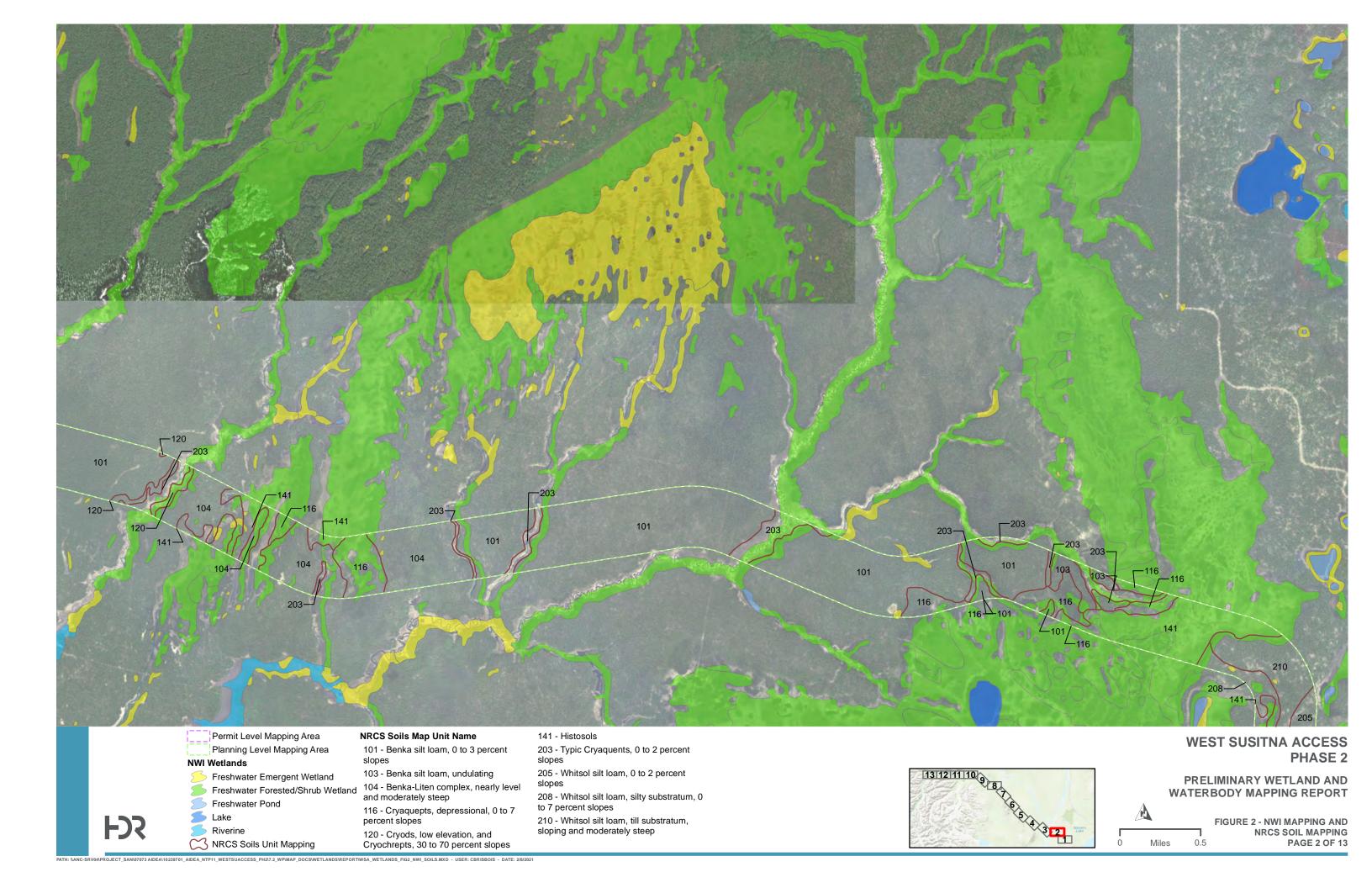


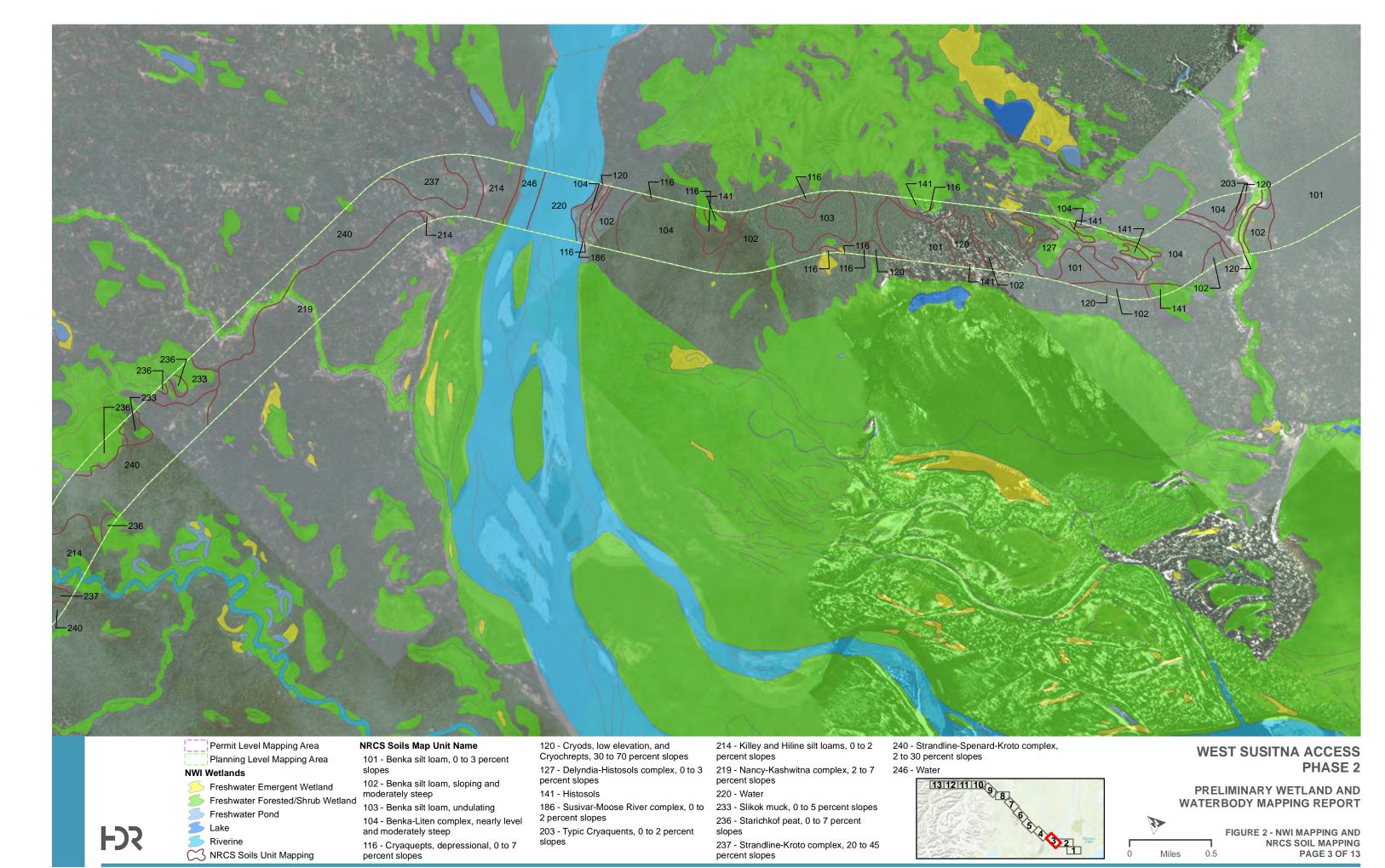
percent slopes

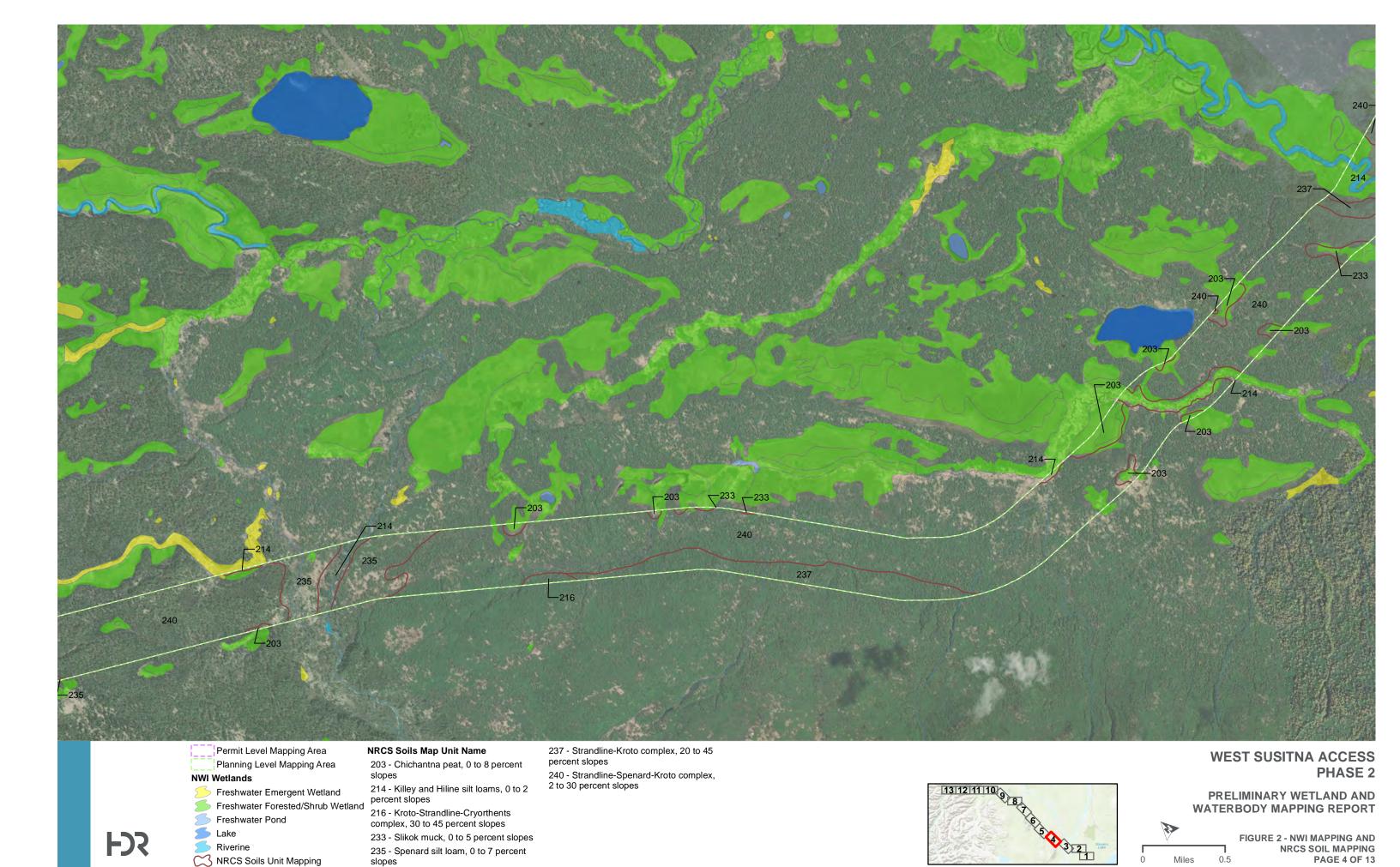
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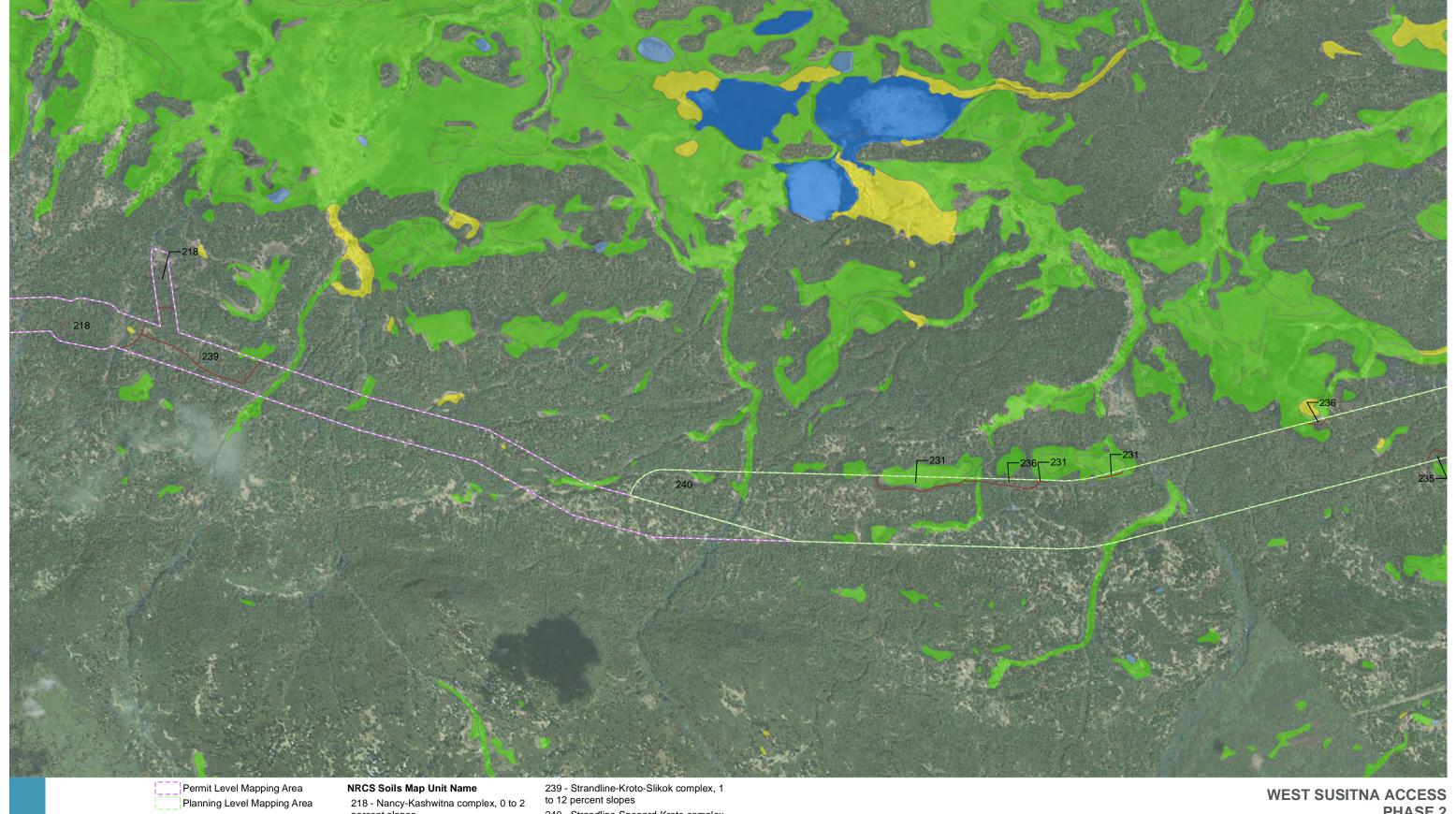
slopes

NRCS Soils Unit Mapping













Freshwater Emergent Wetland Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

NRCS Soils Unit Mapping

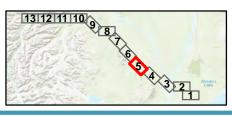
percent slopes

231 - Salamatof peat, 0 to 2 percent slopes

235 - Spenard silt loam, 0 to 7 percent

236 - Starichkof peat, 0 to 7 percent slopes

240 - Strandline-Spenard-Kroto complex, 2 to 30 percent slopes

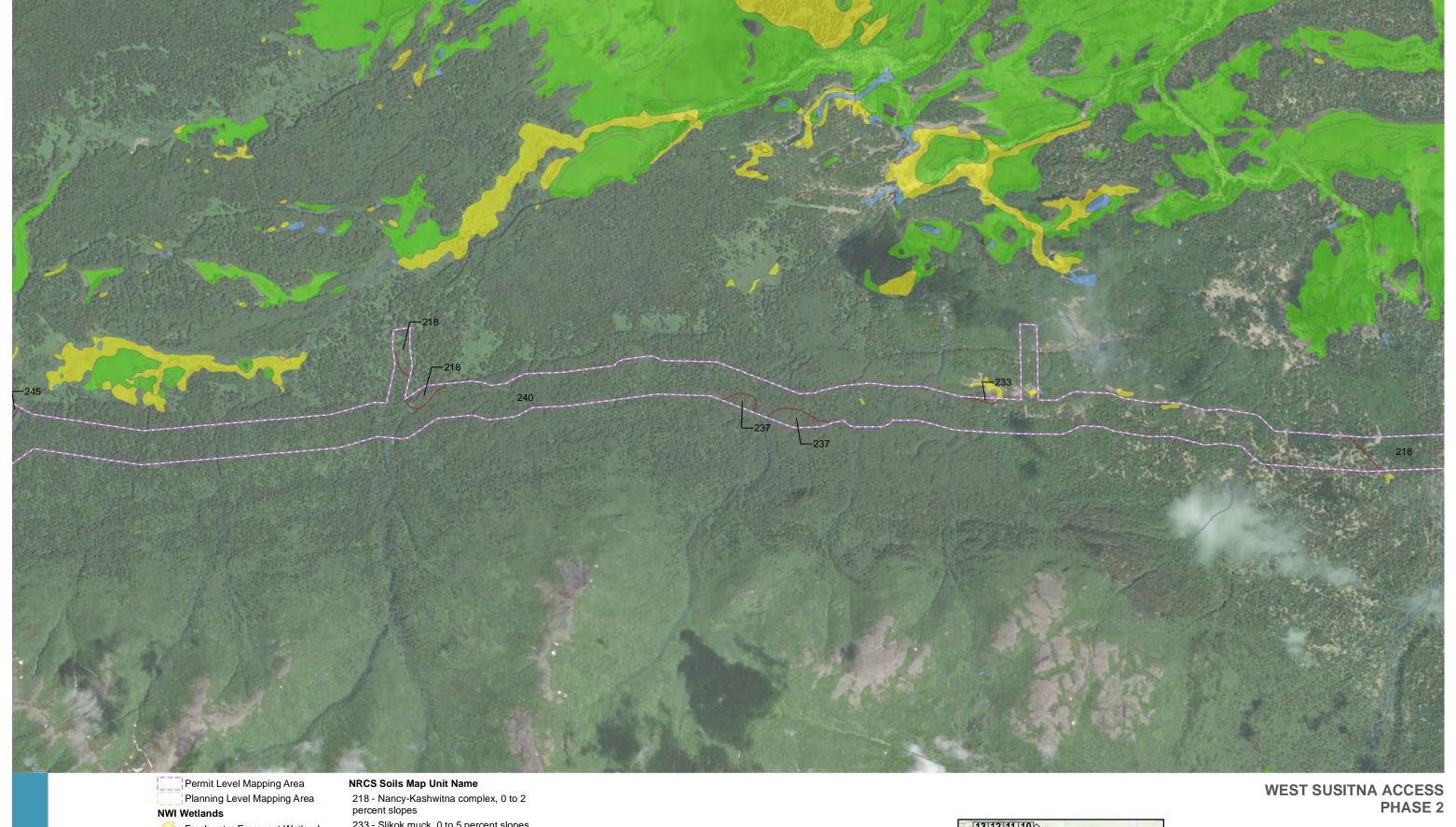


PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 2 - NWI MAPPING AND NRCS SOIL MAPPING PAGE 5 OF 13



Freshwater Emergent Wetland

Freshwater Pond

NRCS Soils Unit Mapping

233 - Slikok muck, 0 to 5 percent slopes Freshwater Forested/Shrub Wetland

237 - Strandline-Kroto complex, 20 to 45 percent slopes

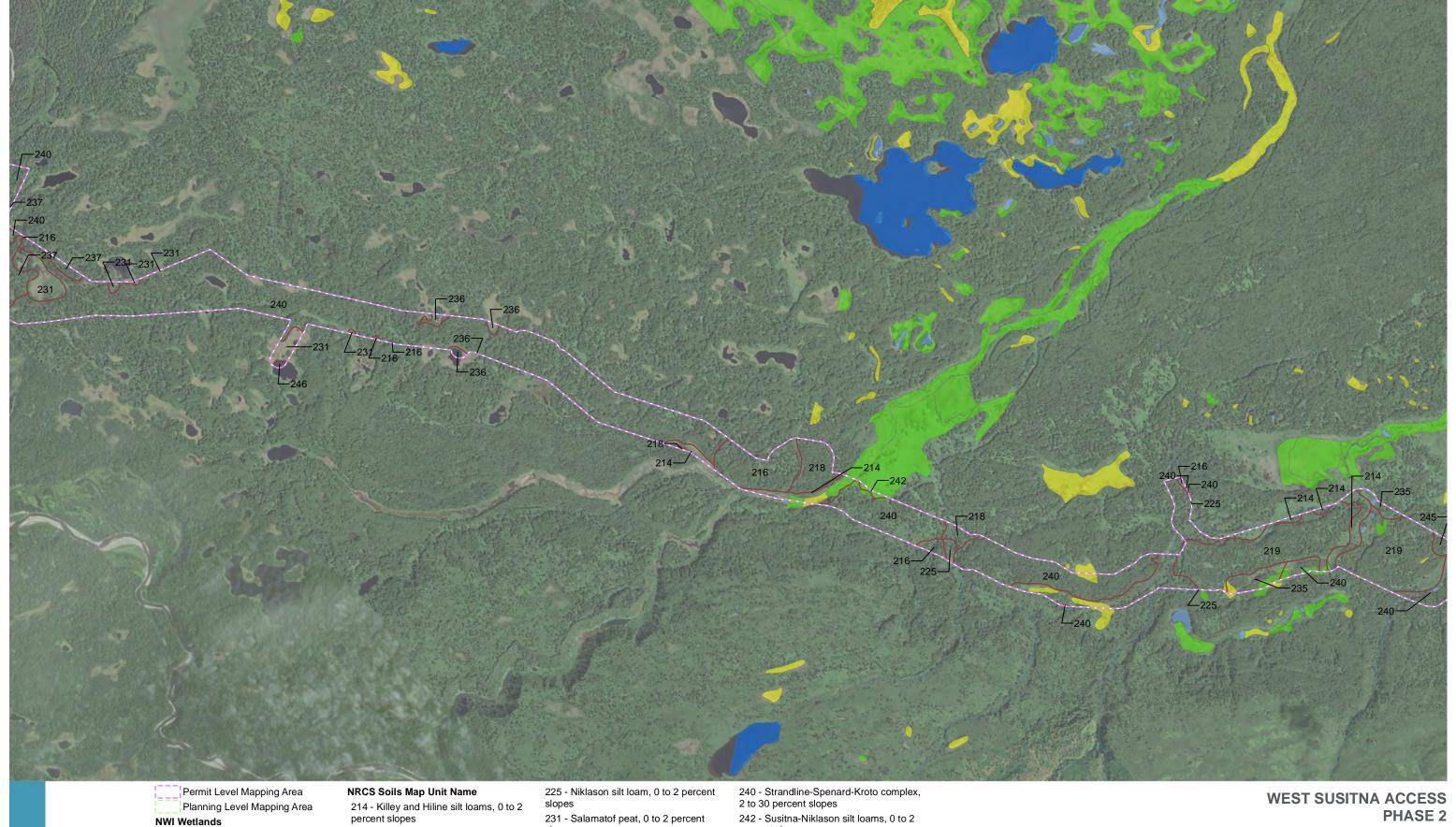
240 - Strandline-Spenard-Kroto complex, 2 to 30 percent slopes

245 - Wasilla silt loam, 0 to 2 percent slopes



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT







Freshwater Emergent Wetland Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine NRCS Soils Unit Mapping 216 - Kroto-Strandline-Cryorthents complex, 30 to 45 percent slopes

218 - Nancy-Kashwitna complex, 0 to 2 219 - Nancy-Kashwitna complex, 2 to 7

percent slopes

235 - Spenard silt loam, 0 to 7 percent

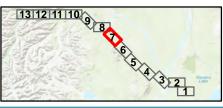
236 - Starichkof peat, 0 to 7 percent

237 - Strandline-Kroto complex, 20 to 45 percent slopes

percent slopes

245 - Wasilla silt loam, 0 to 2 percent slopes

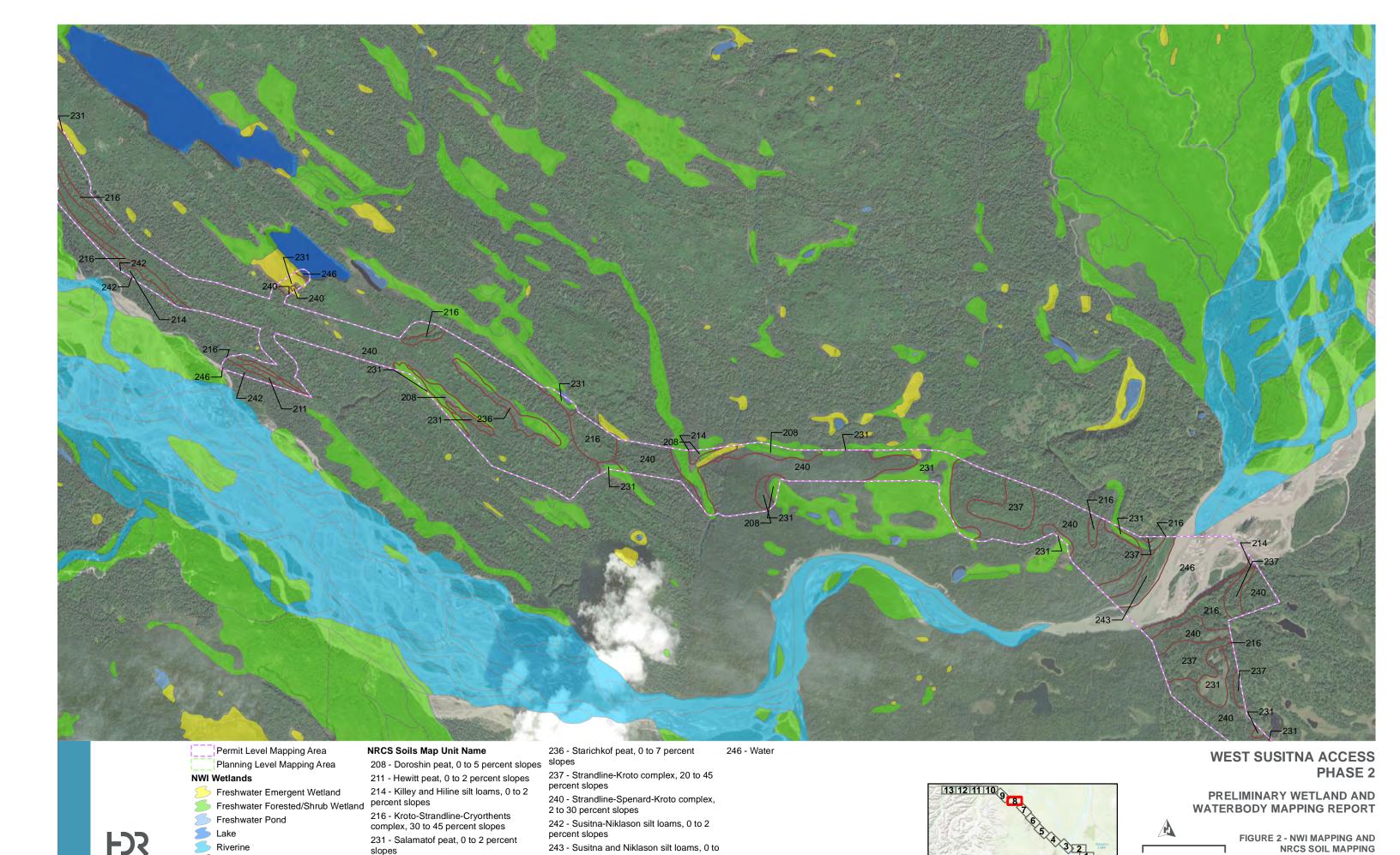
246 - Water



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



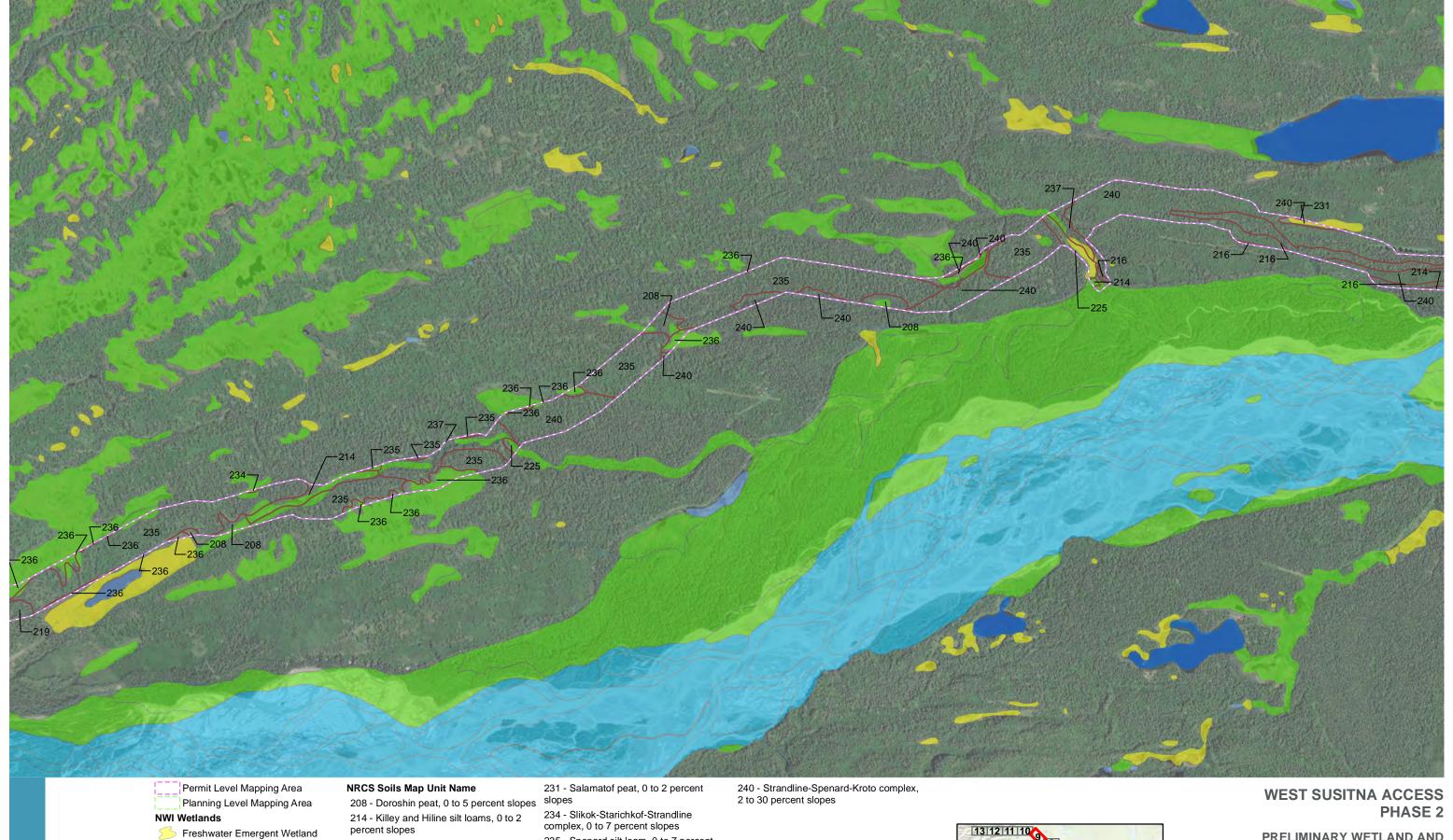
FIGURE 2 - NWI MAPPING AND NRCS SOIL MAPPING PAGE 7 OF 13



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2 percent slopes

NRCS Soils Unit Mapping



Riverine 225 - Niklason s slopes

Freshwater Pond

Freshwater Forested/Shrub Wetland

216 - Kroto-Strandline-Cryorthents complex, 30 to 45 percent slopes

219 - Nancy-Kashwitna complex, 2 to 7 percent slopes

225 - Niklason silt loam, 0 to 2 percent

235 - Spenard silt loam, 0 to 7 percent slopes

236 - Starichkof peat, 0 to 7 percent slopes

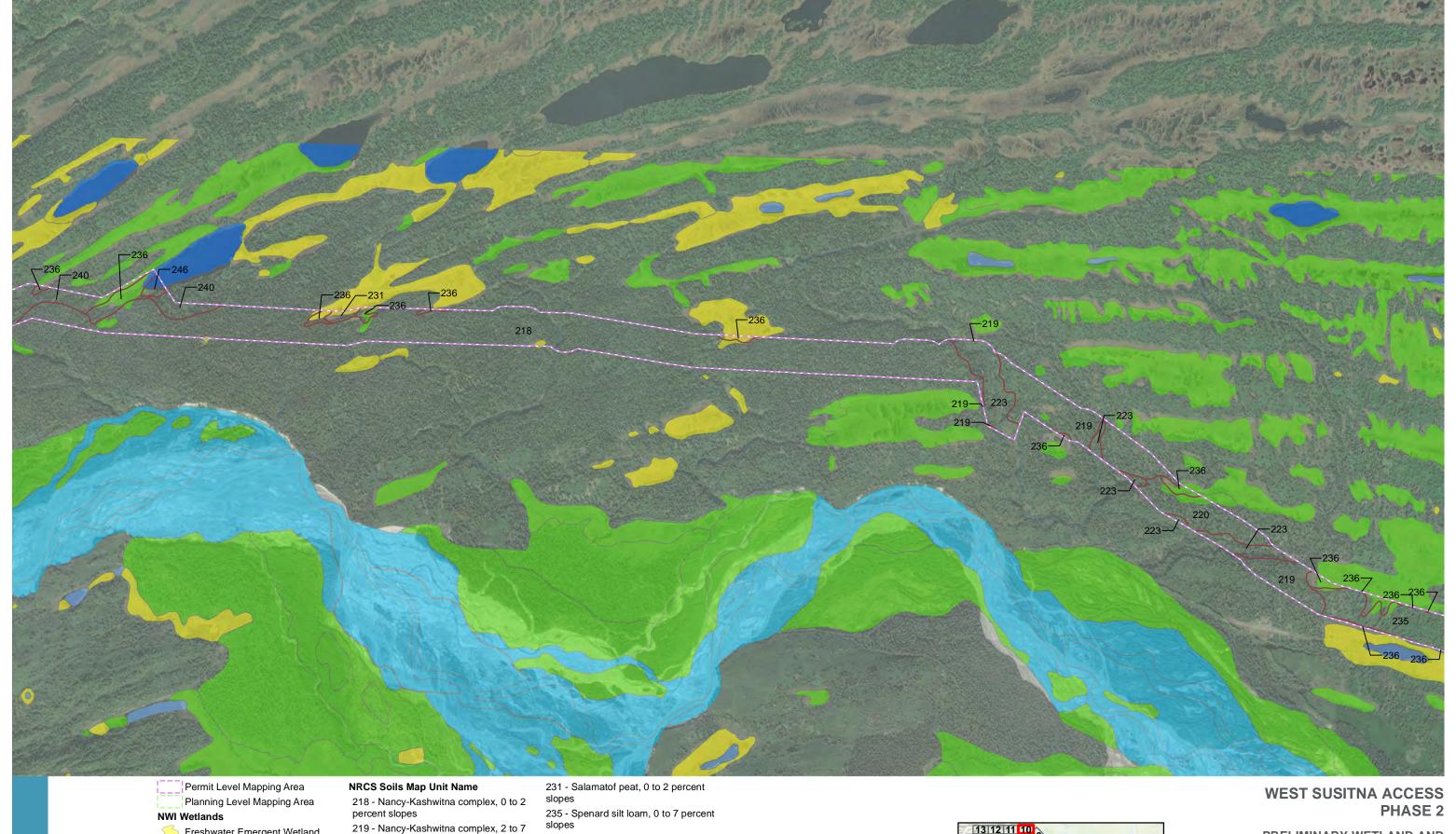
237 - Strandline-Kroto complex, 20 to 45 percent slopes

13|12|11|10 g 8 7 6 5 4 3 2 Section 1

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 2 - NWI MAPPING AND NRCS SOIL MAPPING PAGE 9 OF 13





Freshwater Emergent Wetland

Freshwater Pond

Riverine NRCS Soils Unit Mapping

Freshwater Forested/Shrub Wetland

219 - Nancy-Kashwitna complex, 2 to 7 percent slopes

220 - Nancy-Kashwitna complex, 7 to 12 slopes percent slopes 240 - Strandline-Spenard-Kroto complex, 223 - Nancy-Kashwitna complex, 30 to 45

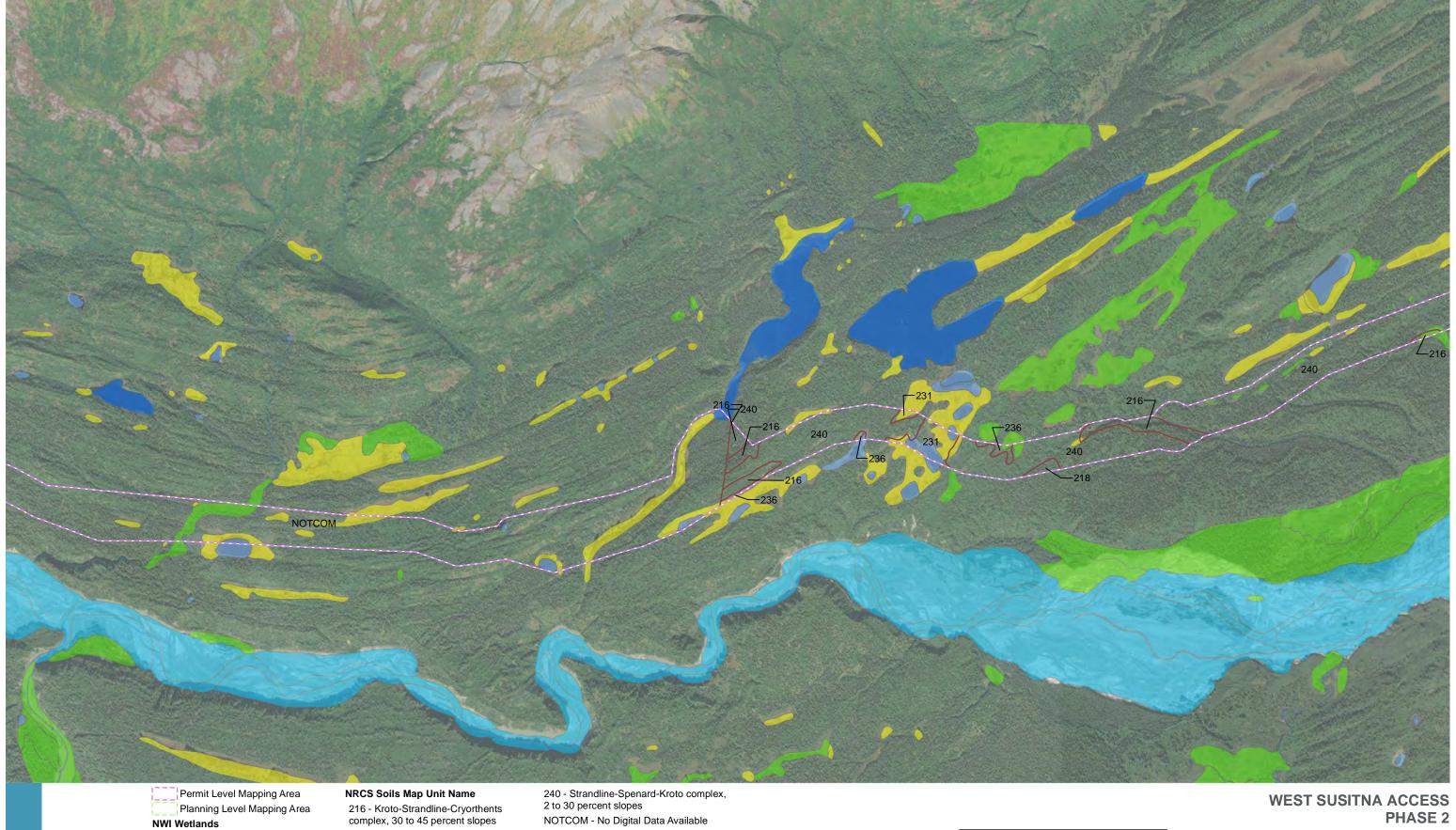
percent slopes

236 - Starichkof peat, 0 to 7 percent

246 - Water

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT







Freshwater Emergent Wetland Freshwater Forested/Shrub Wetland

Freshwater Pond

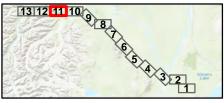
Riverine

NRCS Soils Unit Mapping

218 - Nancy-Kashwitna complex, 0 to 2 percent slopes

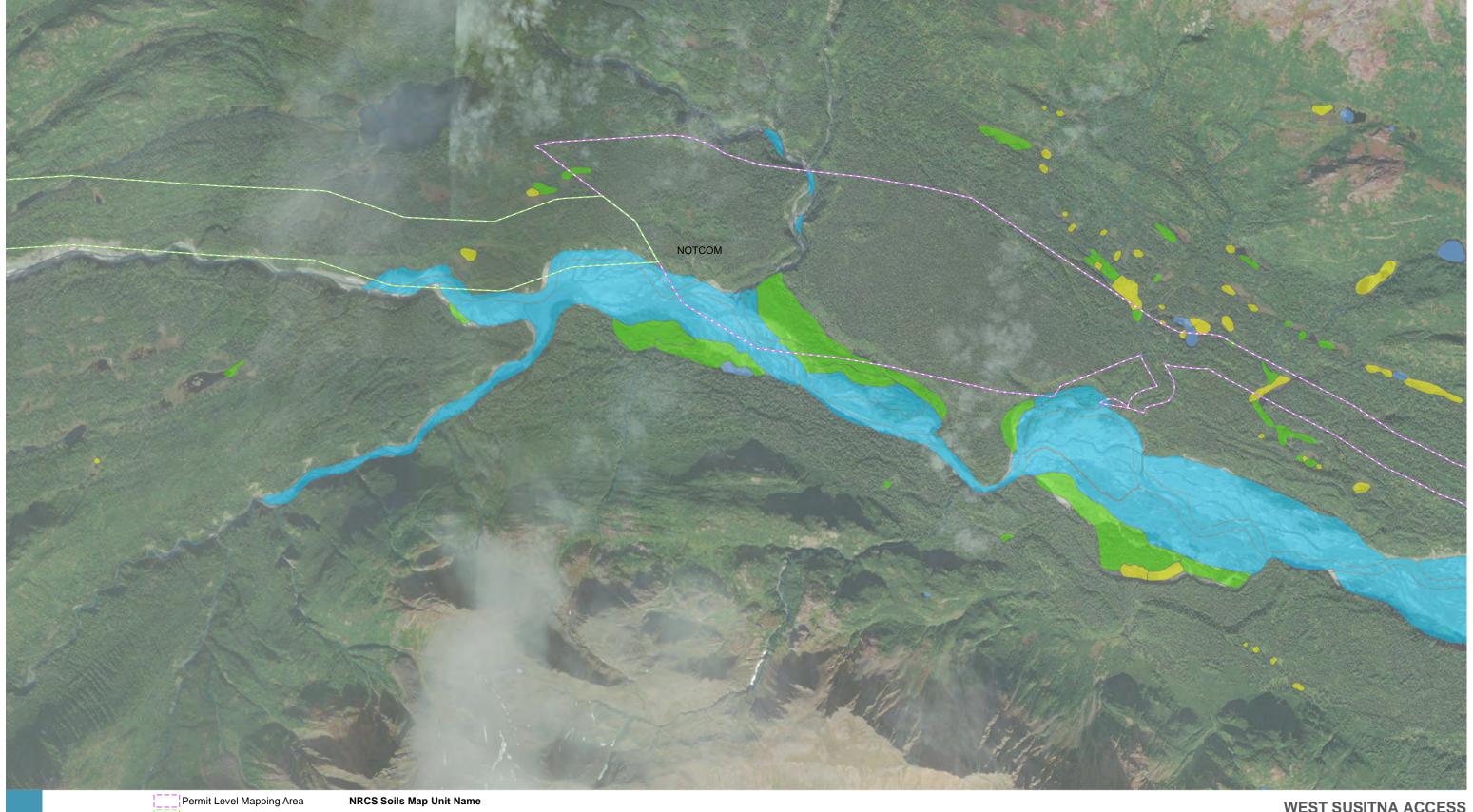
231 - Salamatof peat, 0 to 2 percent

236 - Starichkof peat, 0 to 7 percent slopes



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT





Planning Level Mapping Area

NOTCOM - No Digital Data Available

NWI Wetlands

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

FDR

NRCS Soils Unit Mapping



WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

FIGURE 2 - NWI MAPPING AND NRCS SOIL MAPPING PAGE 12 OF 13



Permit Level Mapping Area Planning Level Mapping Area **NWI Wetlands**



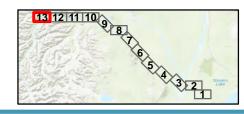
FD3

Freshwater Pond

Riverine

NRCS Soils Unit Mapping
NRCS Soils Map Unit Name

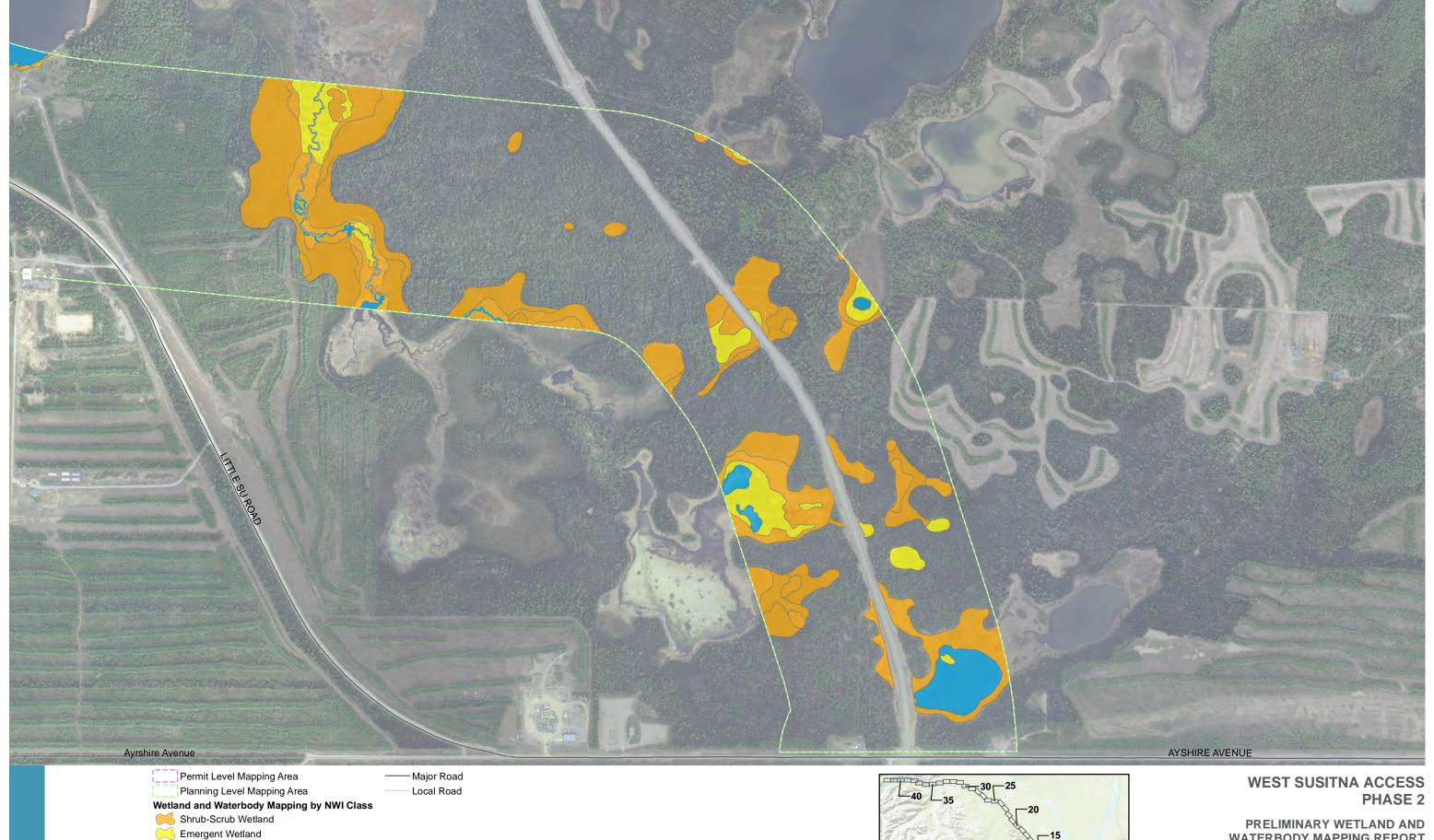
NOTCOM - No Digital Data Available



WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT





FDS

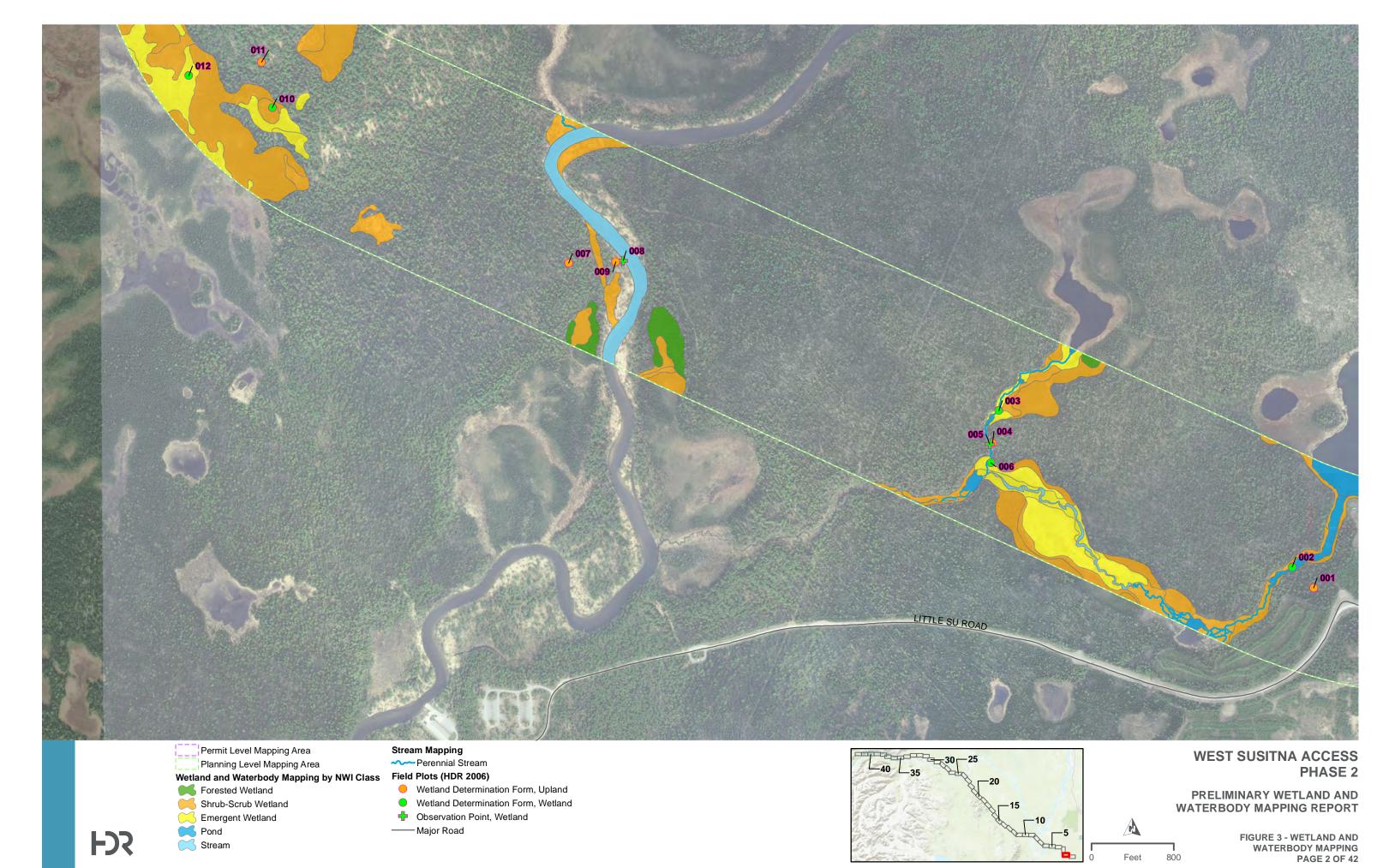
Pond Stream

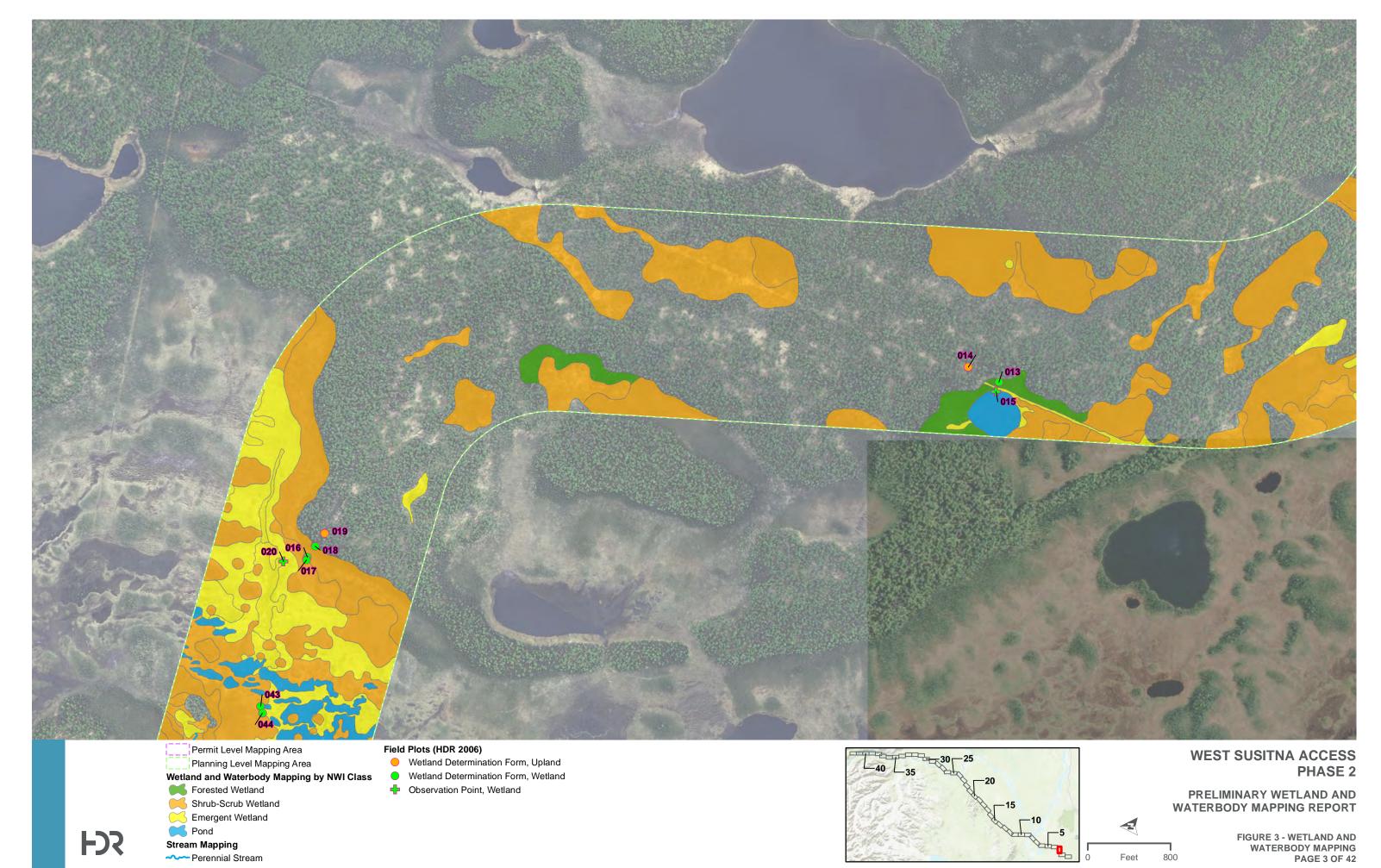
Stream Mapping Perennial Stream

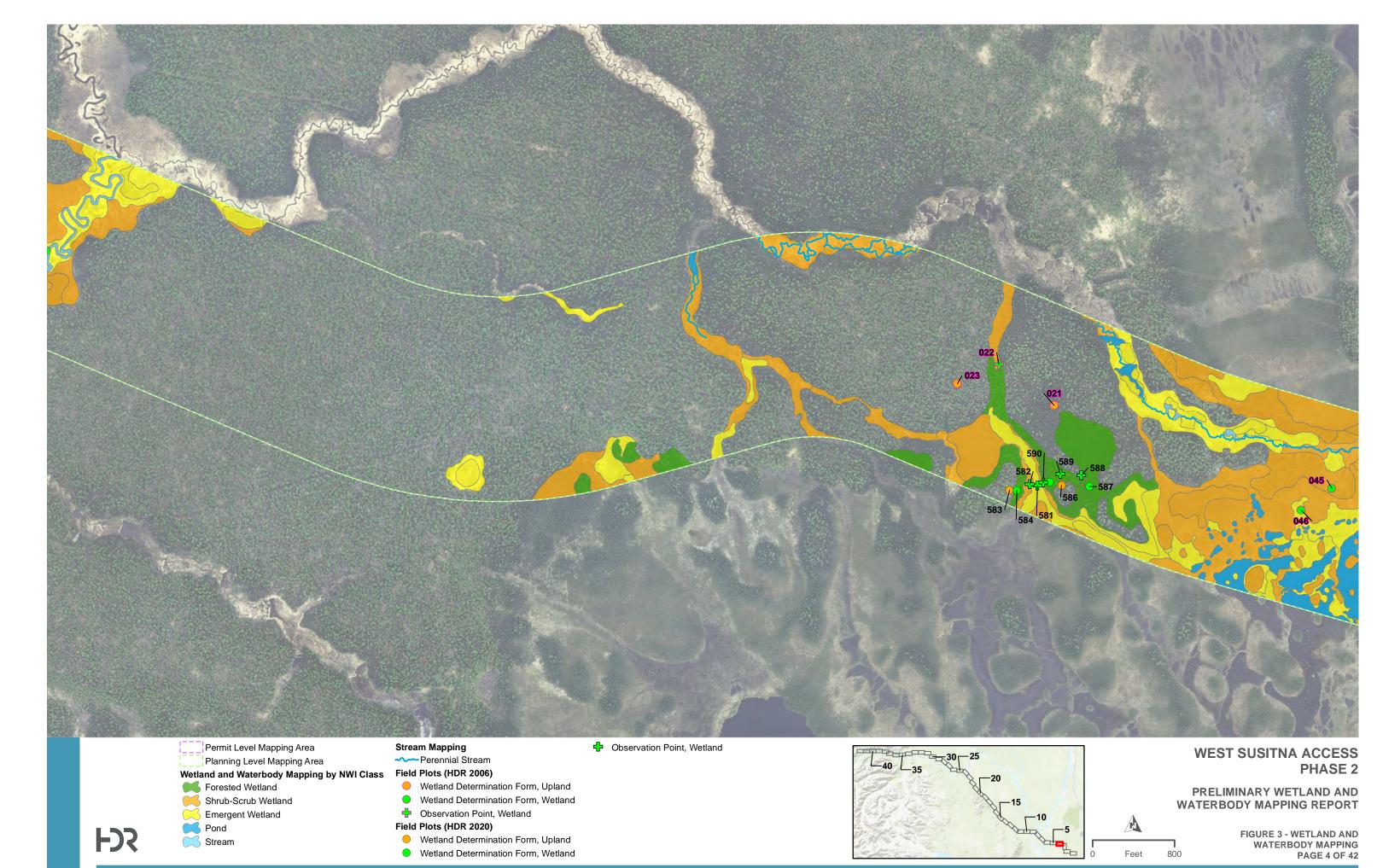
WATERBODY MAPPING REPORT

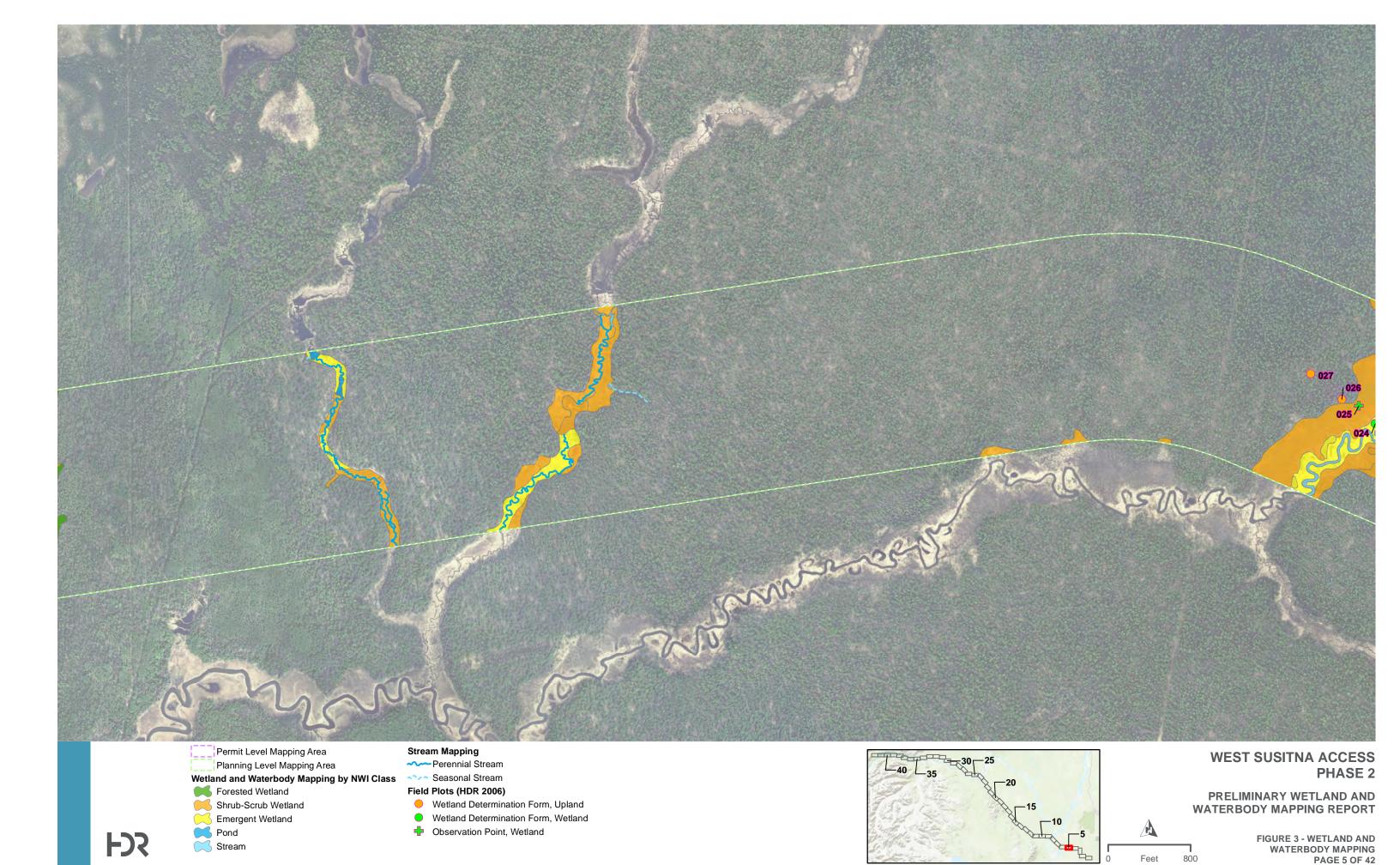


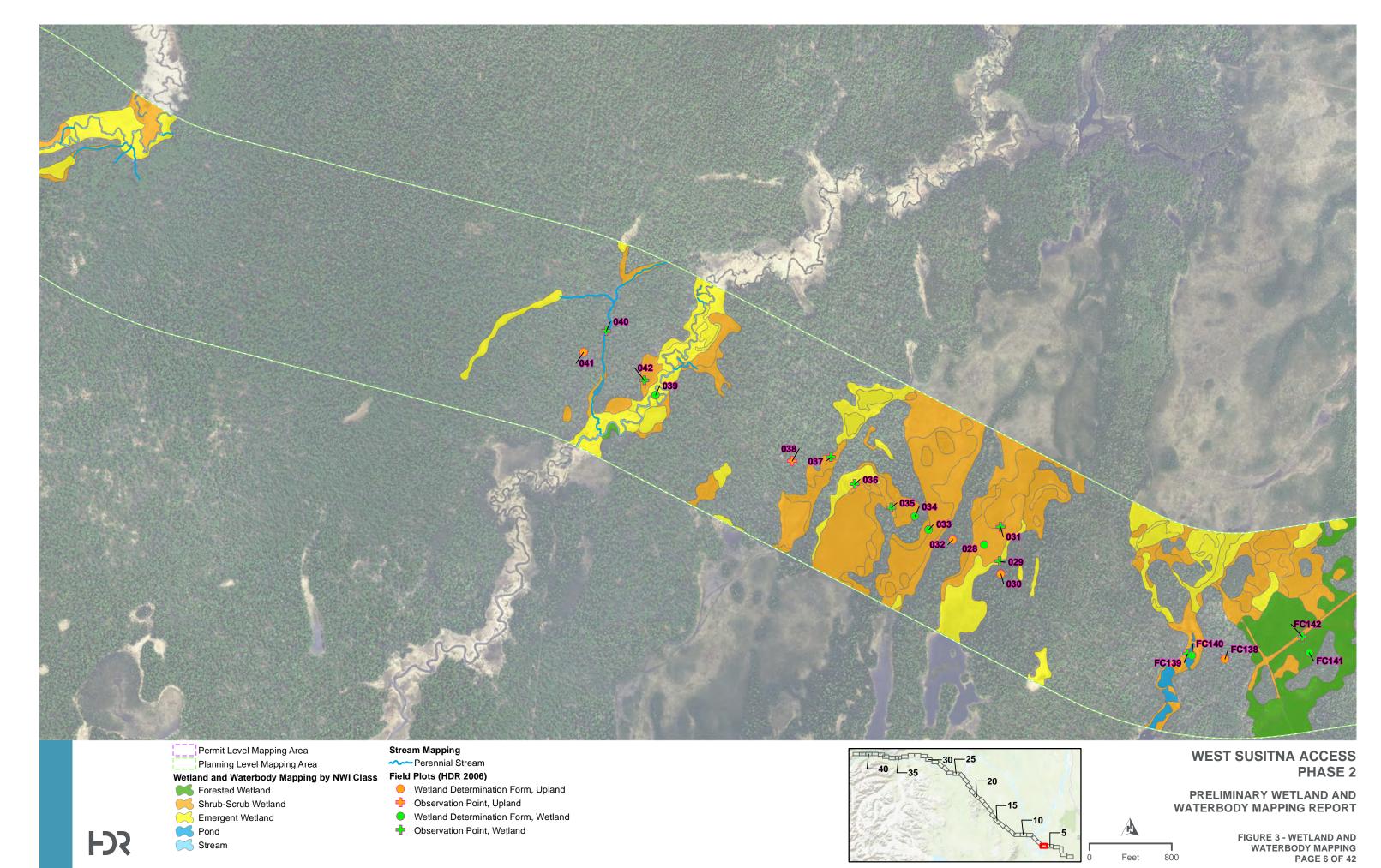
FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 1 OF 42

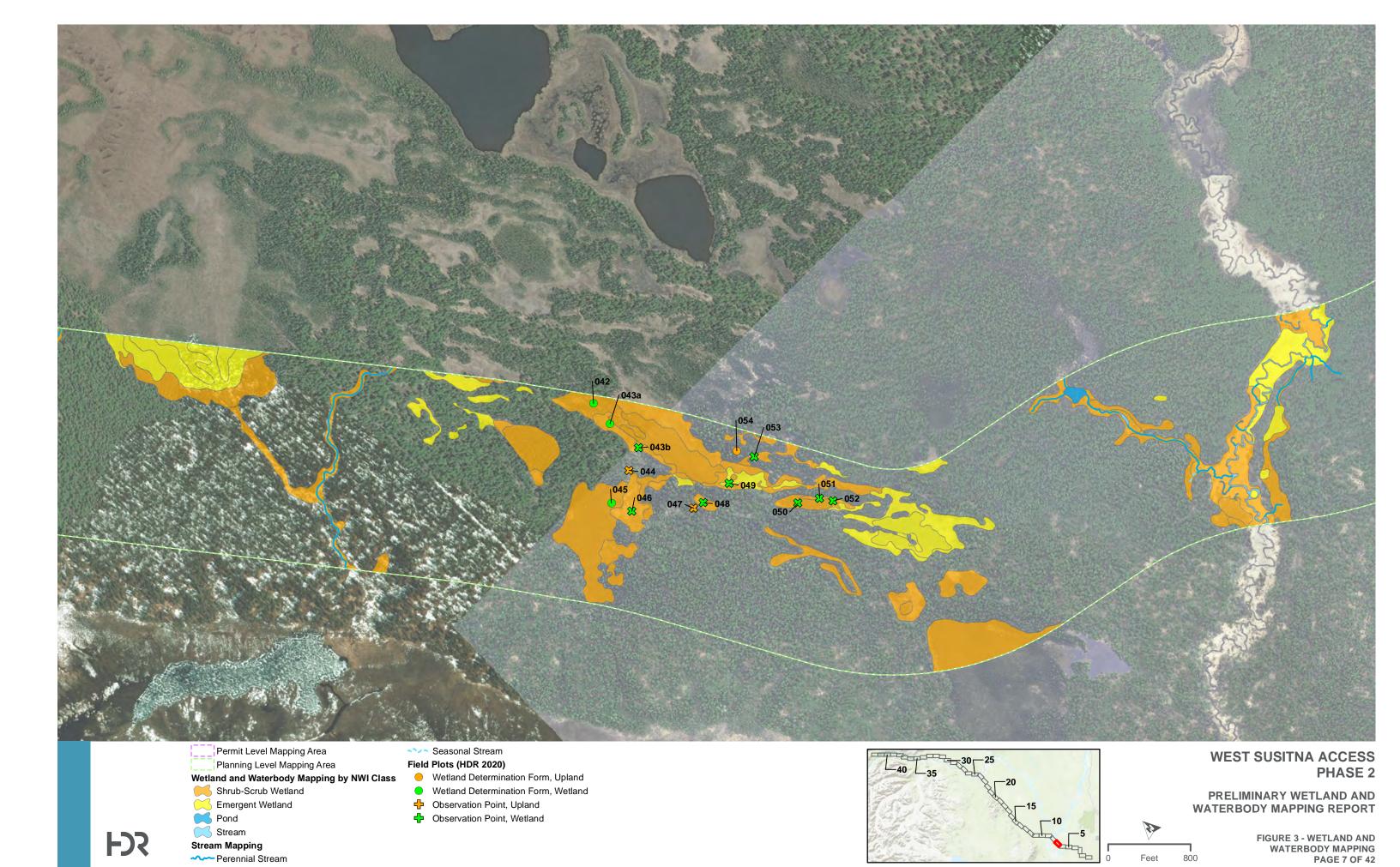


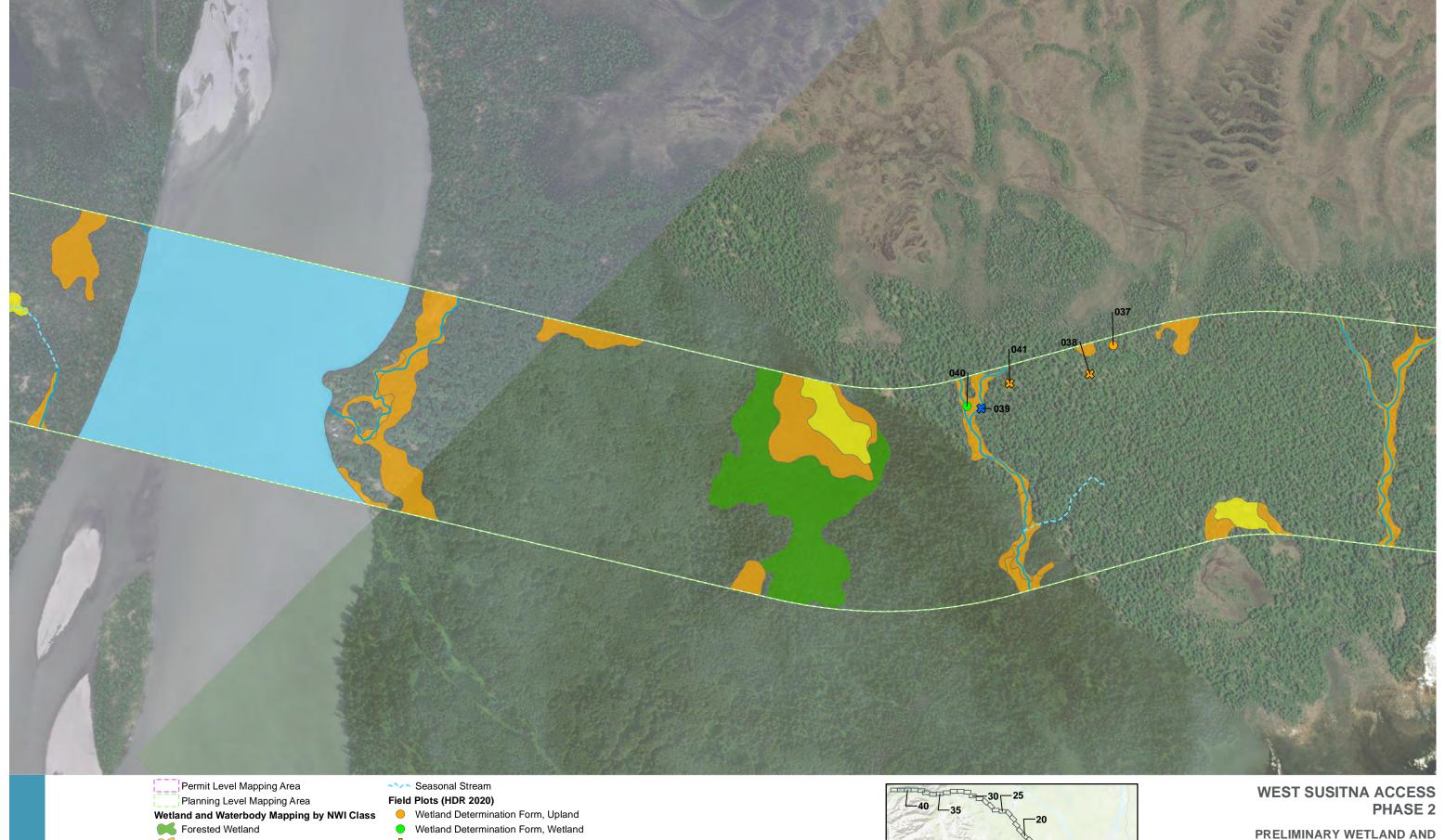














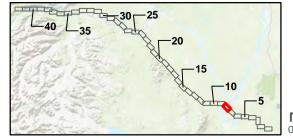
Perennial Stream

Shrub-Scrub Wetland Emergent Wetland

Stream

Stream Mapping

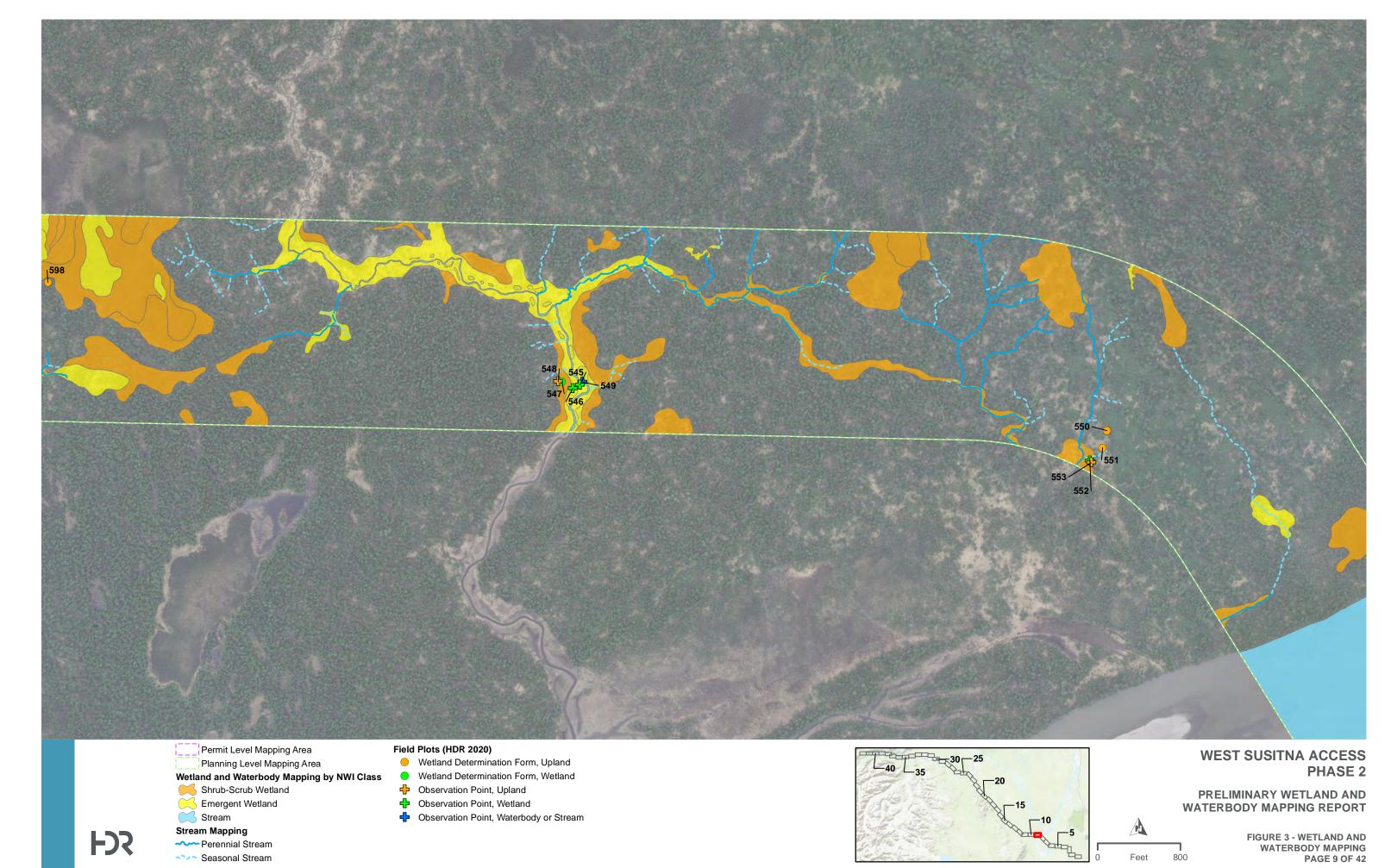
- Observation Point, Upland
- Observation Point, Waterbody or Stream

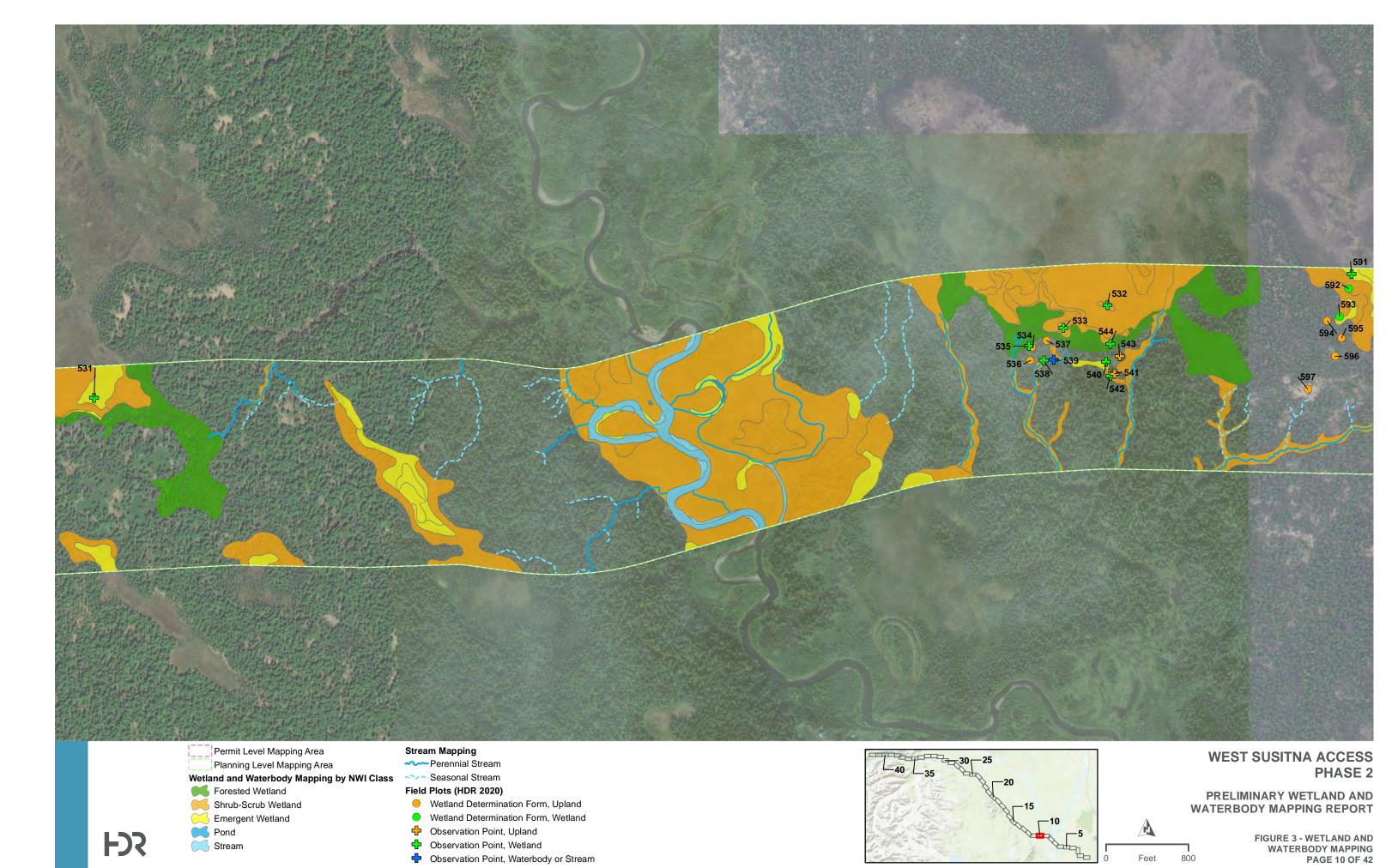


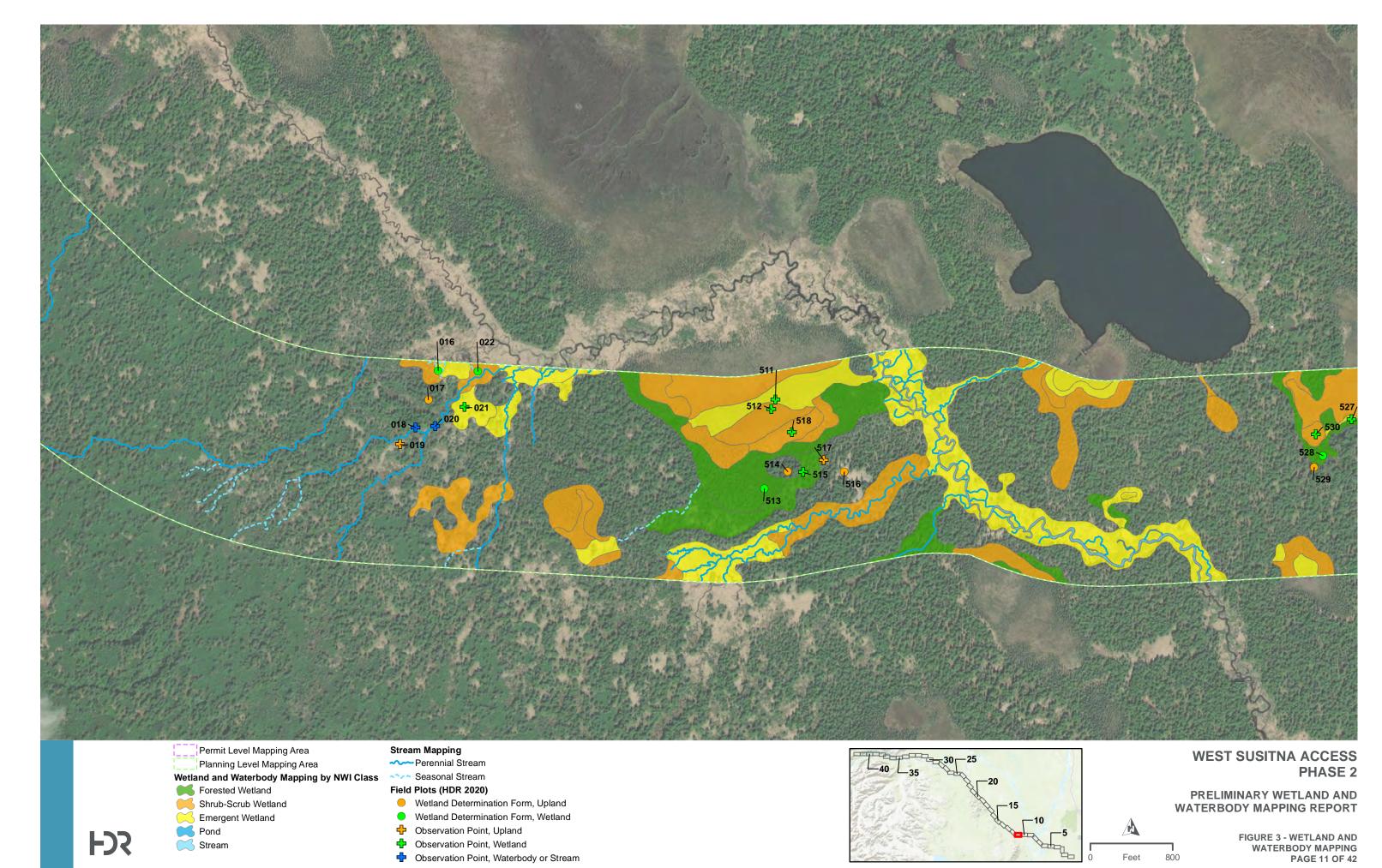
WATERBODY MAPPING REPORT

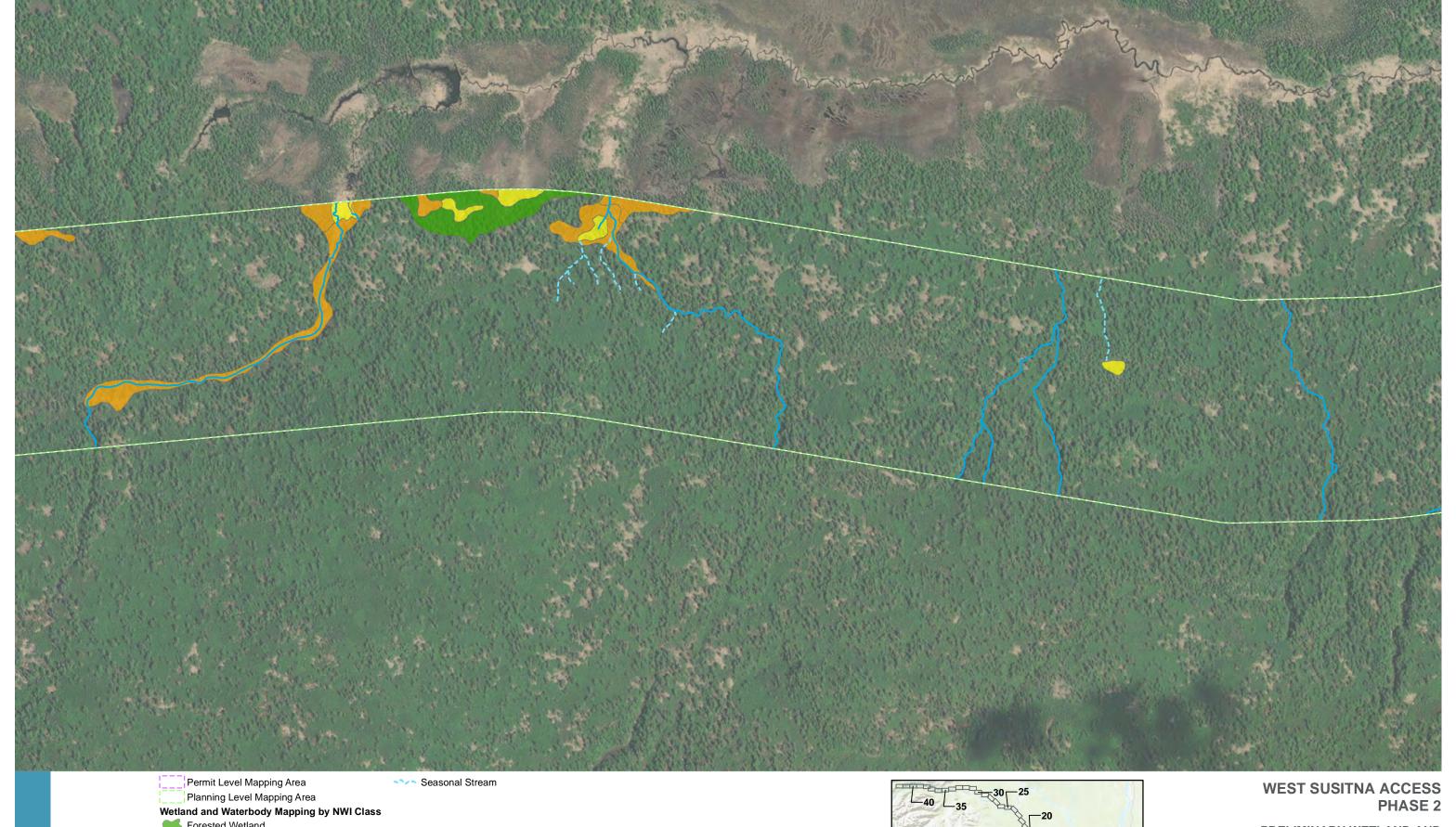


FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 8 OF 42









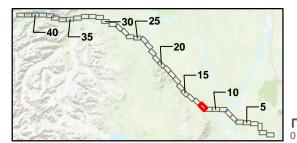
Forested Wetland

Shrub-Scrub Wetland

Emergent Wetland Stream

Stream Mapping

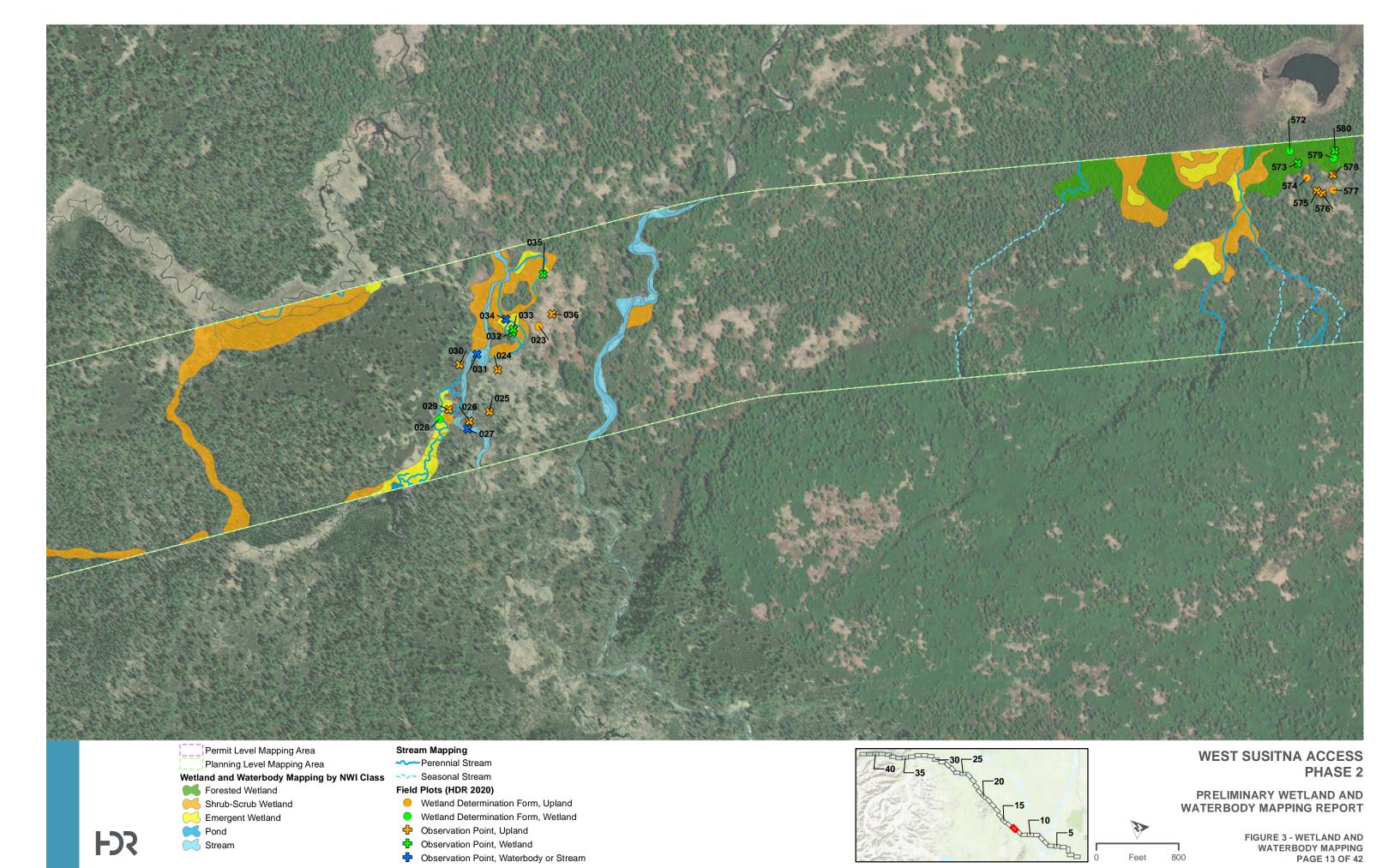
Perennial Stream

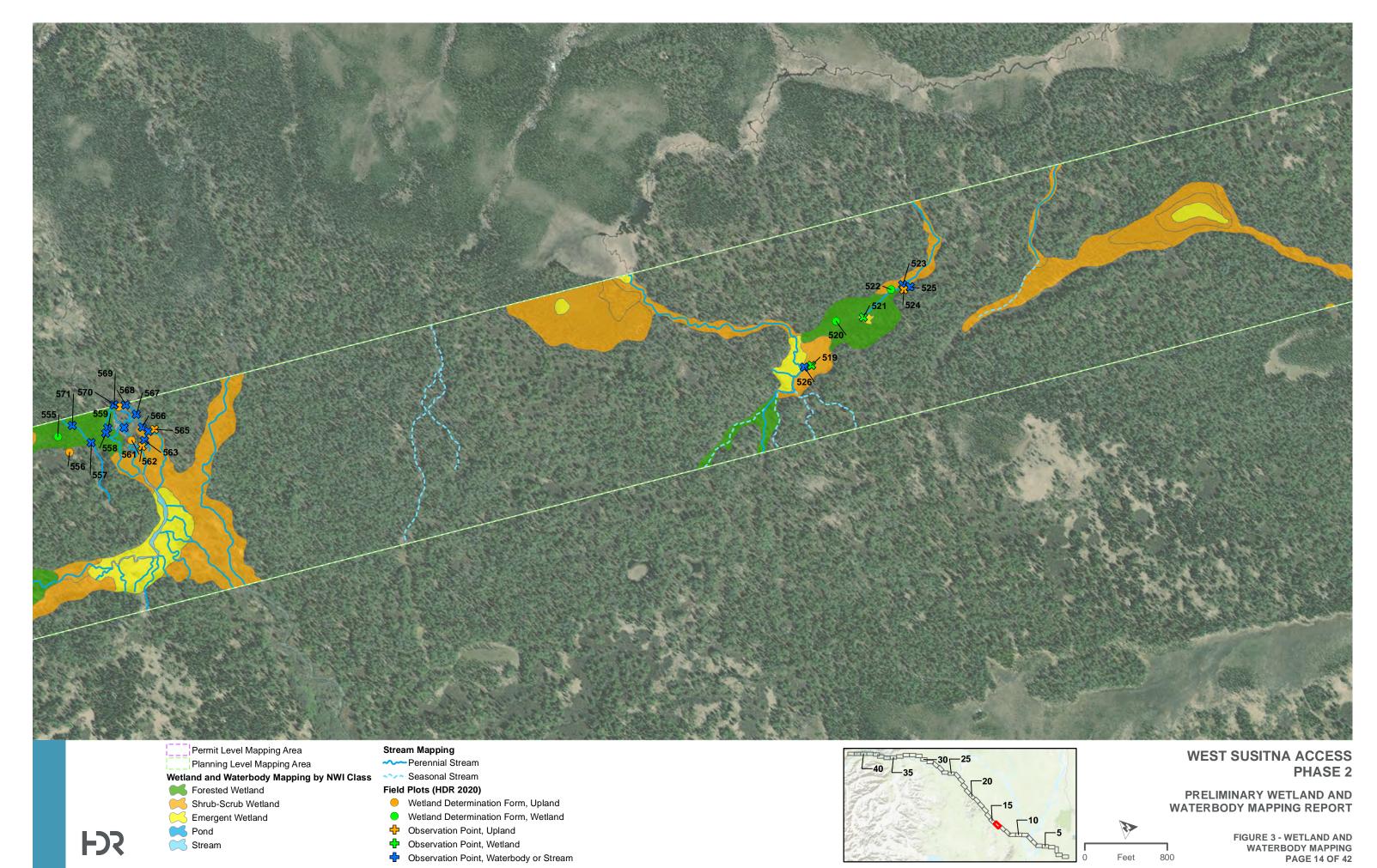


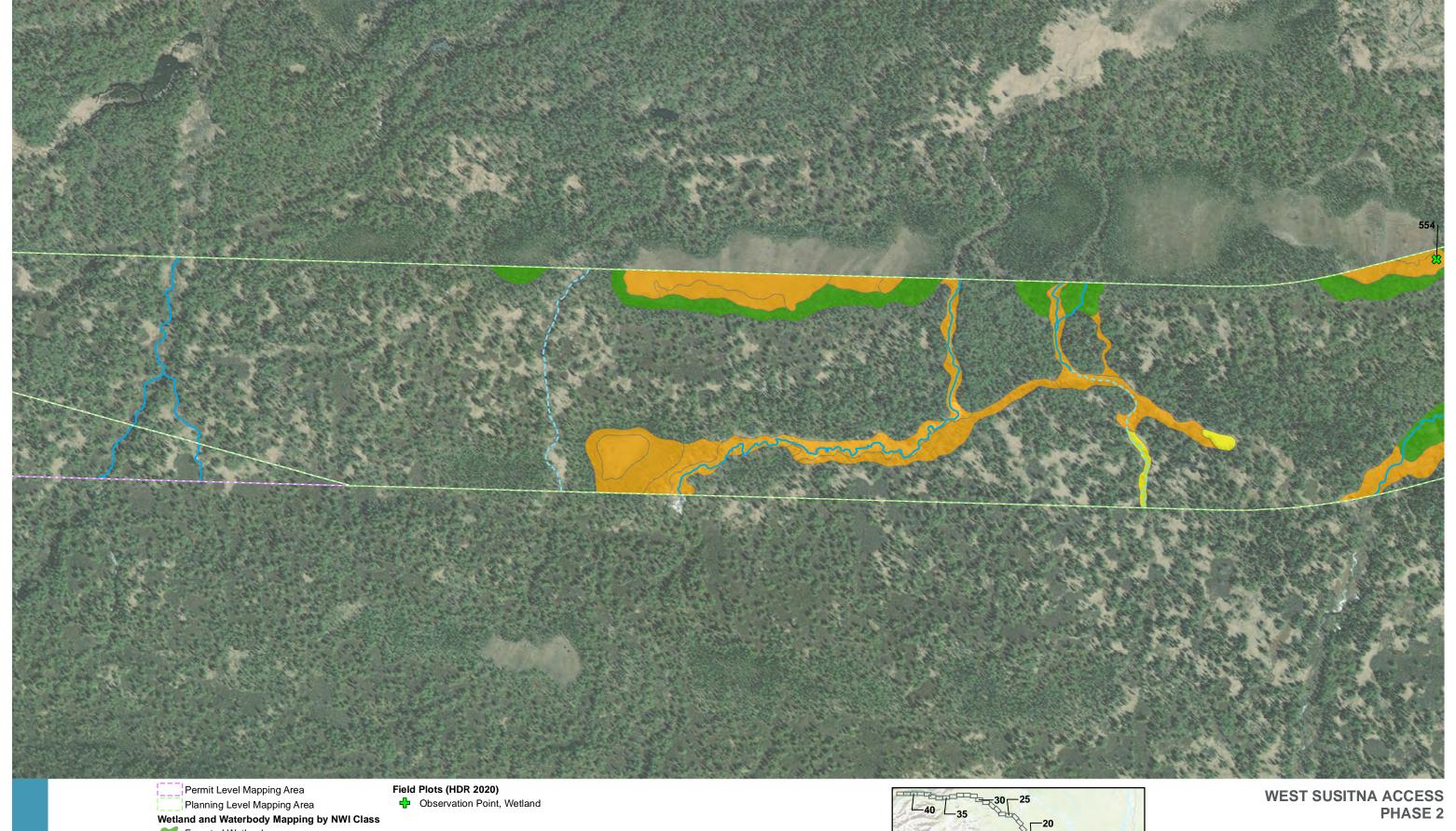
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 12 OF 42









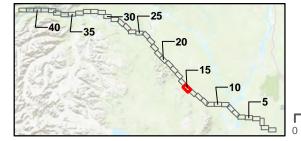
Forested Wetland

Shrub-Scrub Wetland
Emergent Wetland

Stream Mapping

Perennial Stream

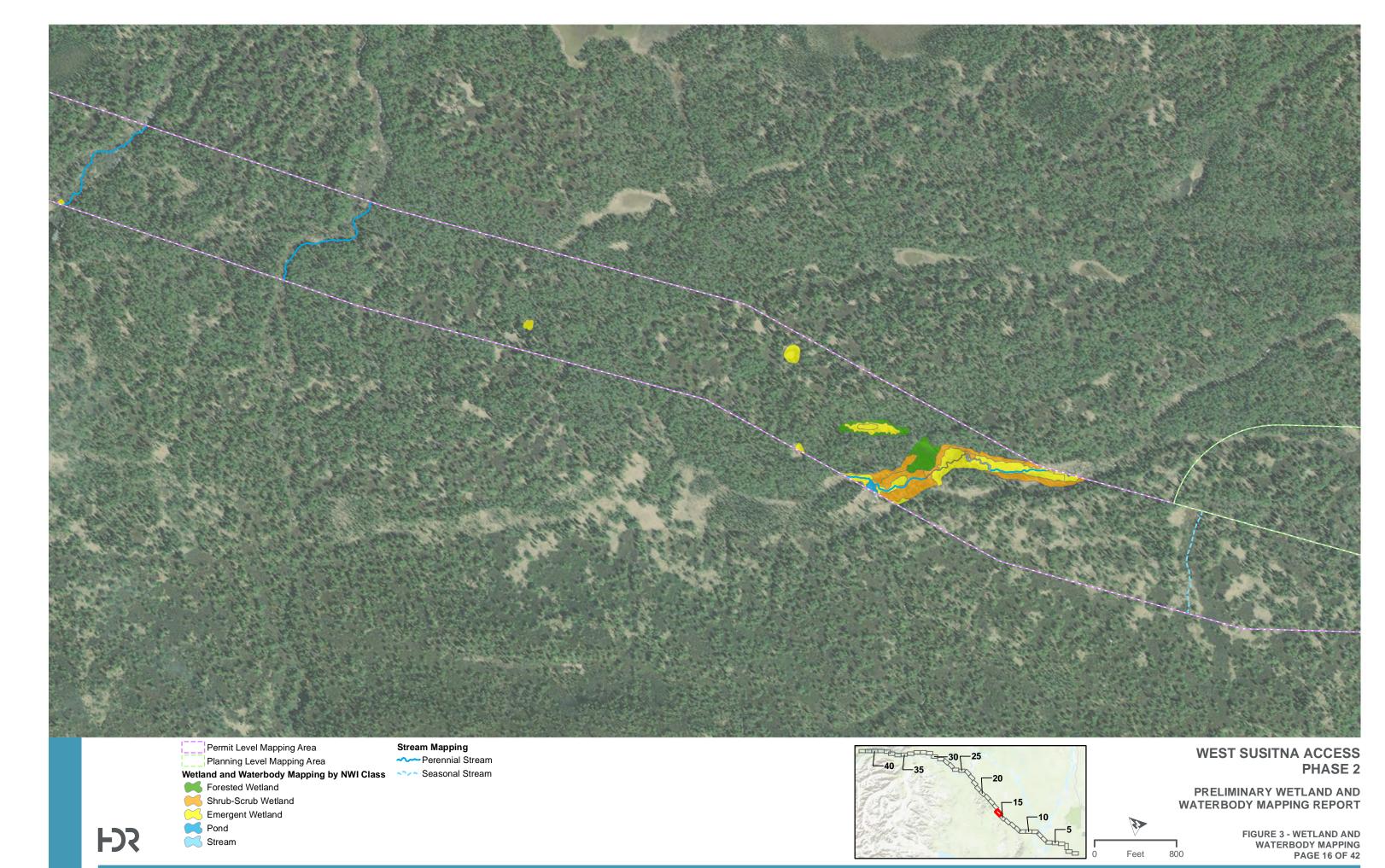
Seasonal Stream

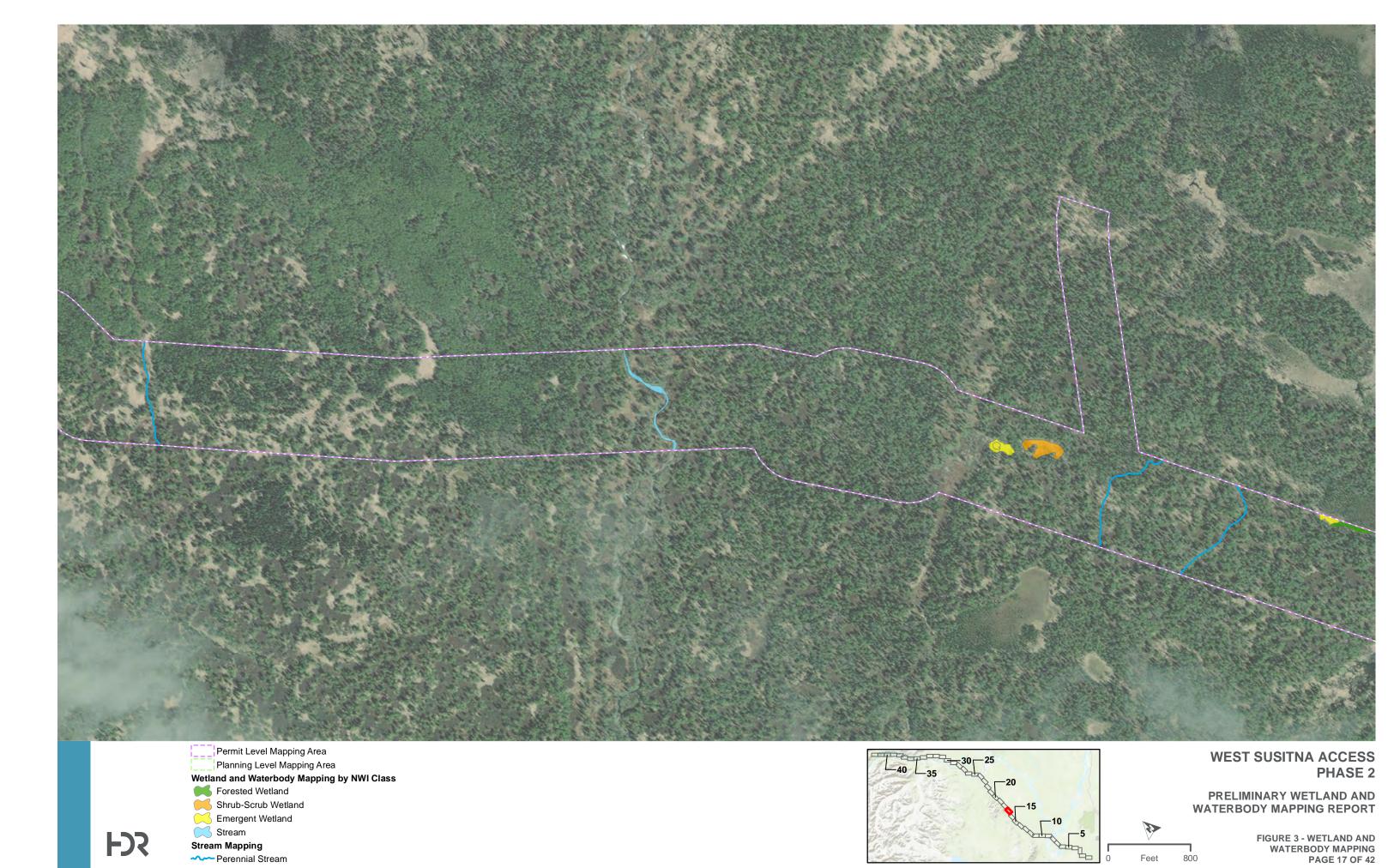


PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

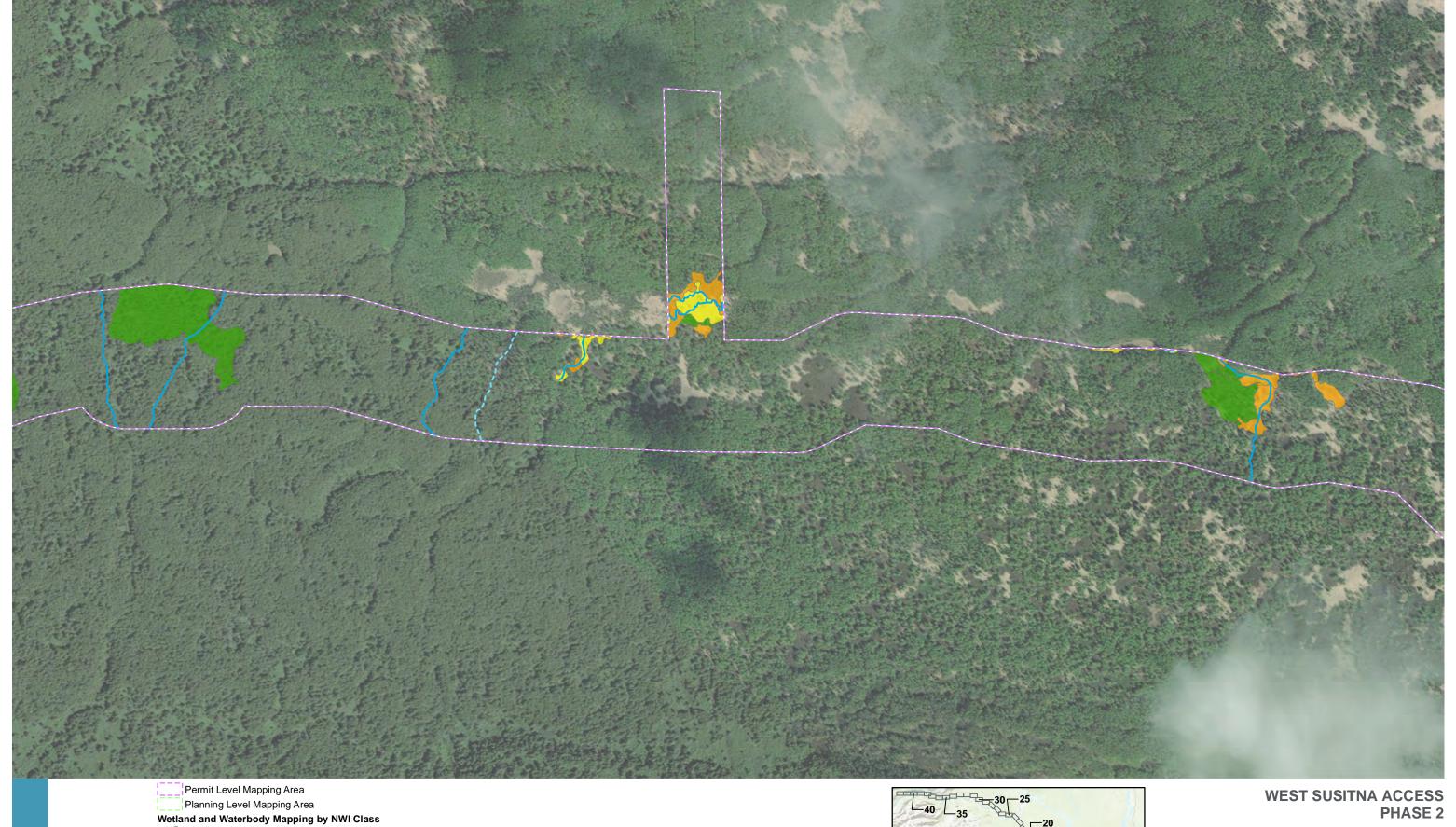


FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 15 OF 42





H: WANC-SRV04PROJECT, SAM07073 AIDEAI10239701_AIDEA_NTP11_WESTSUACCESS_PH27.2, WPIMAP_DOCSIWETLANDS/REPORTIWSA_WETLANDS-FIG3_WETLANDS-WATERBODYMAPPING.MXD - USER: CBRISBOIS - DATE: 2/8/2021



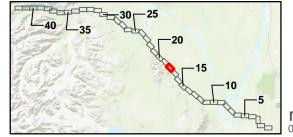
Forested Wetland

Shrub-Scrub Wetland Emergent Wetland

Stream Mapping

Perennial Stream

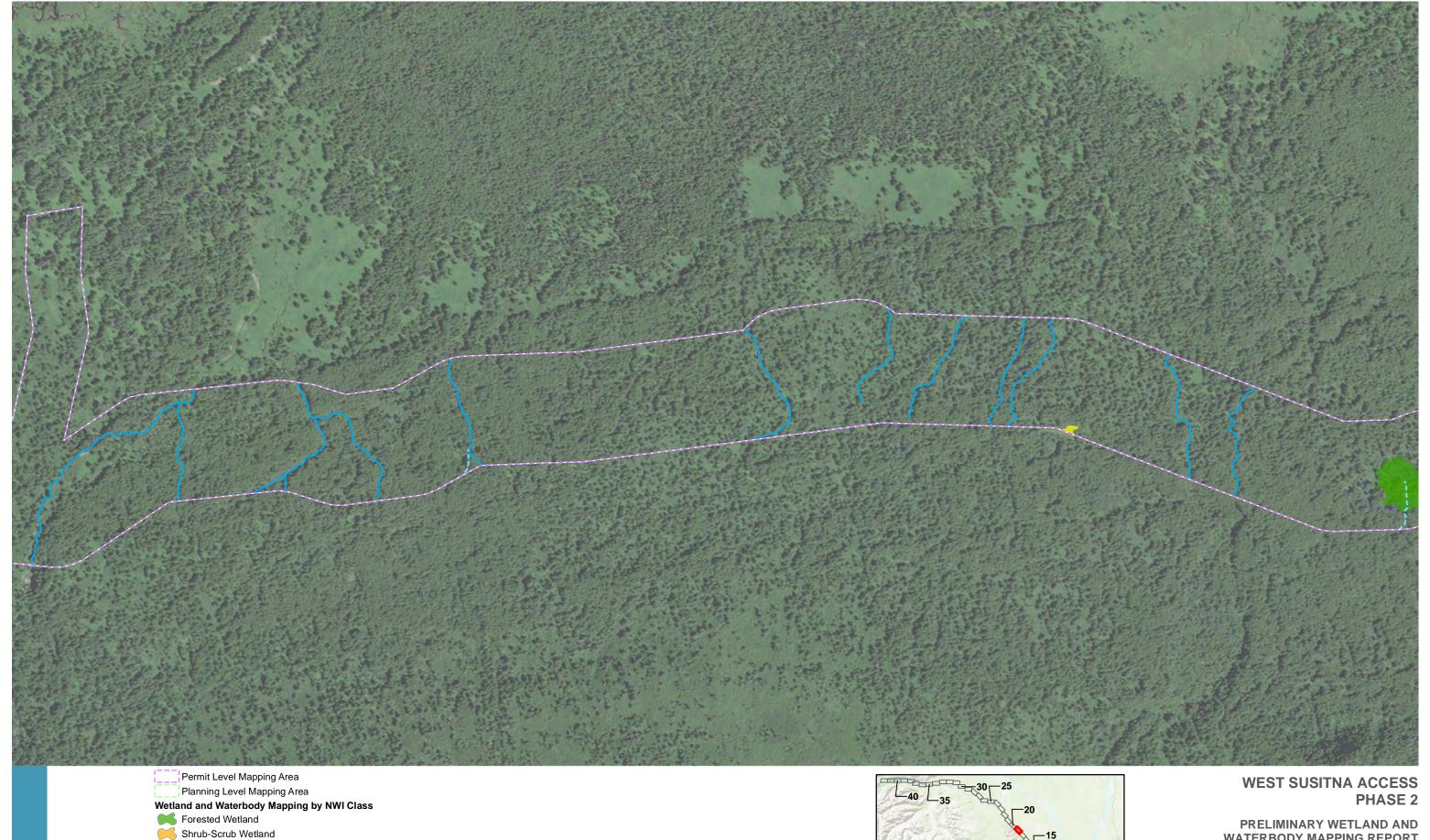
Seasonal Stream



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



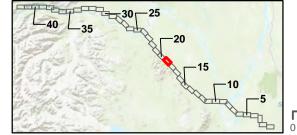
FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 18 OF 42



Stream Mapping ~~ Perennial Stream

Seasonal Stream

Emergent Wetland



WATERBODY MAPPING REPORT



FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 19 OF 42



Wetland and Waterbody Mapping by NWI Class
Forested Wetland

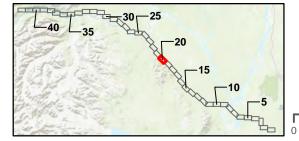
Shrub-Scrub Wetland

Stream Mapping

FDR

Perennial Stream

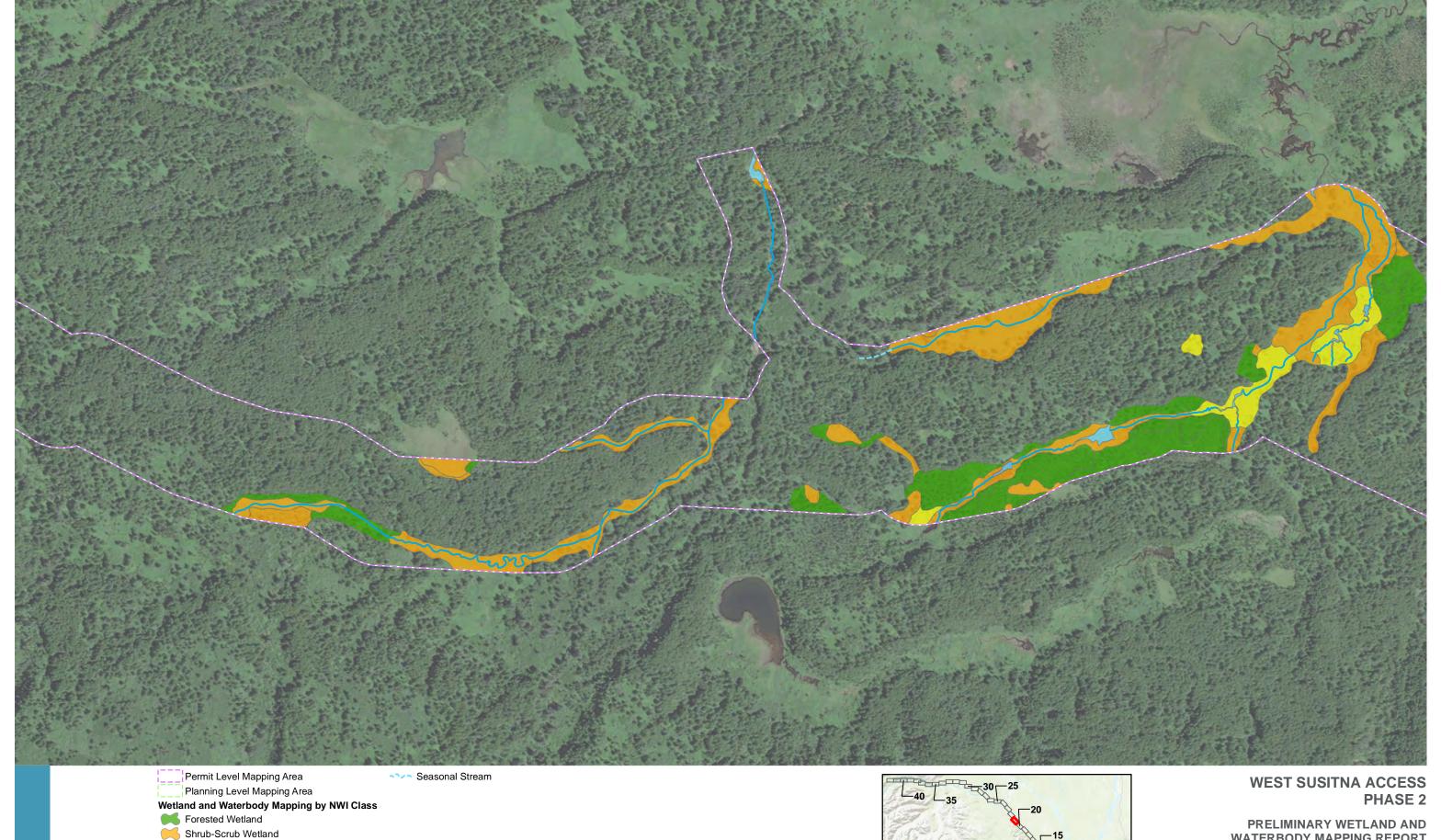
Seasonal Stream



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 20 OF 42

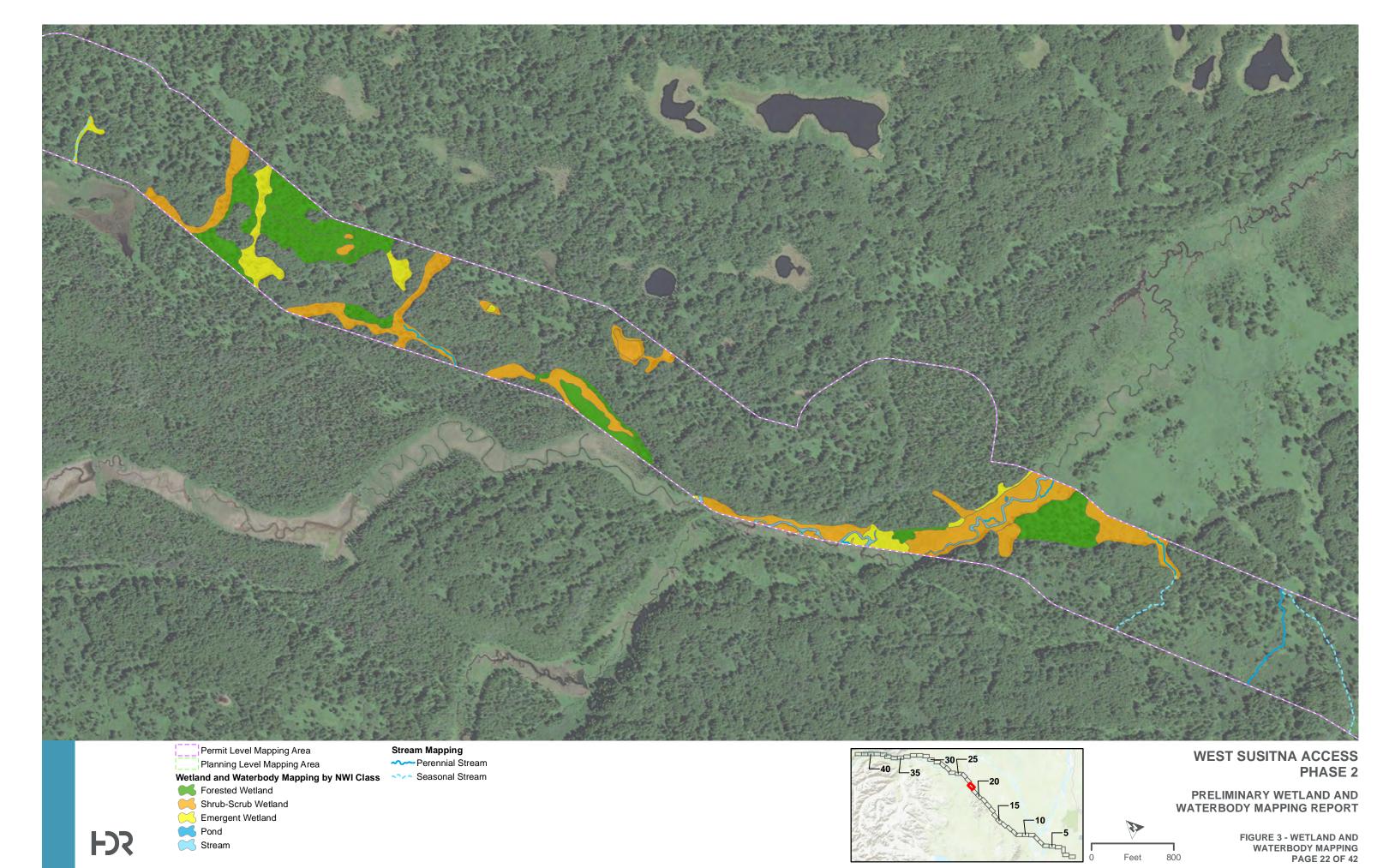


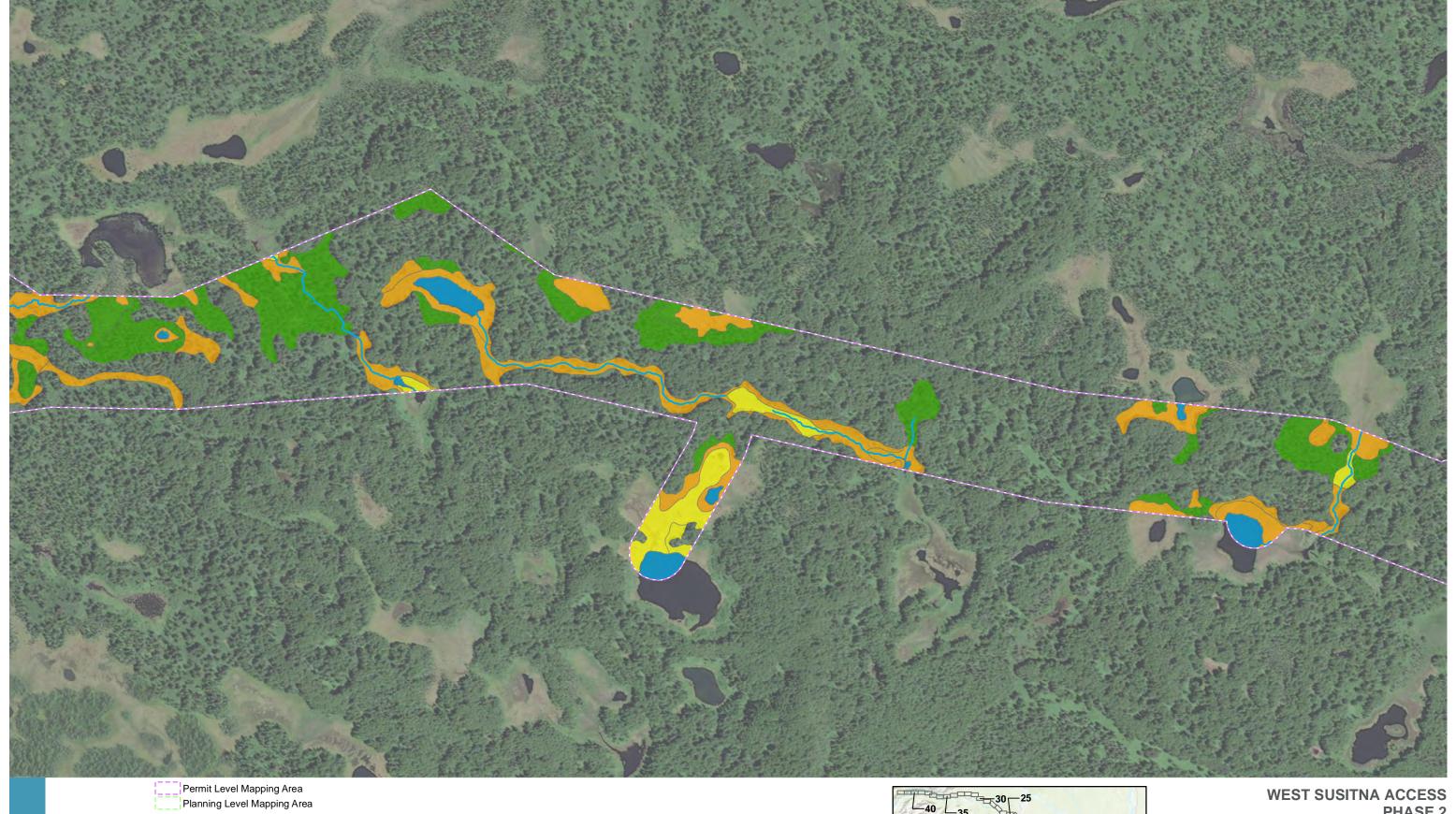
Stream Stream Mapping Perennial Stream

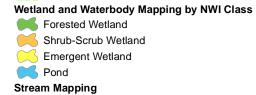
Emergent Wetland

WATERBODY MAPPING REPORT

FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 21 OF 42







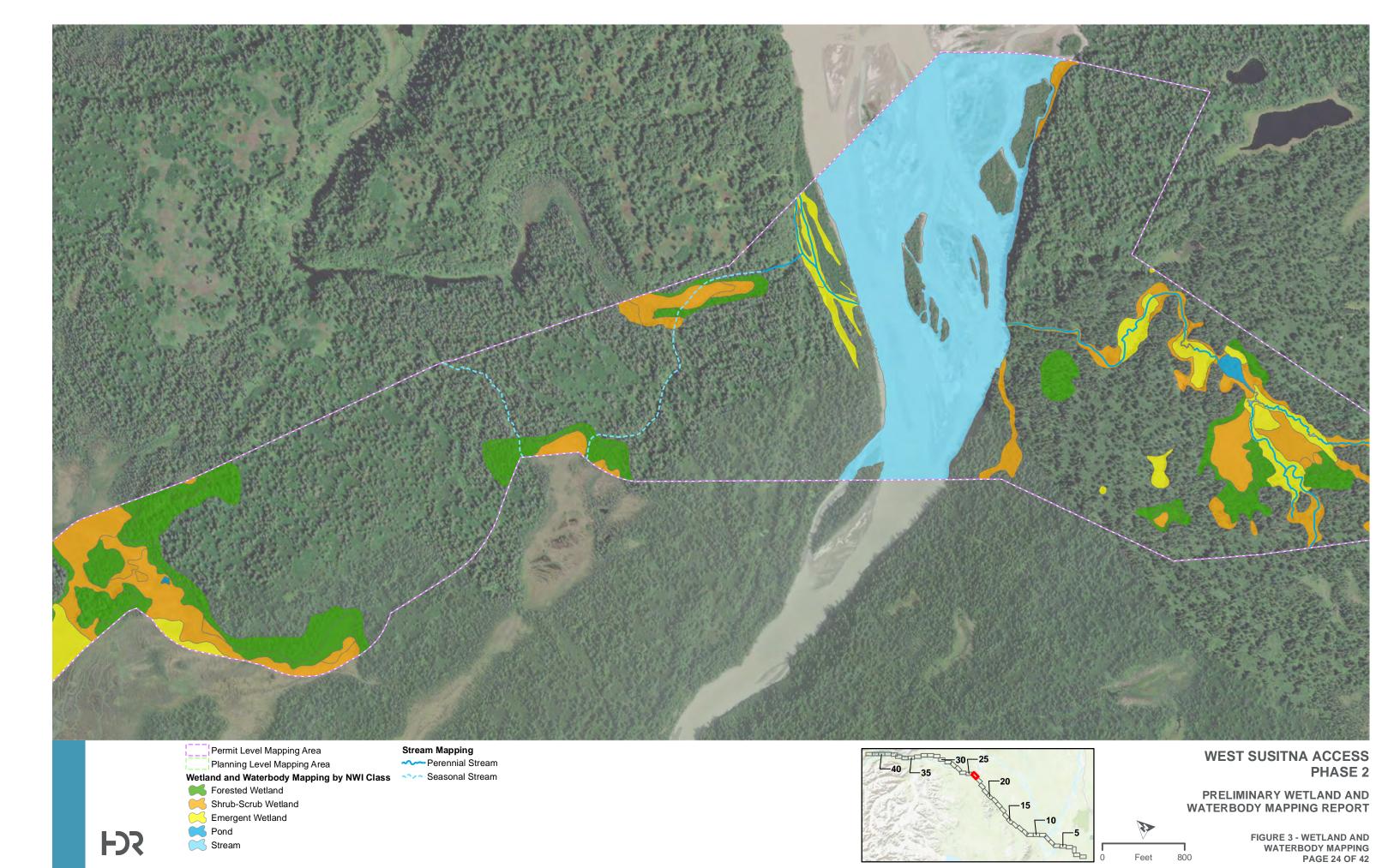
FDS

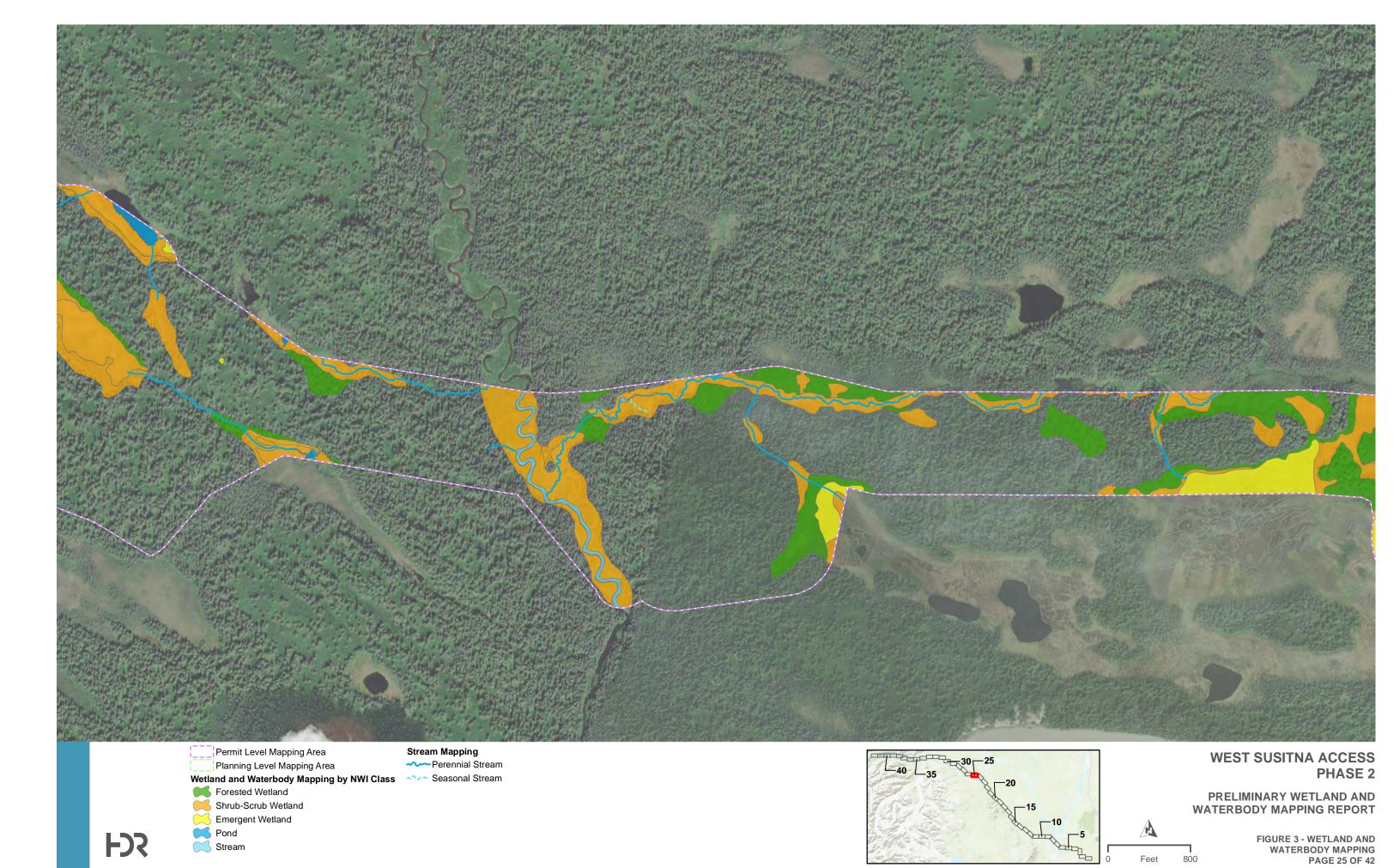
PHASE 2

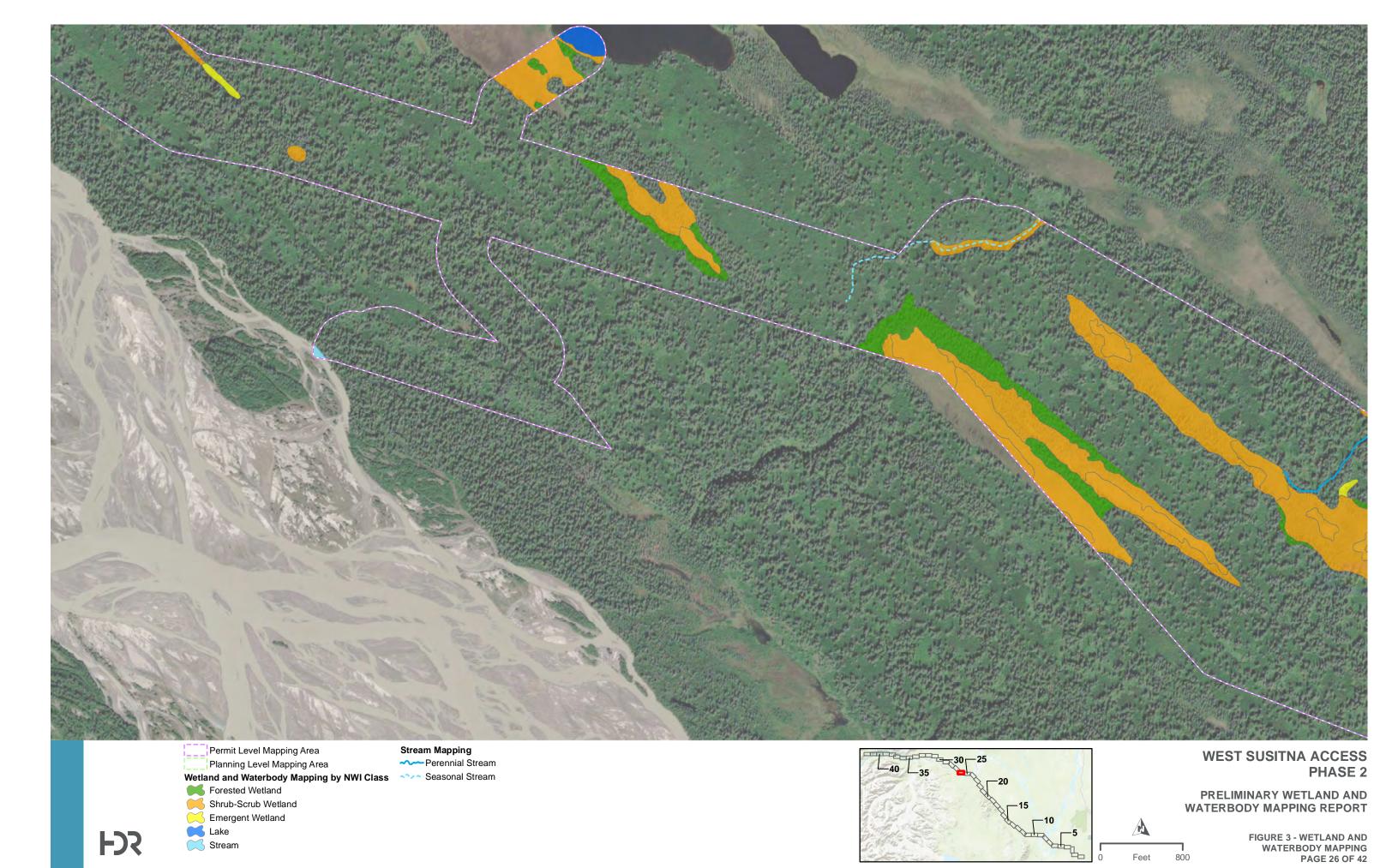
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

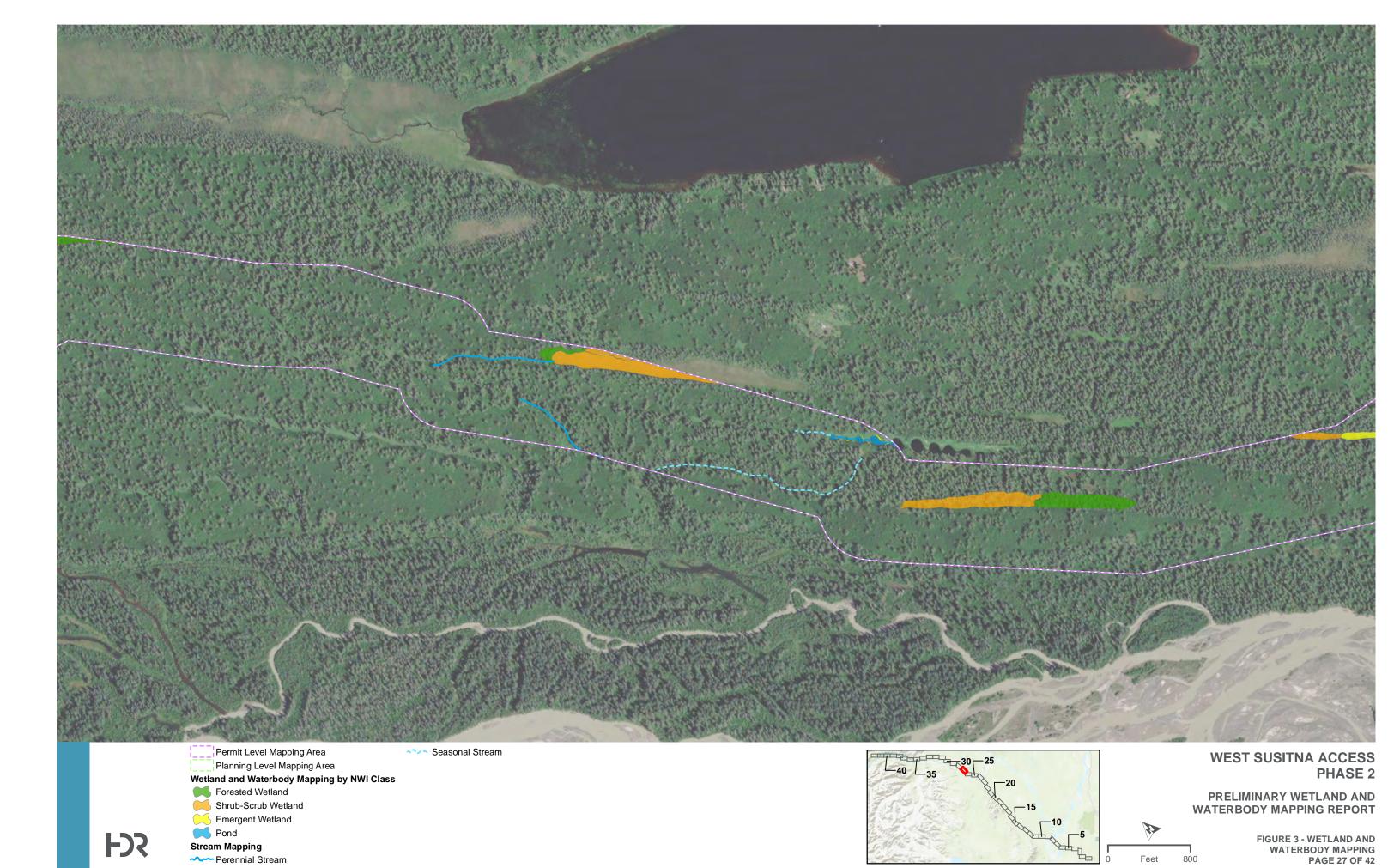


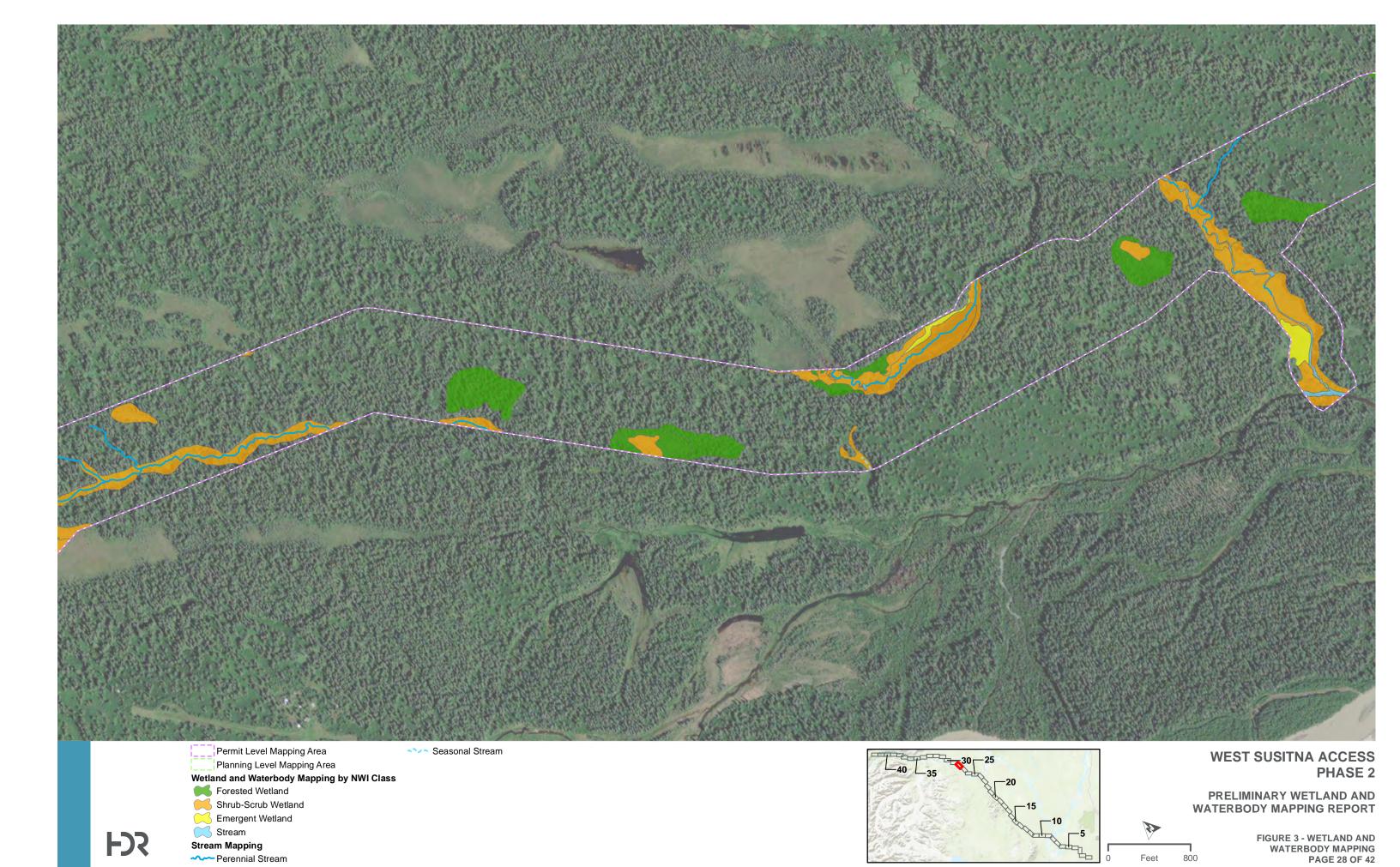
FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 23 OF 42





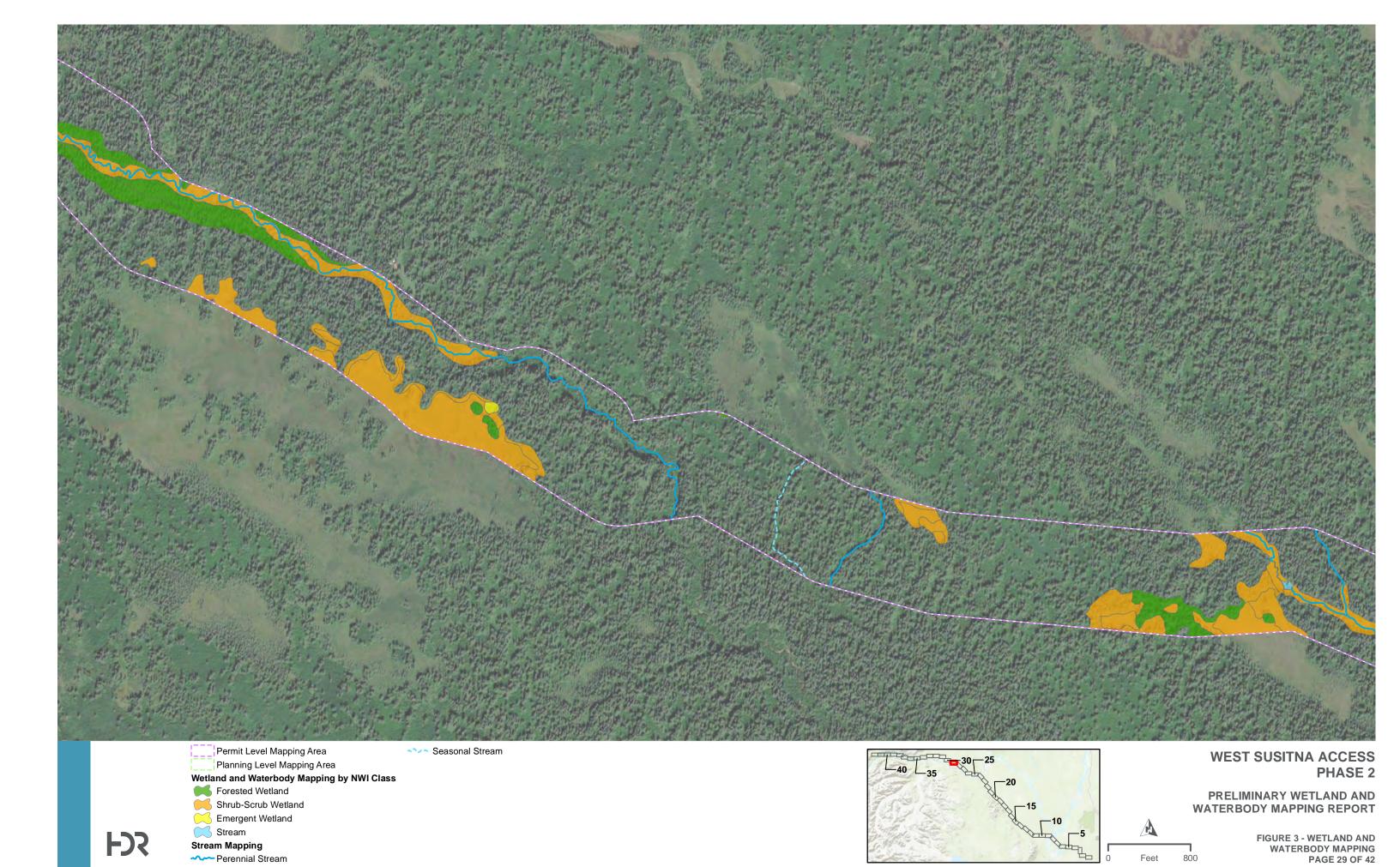


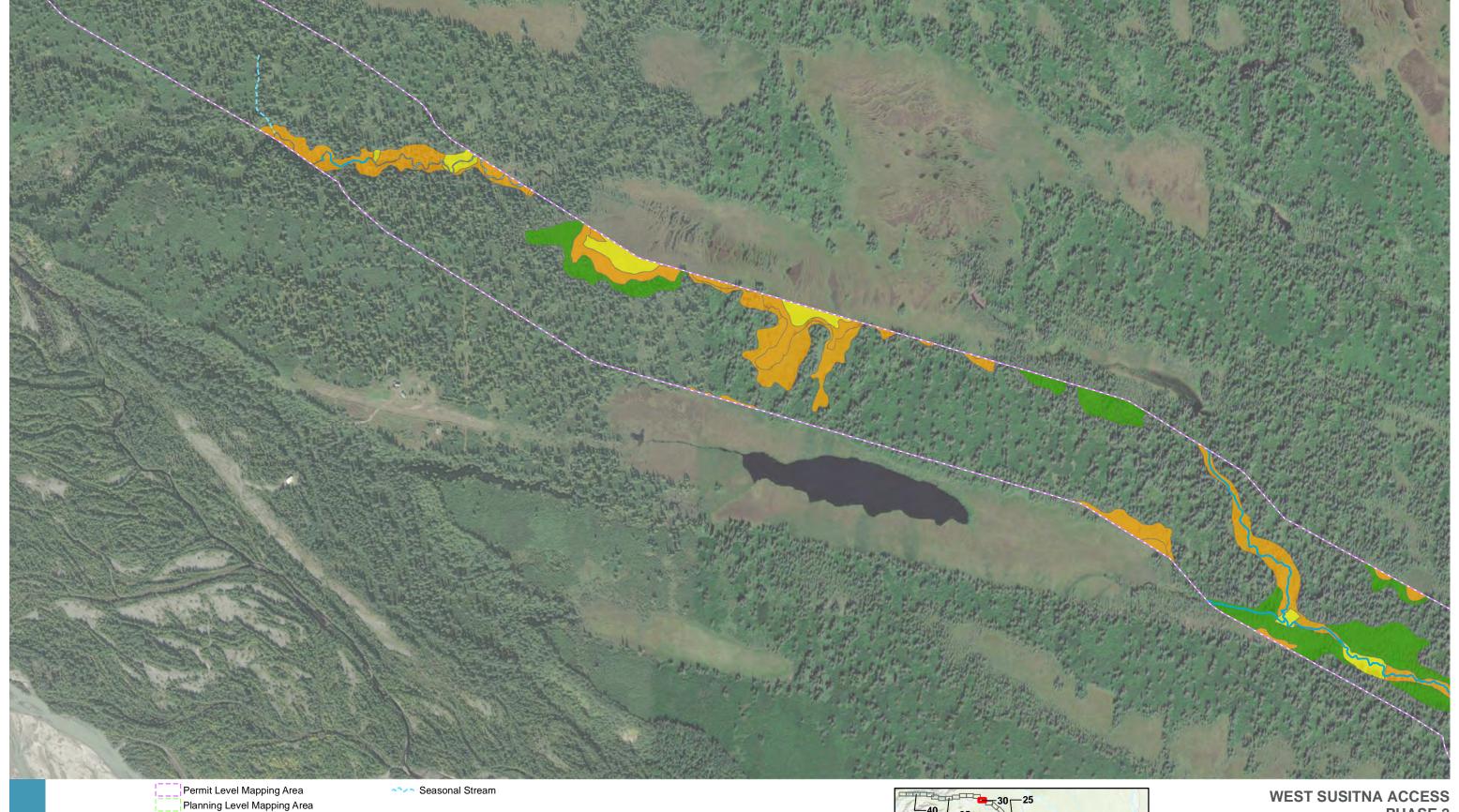




ROJECT_SAN07073 AIDEA|10239701_AIDEA_NTP11_WESTSUACCESS_PH27.2_WPMAP_DOCS\WETLANDS\REPORT\WSA_WETLANDS_FIG3_WETLANDSWATERBODYMAPPING.MXD - USER: CBRISBOIS - DATE: 2/8/2021

Perennial Stream







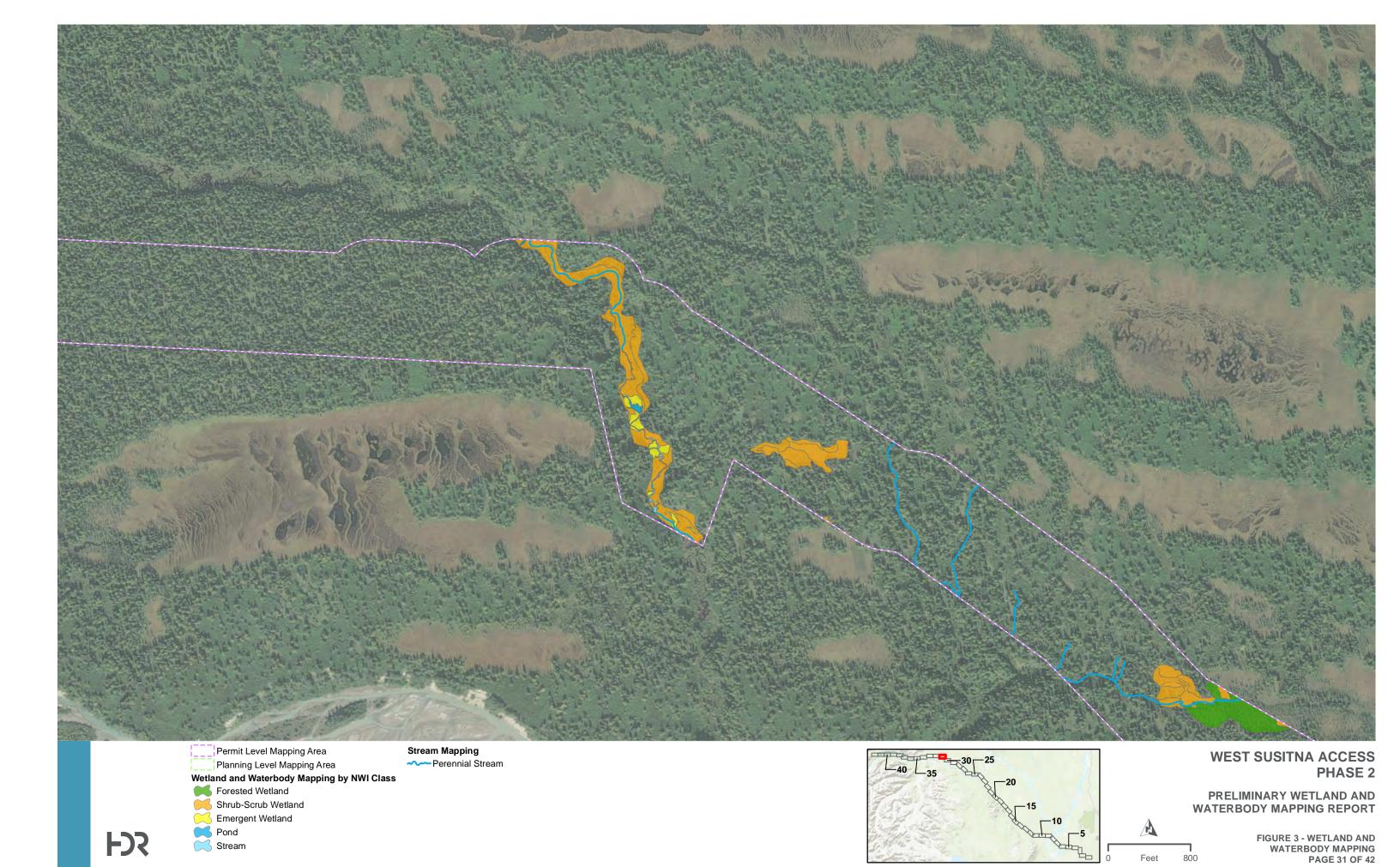
Perennial Stream

PHASE 2

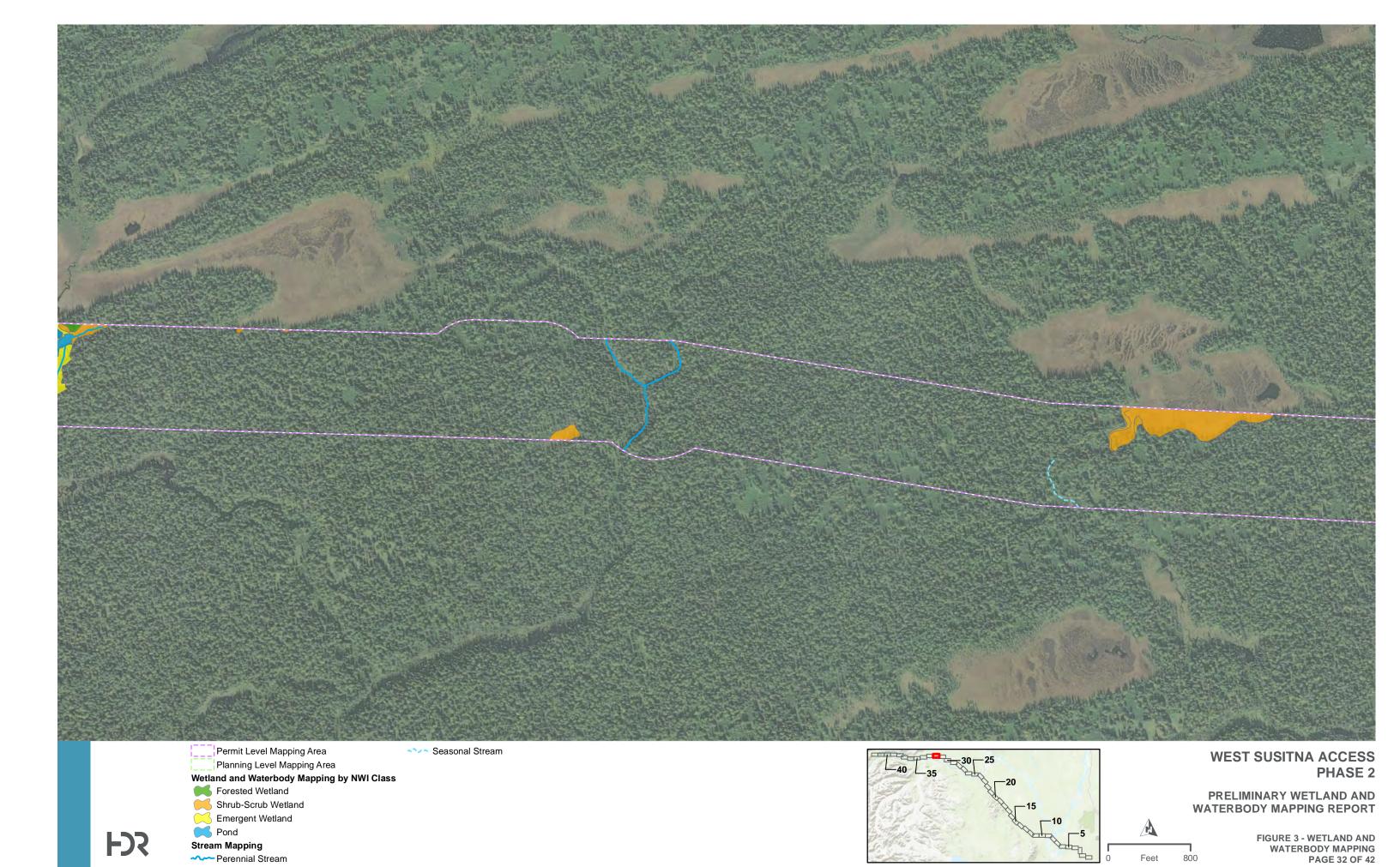
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 30 OF 42

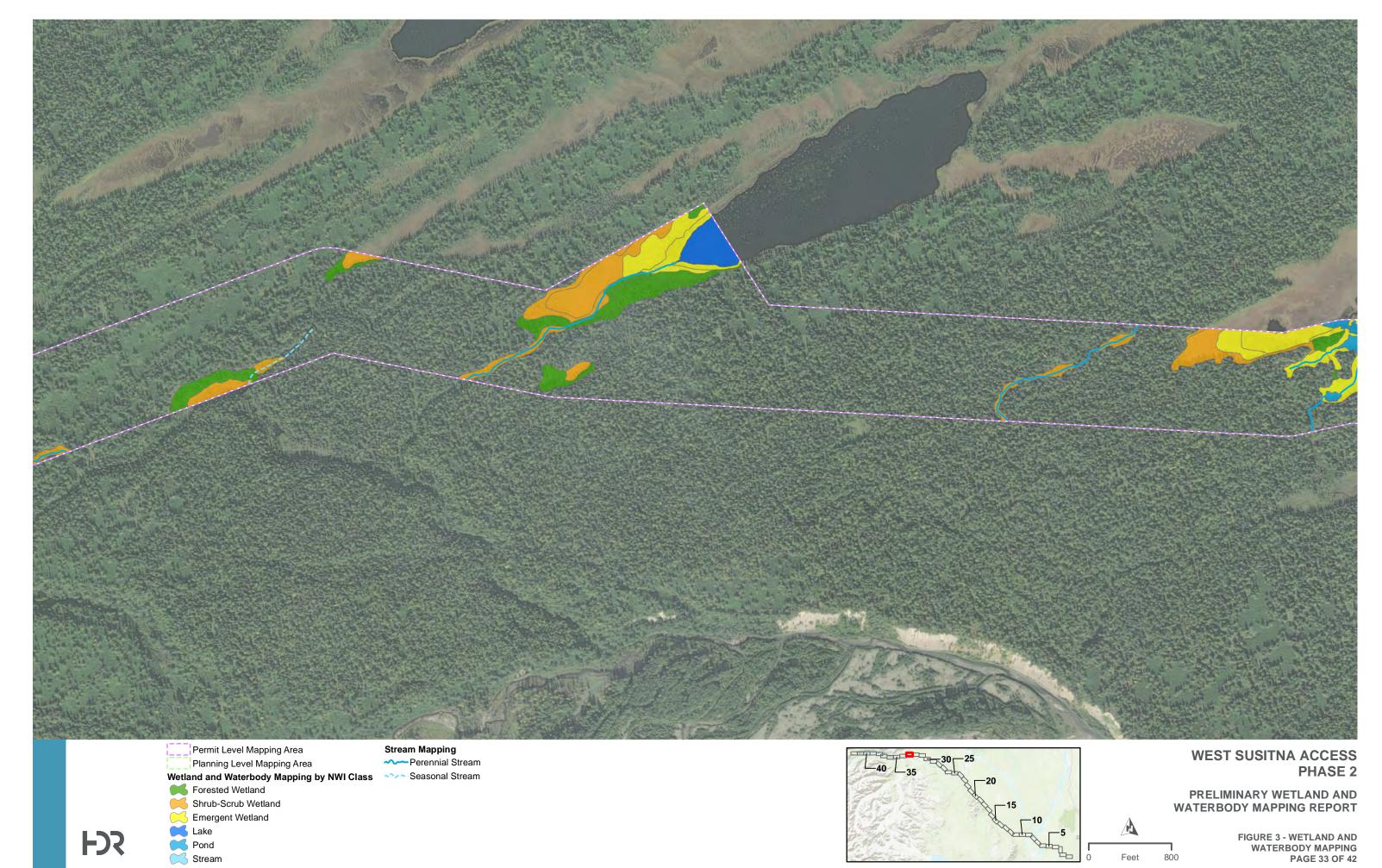


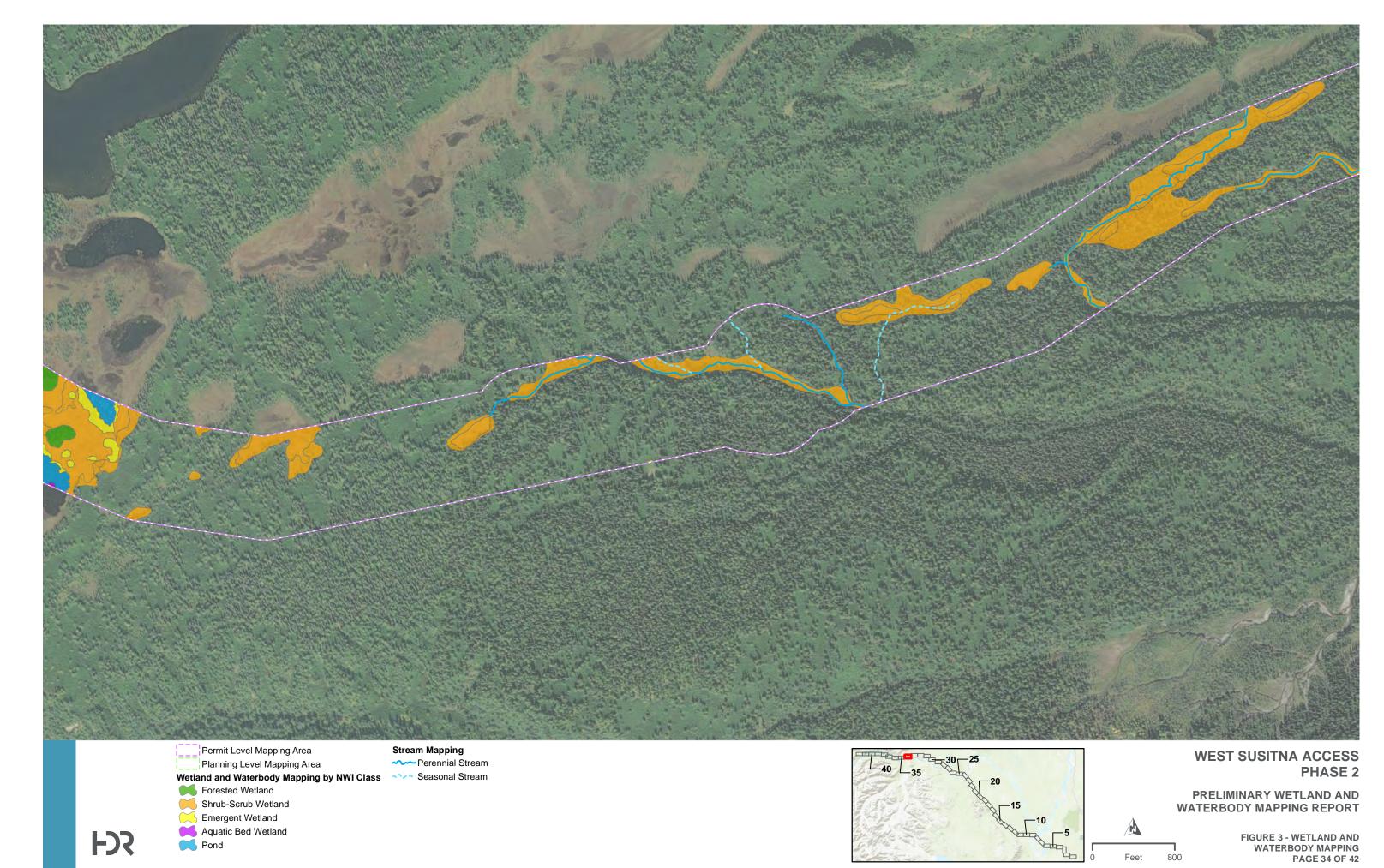
H: WANC-SRV04PROJECT SAN07073 AIDEA10239701 AIDEA NTP11 WESTSUACCESS. PHZI7.2 WPMAP DOCSWETLANDSWETCHNDSSWETCHNDS FIG3. WETLANDSWATERBODYMAPPING.MXD - USER: CBRISBOIS - DATE: 2/8/2021

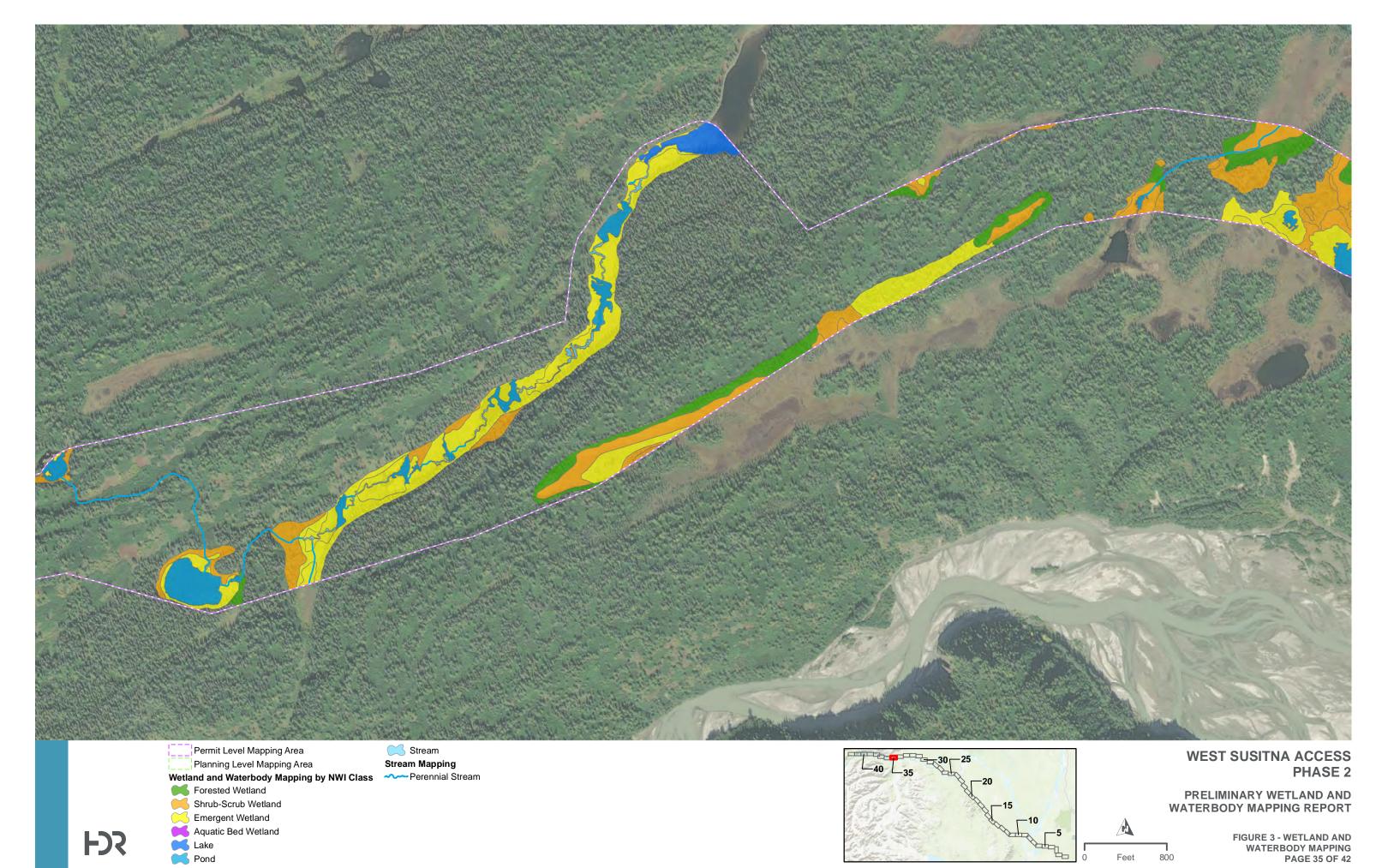


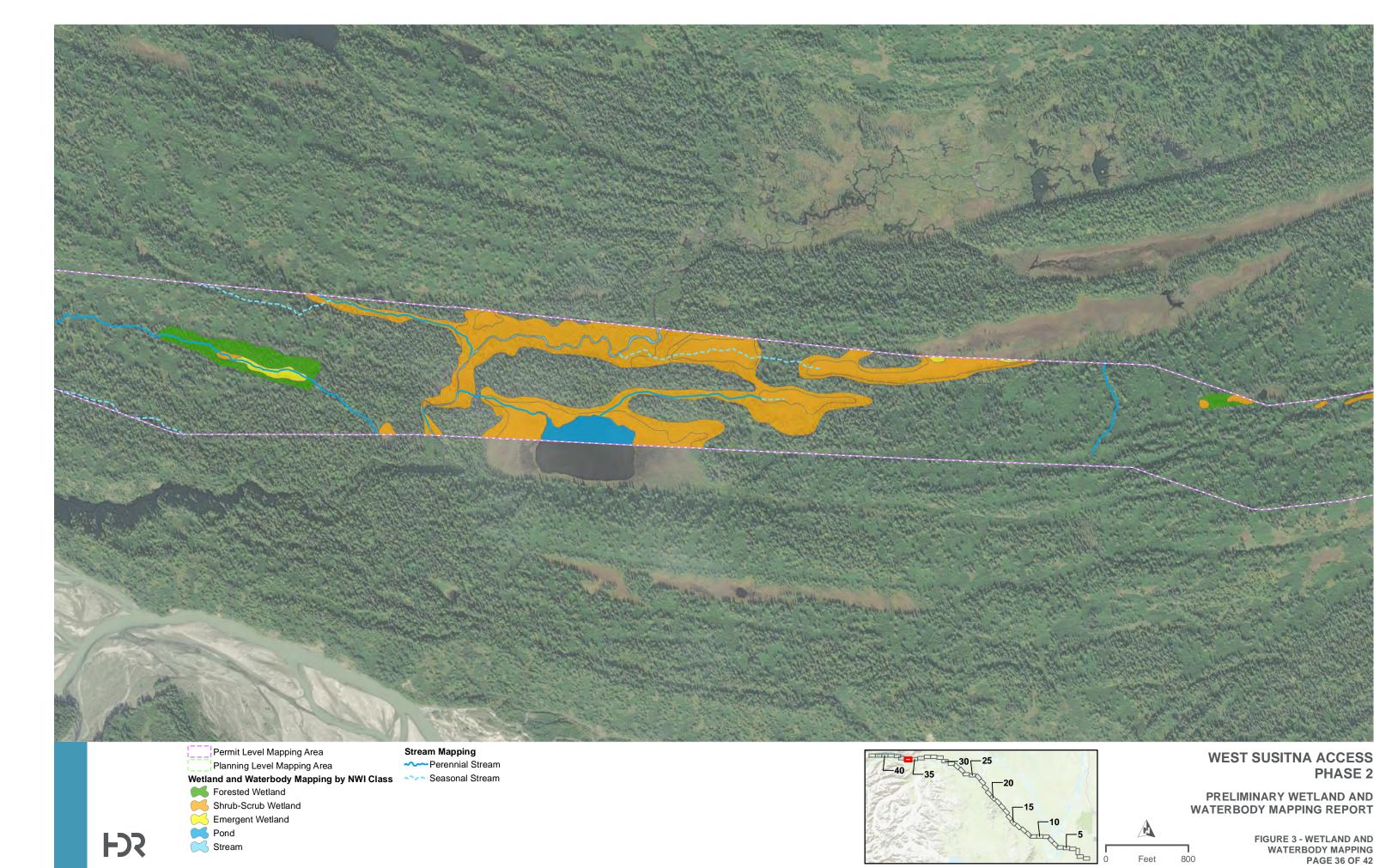
ROJECT_SANI07073 AIDEA10239701_AIDEA_NTP11_WESTSUACCESS_PH27.2_WP/MAP_DOCS/WETLANDS/REPORT/WSA_WETLANDS_FIG3_WETLANDS/WATERBODYMAPPING.MXD - USER: CBRISBOIS - DATE: 2/8/2021

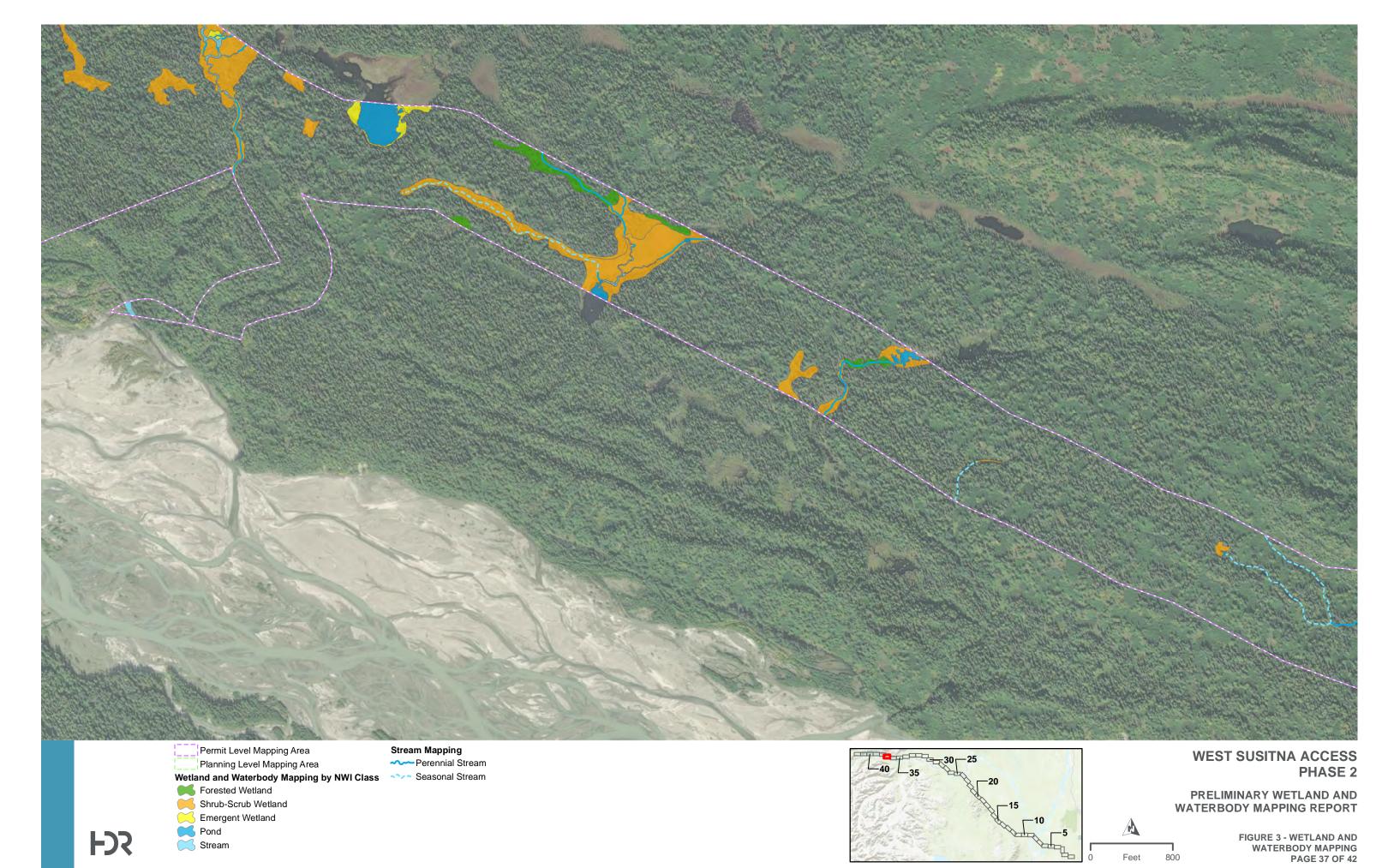
Perennial Stream

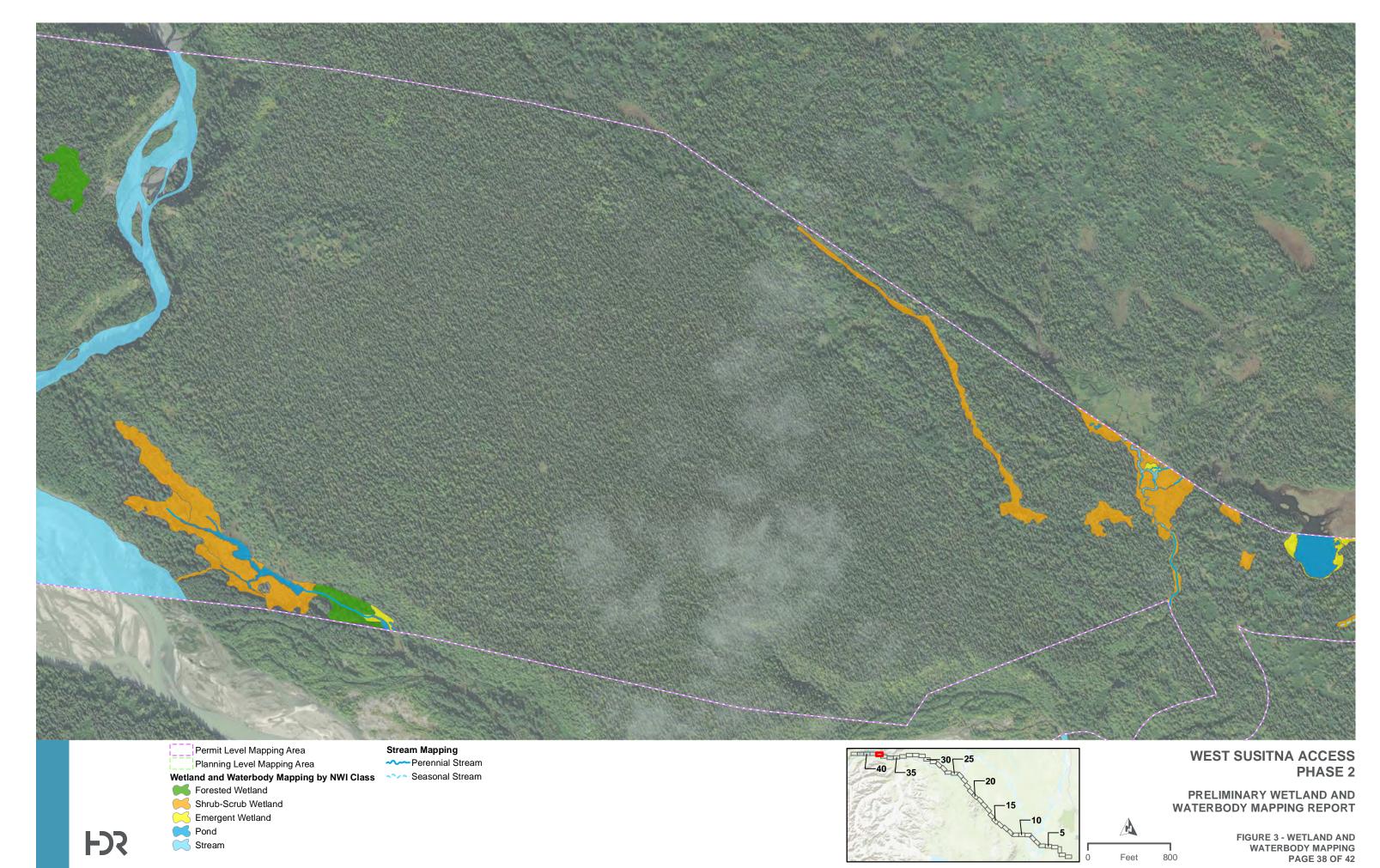


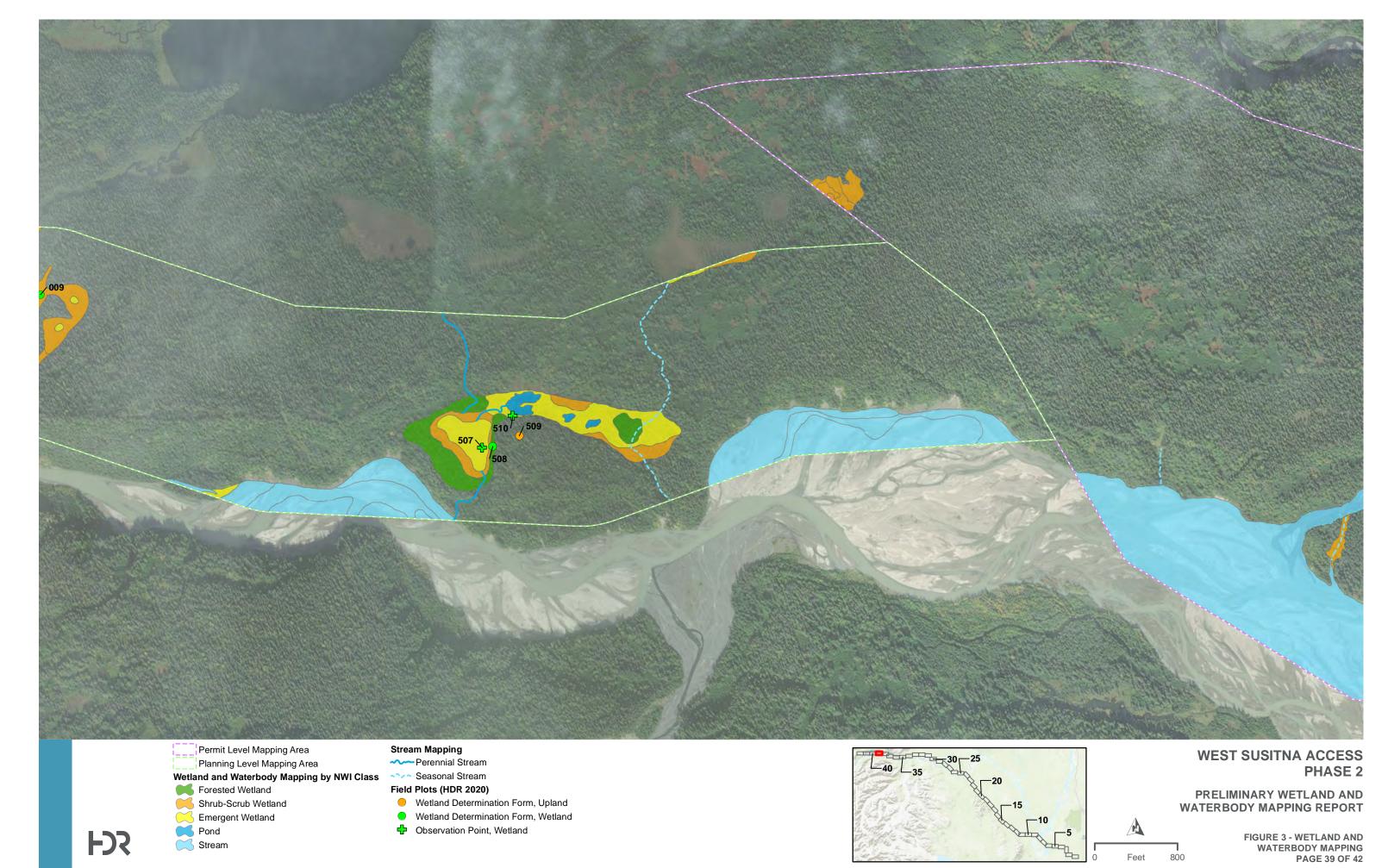


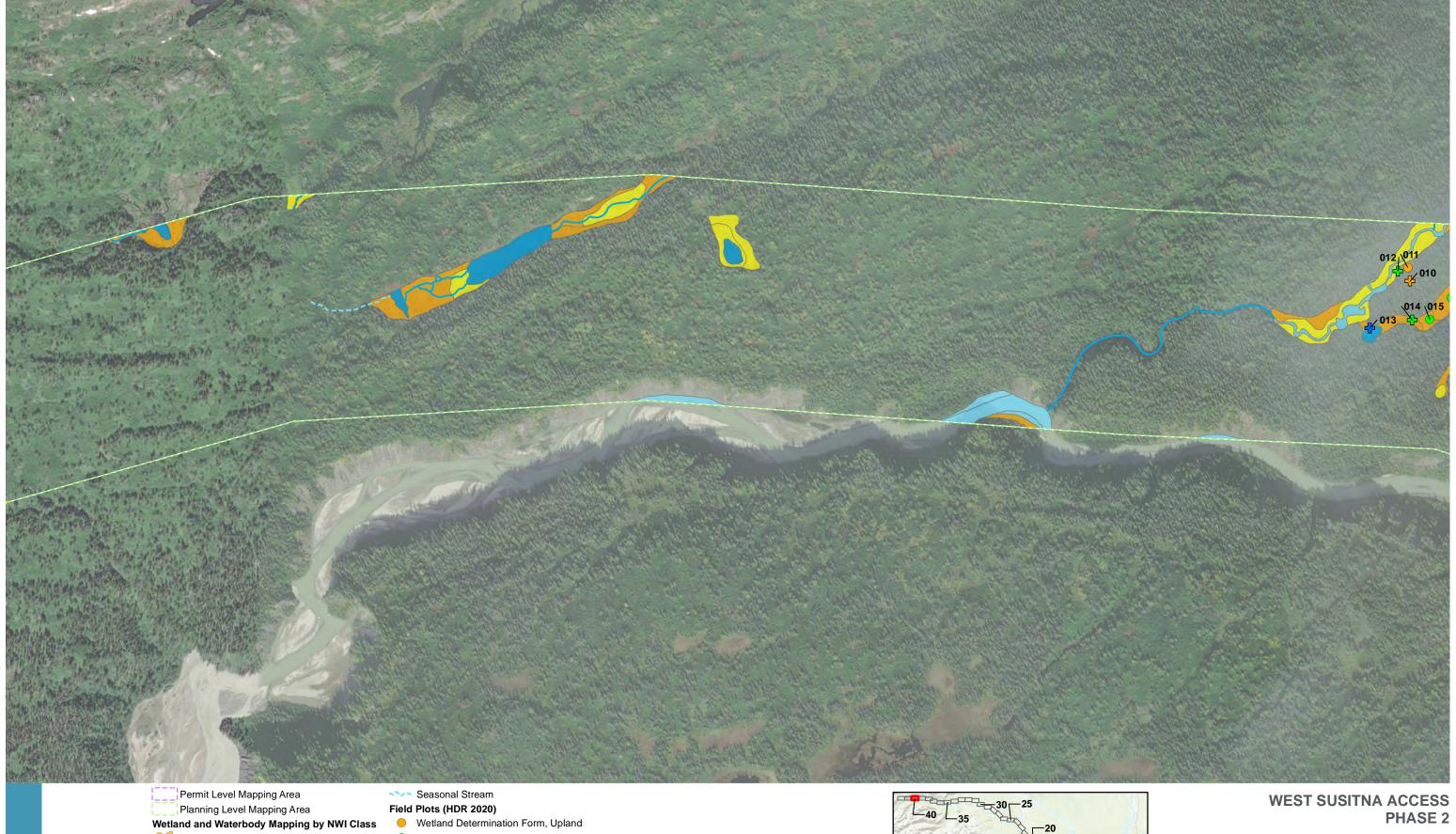












FD3

Shrub-Scrub Wetland

Emergent Wetland

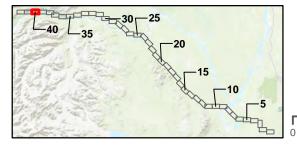
Pond

Stream

Stream Mapping

Perennial Stream

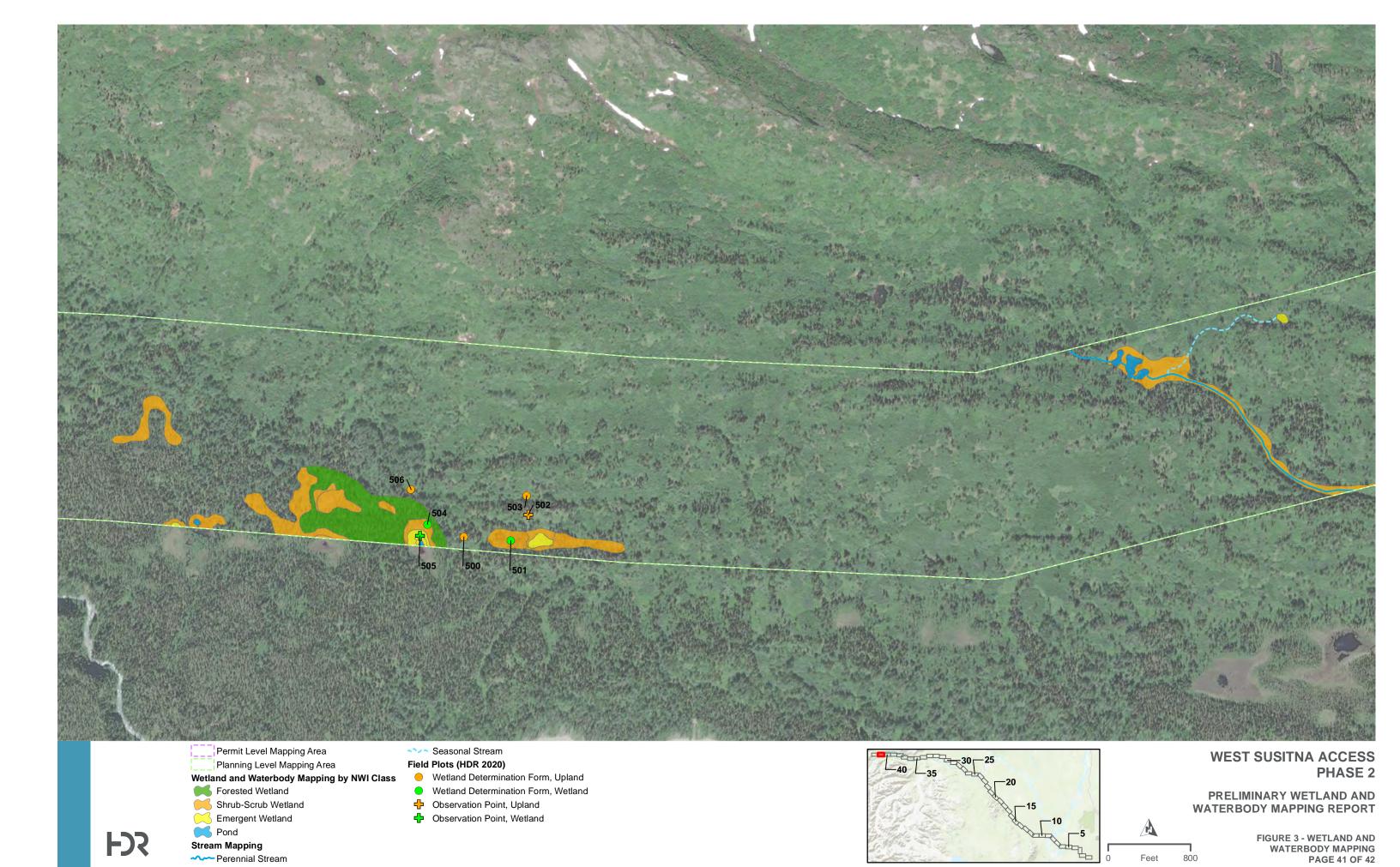
- Wetland Determination Form, Wetland
- Observation Point, Upland
- Observation Point, Wetland
- Observation Point, Waterbody or Stream



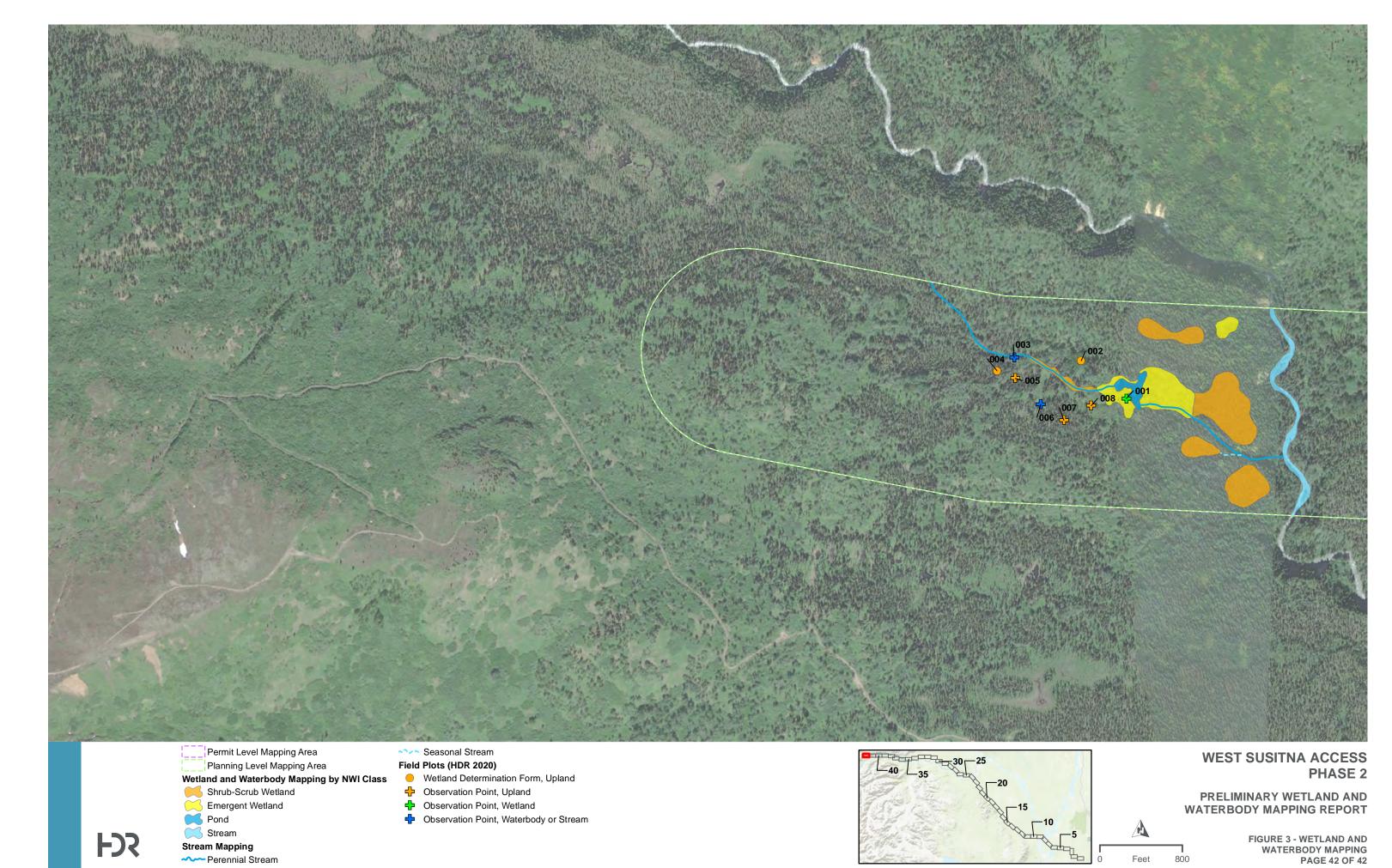
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 3 - WETLAND AND WATERBODY MAPPING PAGE 40 OF 42

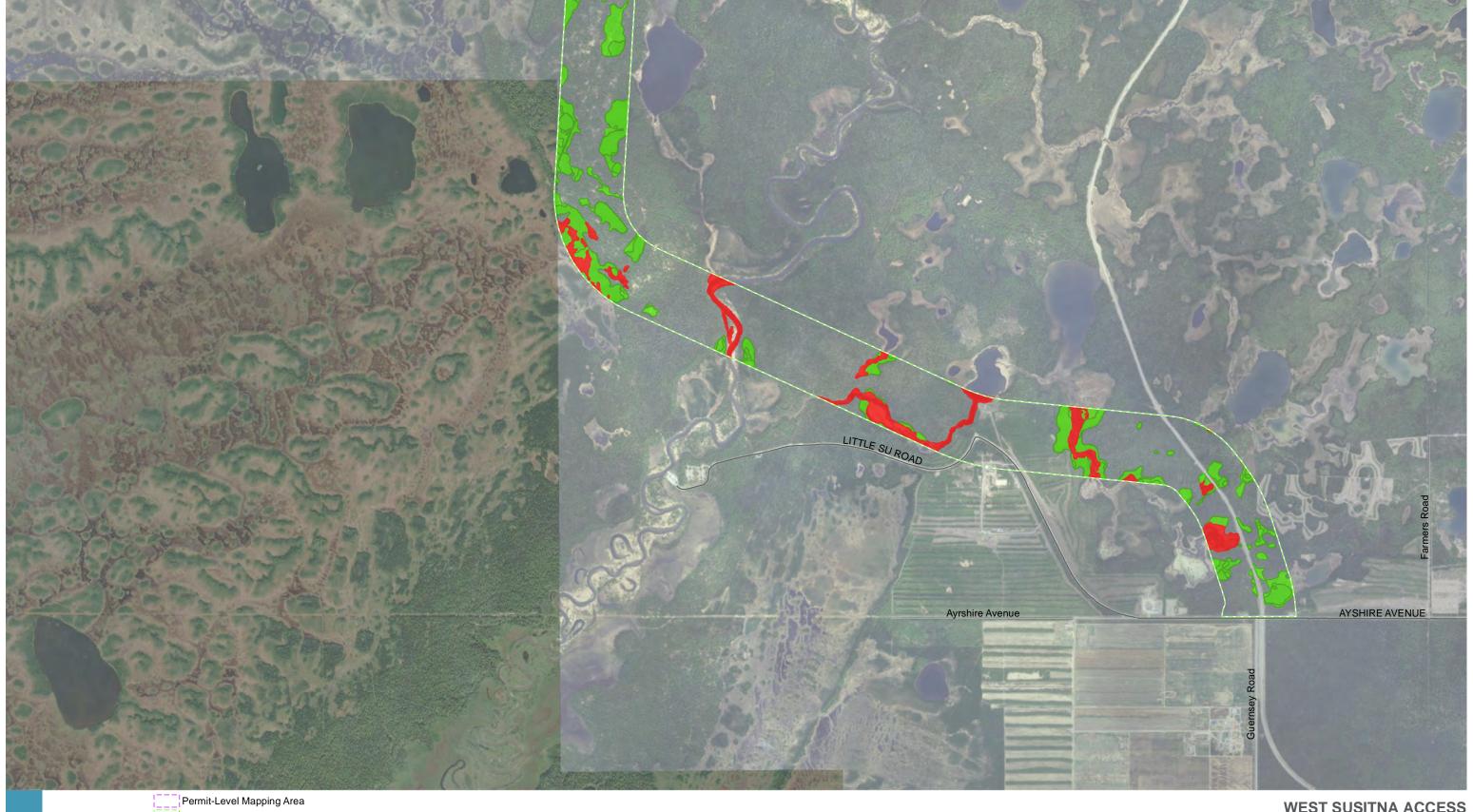


H: WANC-SRV04PROJECT, SAN07073 AIDEA(10239701, AIDEA, NTPH). WESTSUACCESS, PH217.2 WP/MAP_DOCS/WETLANDS/REPORTWSA_WETLANDS, FIG3_WETLANDSWATERBODYMAPPING.MXD - USER: CBR18B0IS - DATE: 2/8/202



Perennial Stream

ROJECT_SAN\07073 AIDEA\10239701_AIDEA_NTP11_WESTSUACCESS_PH2\7.2_WP\MAP_DOCS\WETLANDS\REPORT\WSA_WETLANDS_FIG3_WETLANDSWATERBODYMAPPING.MXD · USER: CBRISBOIS · DATE: 2/8/2021



FDR

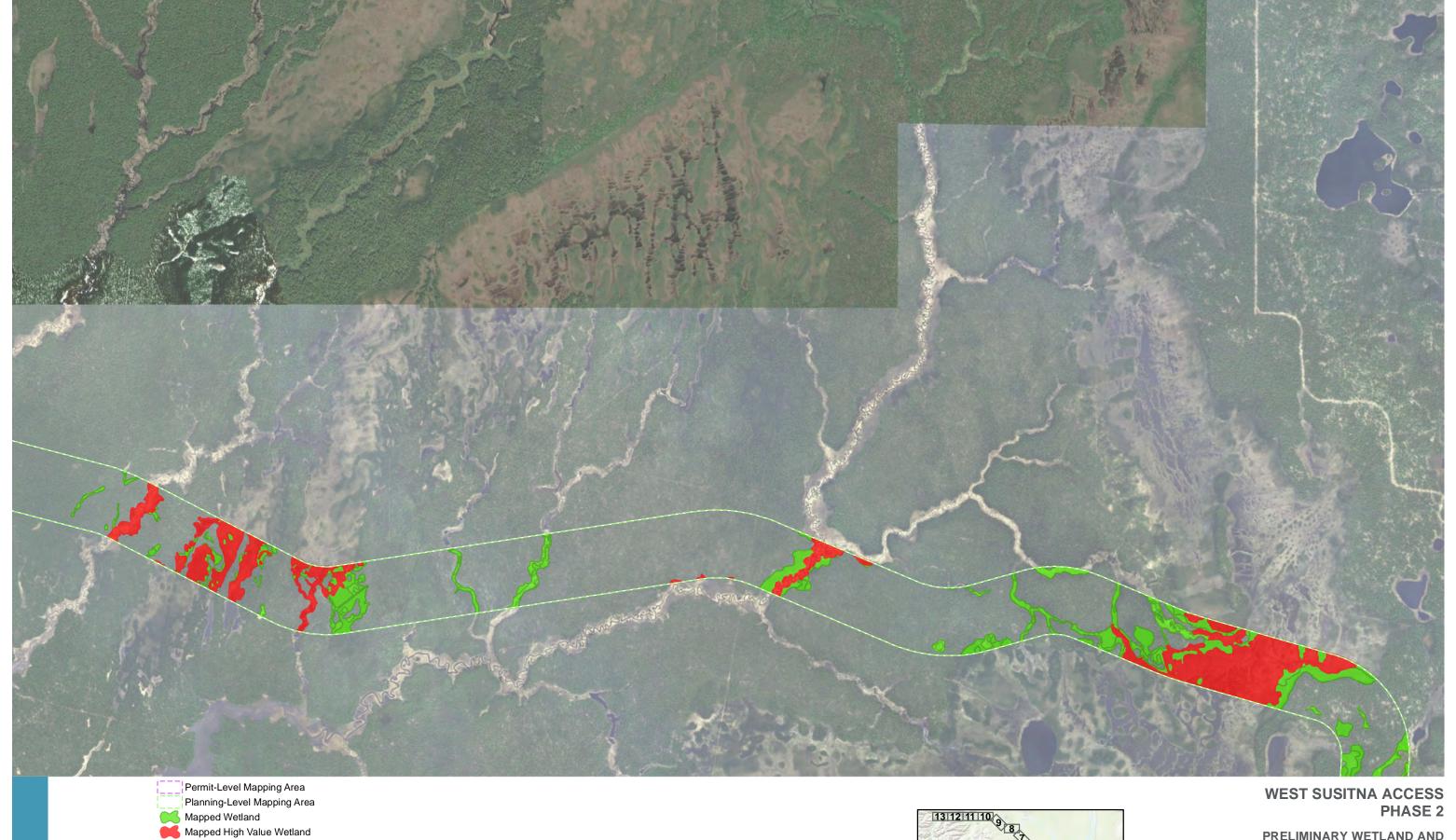
13|12|11|10|9|8|7|6|5|4|3|2| Brade

WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

0 Miles 0.5

FIGURE 4 - HIGH VALUE WETLANDS PAGE 1 OF 13

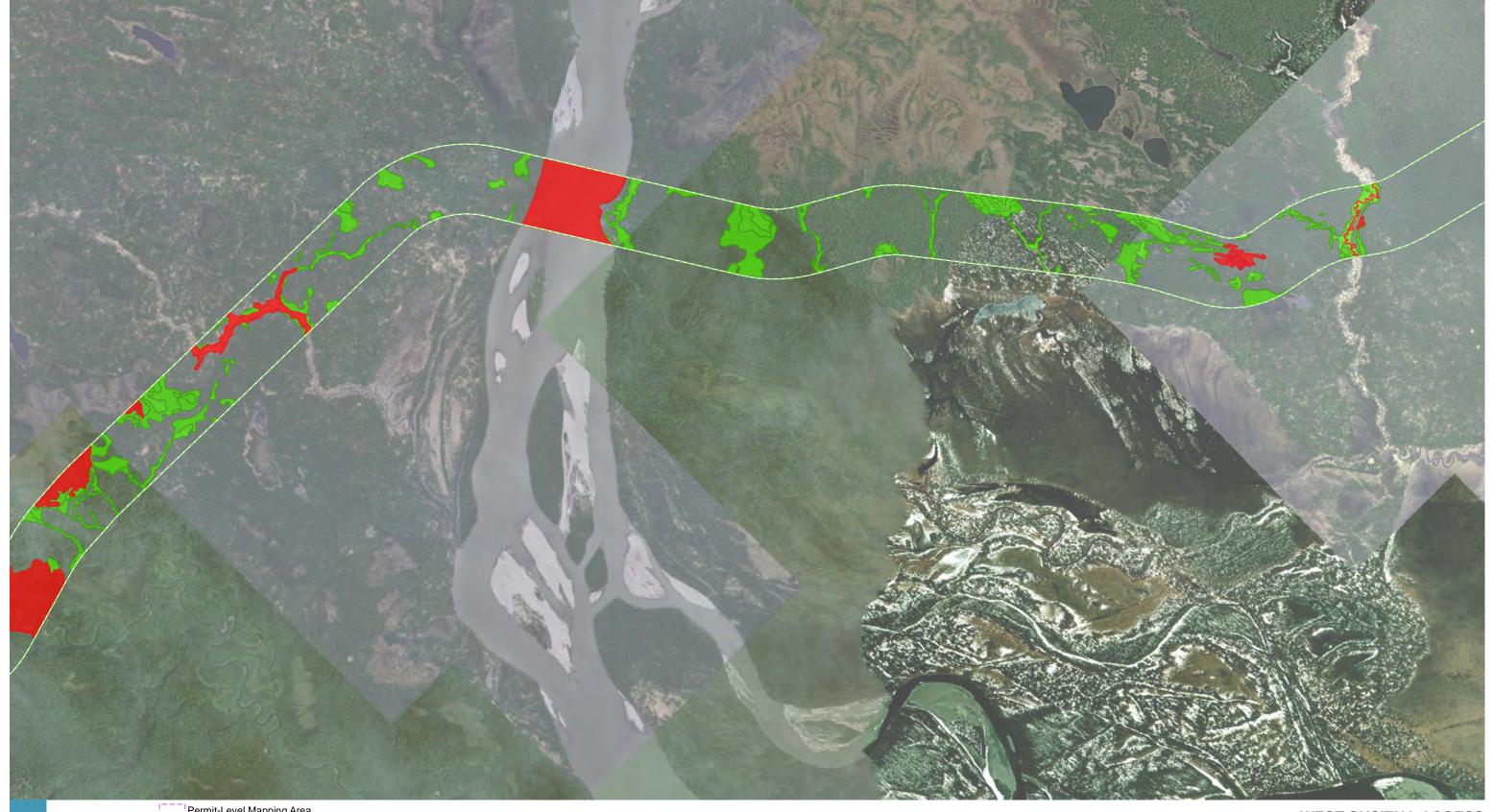


FJR

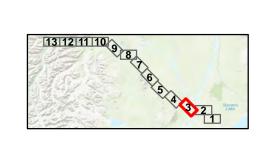
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS PAGE 2 OF 13







WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS 0.5 PAGE 3 OF 13



WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS
0.5 PAGE 4 OF 13







WEST SUSITNA ACCESS PHASE 2

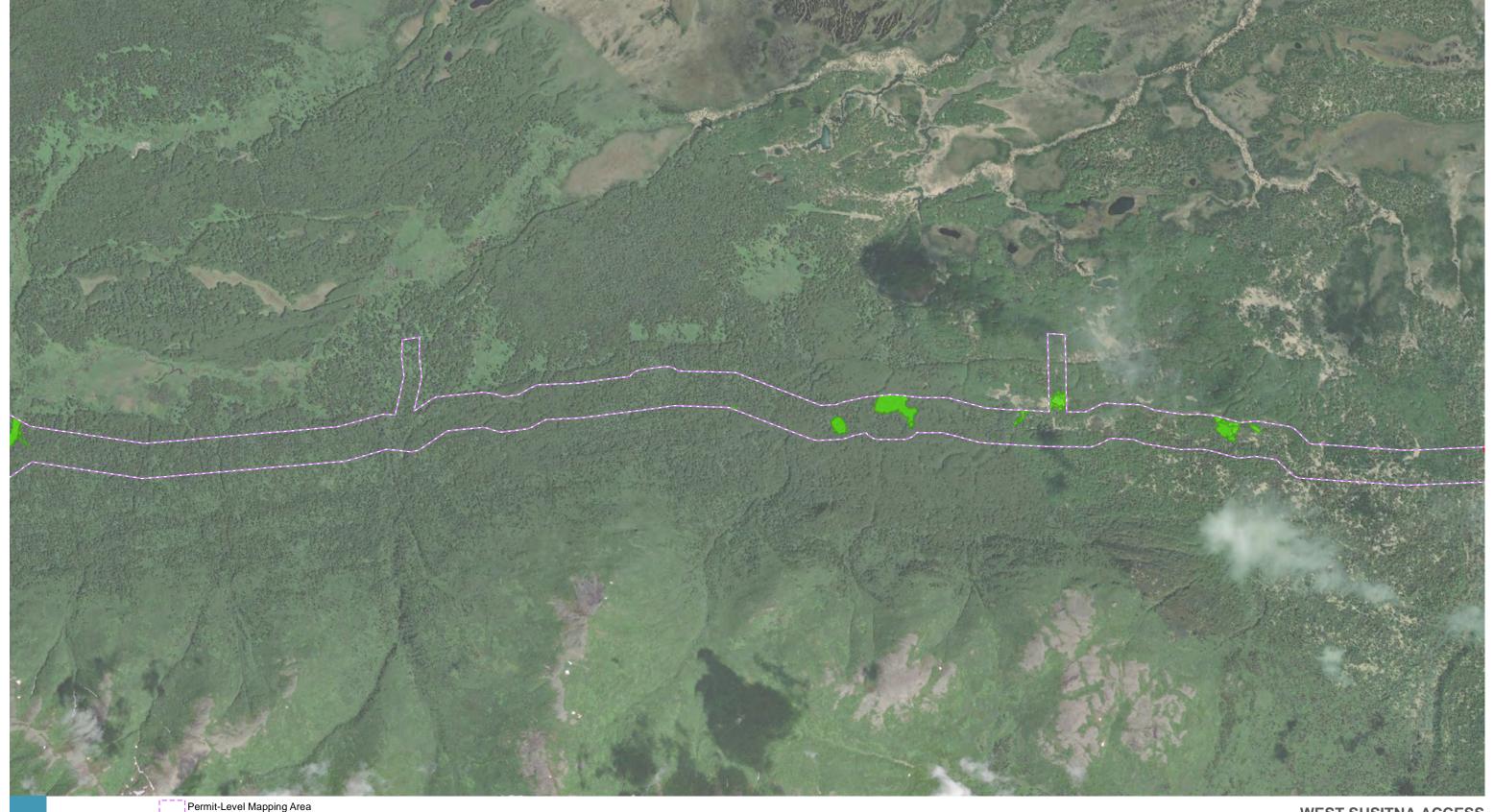
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



WATERBODY MAPPING REPORT

FJR

FIGURE 4 - HIGH VALUE WETLANDS
PAGE 5 OF 13





WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

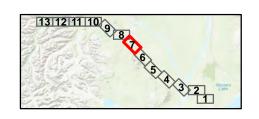


FDR

FIGURE 4 - HIGH VALUE WETLANDS PAGE 6 OF 13





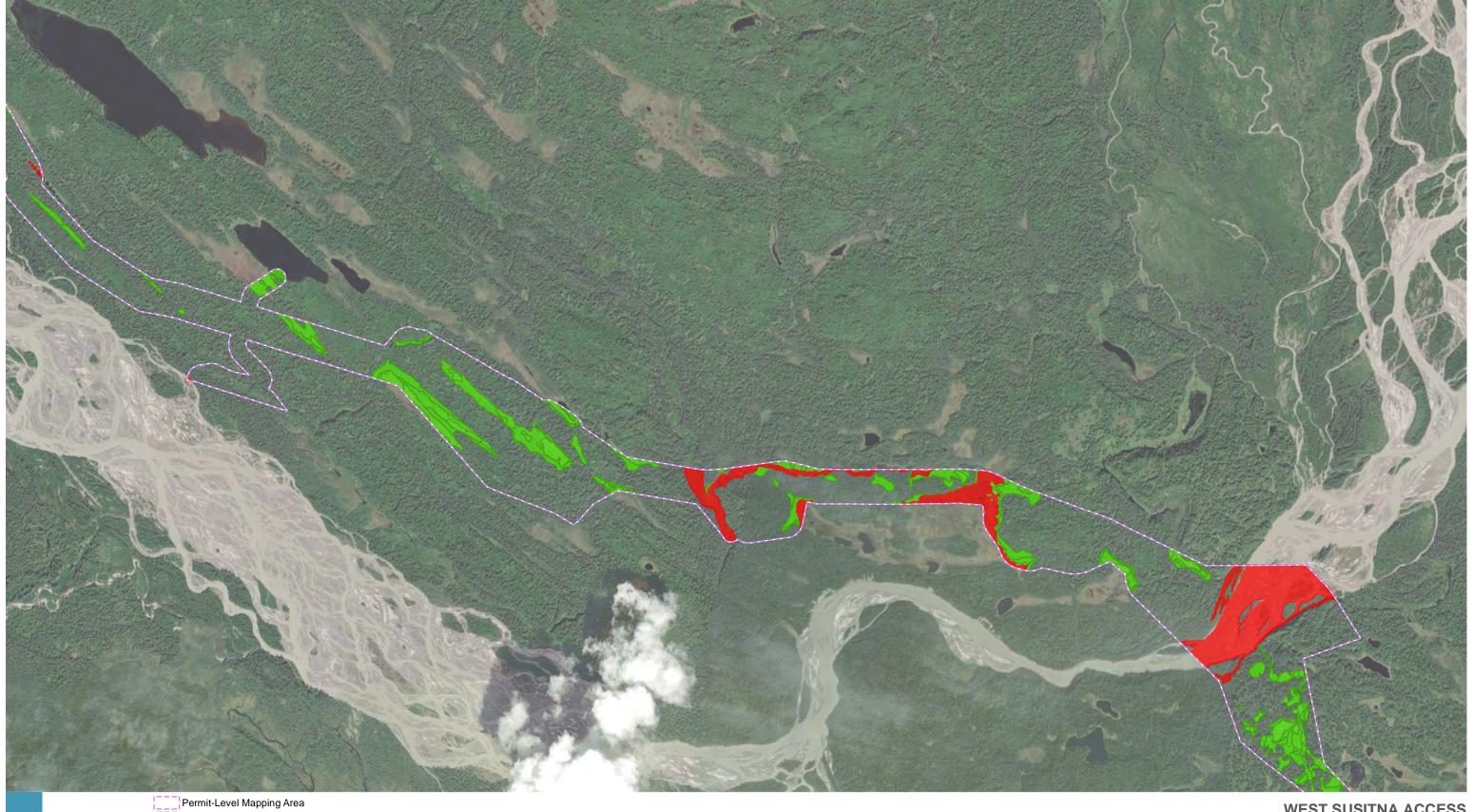


WEST SUSITNA ACCESS PHASE 2



PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT

FIGURE 4 - HIGH VALUE WETLANDS PAGE 7 OF 13

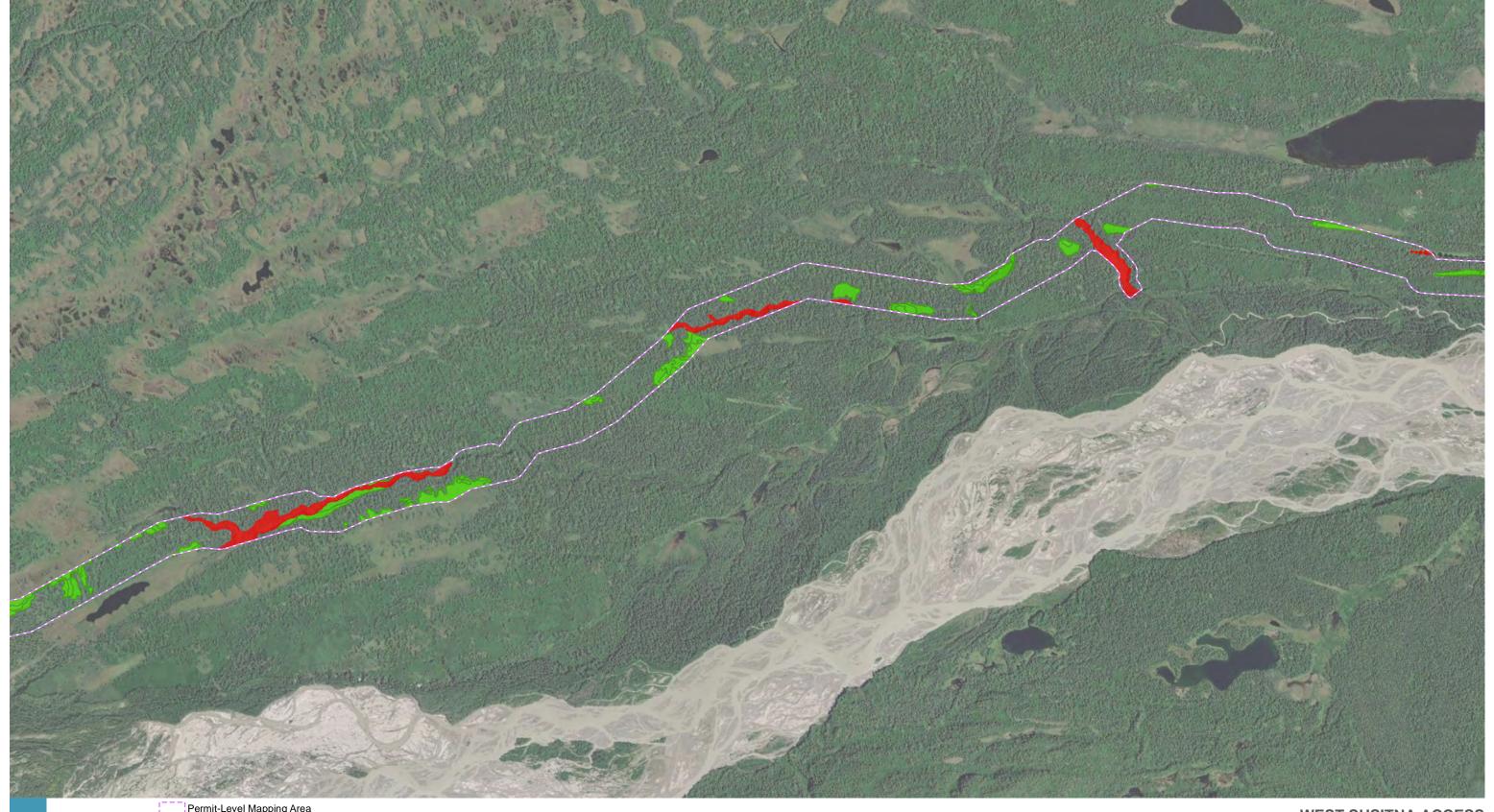


WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS PAGE 8 OF 13







WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



WATERBOOT WAPPING REPORT

FDR

FIGURE 4 - HIGH VALUE WETLANDS PAGE 9 OF 13



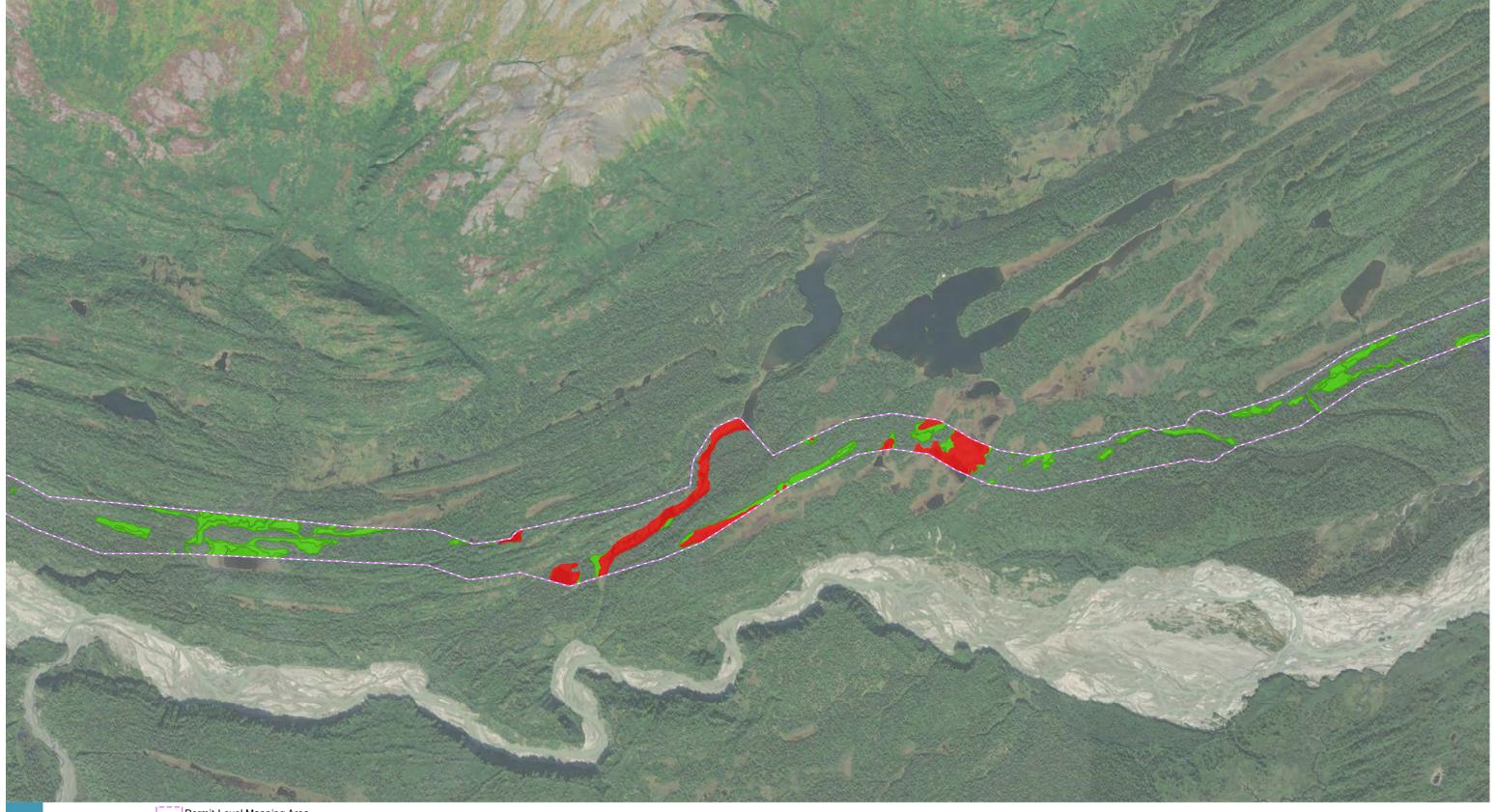


WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS PAGE 10 OF 13







WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS
0.5 PAGE 11 OF 13

FDR







WEST SUSITNA ACCESS PHASE 2

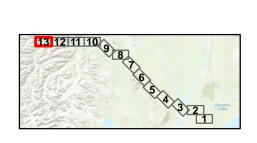
PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



FIGURE 4 - HIGH VALUE WETLANDS PAGE 12 OF 13







WEST SUSITNA ACCESS PHASE 2

PRELIMINARY WETLAND AND WATERBODY MAPPING REPORT



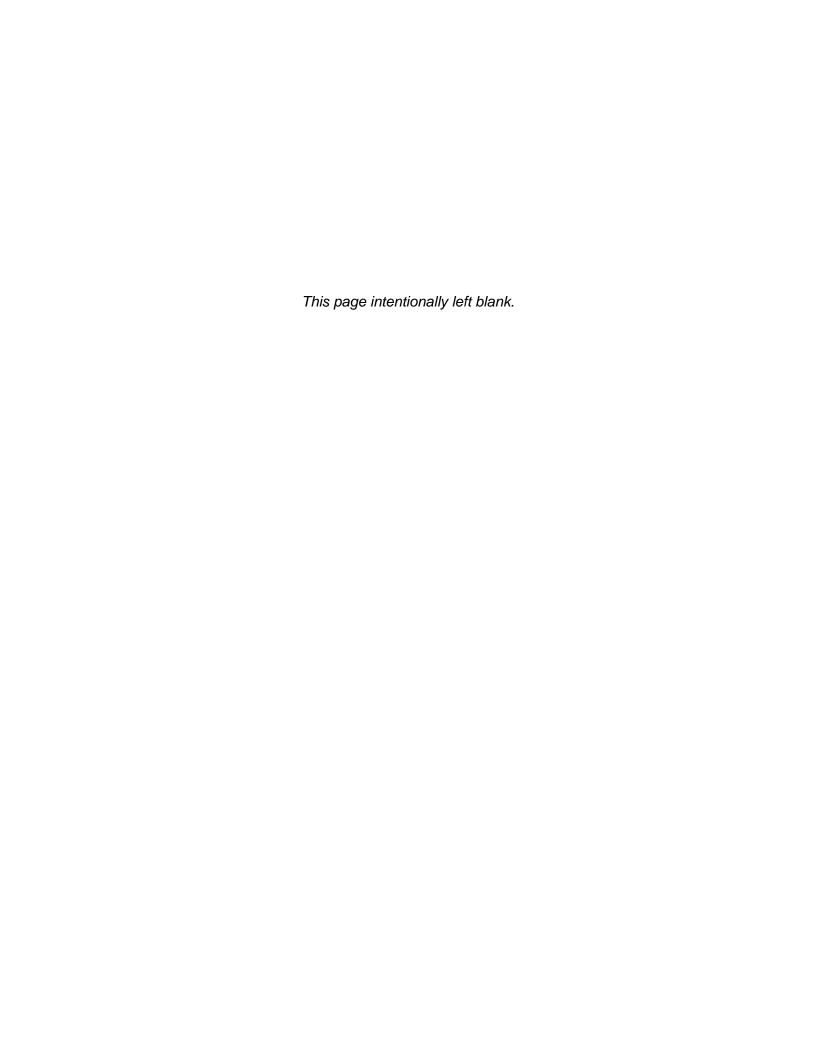
FIGURE 4 - HIGH VALUE WETLANDS PAGE 13 OF 13



Appendix A

Wetland Determination Forms and Photographs

September 15, 16, 18, 23, and 29, 2020





Appendix A: Summary of Wetland Determination Form Sites

	Ap	ppendix A: Summa	ry of Wetland Dete	rmination Form Sit	es
Site	Latitude	Longitude	NWI Code ^a	HGM Class ^b	Viereck Level IV Code ^c
002	61.98160	-152.58934	U	N/A	IC2d
004	61.98124	-152.59405	Ü	N/A	IA3c
009	61.98624	-152.42455	PSS1/EM1B	Slope	IIC2d
011	61.98694	-152.42684	U	N/A	IIC2f
015	61.98570	-152.42561	PSS1C	Slope	IIB2a
016	61.55550	-150.71767	PEM1B	Slope	IIIA2a
017	61.55473	-150.71819	U	N/A	IB2a
022	61.55550	-150.71545	PSS1/EM1B	Slope	IIB2b
023	61.59422	-150.82171	U	N/A	IIIA2b
028	61.59430	-150.82930	PEM1B	Slope	IIA2a
037	61.53129	-150.48527	U	N/A	IC2a
040	61.53274	-150.49284	PSS1C	Riverine	IIB2b
042	61.51461	-150.45456	PSS1/4B	Flat	IC3 – Black spruce/Paper birch ^d
043a	61.51392	-150.45470	PSS1/EM1B	Flat	IIC2j
045	61.51239	-150.45773	PSS4/1B	Flat	IA3d
054	61.51103	-150.45073	U	N/A	IC2 – Black spruce/Paper birch ^d
500	61.97764	-152.54990	U	N/A	IC2a
501	61.97759	-152.54724	PSS1C	Slope	IIB1d
503	61.97880	-152.54645	U	N/A	IIB1a
504	61.97793	-152.55197	PSS1/EM1B	Slope	IIC2d
506	61.97884	-152.55299	U	N/A	IC2a
508	61.98268	-152.39883	PFO1/SS1C	Slope	IB2a
509	61.98298	-152.39736	U	N/A	IC2a
513	61.55246	-150.69941	PFO4/SS1B	Slope	IA2f
514	61.55292	-150.69813	U	N/A	IB1d
516	61.55293	-150.69498	U	N/A	IIIA2a
520	61.60773	-150.87259	PFO4/SS1C	Slope	IA2f
522	61.60731	-150.86917	PSS1B	Slope	IB2a
528	61.55349	-150.66831	PFO1/SS1C	Slope	IB2a
529	61.55319	-150.66879	U	N/A	IIB2b
534	61.55665	-150.61205	U	N/A	IB2a
536	61.55630	-150.61215	U	N/A	IC2a
537	61.55683	-150.61125	U	N/A	IB2a
547	61.55453	-150.56419	PSS1/EM1B	Slope	IB3a
550	61.55335	-150.53396	U	N/A	IIB1b
551	61.55290	-150.53420	U	N/A	IIB2d
555	61.61993	-150.90817	PFO1/SS1B	Slope	IC2 – Black spruce/Paper birch ^d
556	61.61941	-150.90830	U	N/A	IB2a
561	61.61849	-150.90537	U	N/A	IIB2a
570	61.61937	-150.90459	U	N/A	IIB2b
572	61.58362	-150.78487	PFO4/SS1B	Slope	IC2 – Black spruce/Paper birch ^d
574	61.58279	-150.78523	U	N/A	IB2a
577	61.58206	-150.78467	U	N/A	IB3a
579	61.58267	-150.78342	PFO1/SS1B	Slope	IB2a
583	61.48540	-150.22891	U	N/A	IB3a
584	61.48539	-150.22850	PFO4/SS1B	Slope	IC2 – Black spruce/Paper birch ^d
585	61.48563	-150.22668	PFO4/SS3B	Slope	IA2f
586	61.48554	-150.22601	U	N/A	IC2 – Black spruce/Paper birch ^d
587	61.48551	-150.22445	PFO4/SS4C	Slope	IA2f
592	61.55828	-150.59445	PSS4B	Slope	IA2f
	000020	. 30.00 1 10			I/ 1=1

Appendix A: Summary of Wetland Determination Form Sites

Site	Latitude	Longitude	NWI Code ^a	HGM Class ^b	Viereck Level IV Code ^c
593	61.55755	-150.59495	PEM1/SS1B	Slope	IC2 – Black spruce/Paper birch ^d
594	61.55742	-150.59564	U	N/A	IC2a
595	61.55697	-150.59483	U	N/A	IC2a
596	61.55649	-150.59517	U	N/A	IC2a
597	61.55561	-150.59669	U	N/A	IIIA2a
598	61.55703	-150.59271	U	N/A	IC2 – Black spruce/Paper birch ^d

 ^a NWI: National Wetlands Inventory. Cowardin et al. 1979. See Table 4 for full descriptions.
 ^b HGM: Hydrogeomorphic. Brinson 1993
 ^c Viereck et al. 1992
 ^d Community is not described in Viereck et al. 1992.



Appendix A: Summary of Wetland Indicators

											ıary	ry of Wetland Indicators																	
			veç	geta	tion	Soil						Hydrology Primary Indicators Secondary Indicators																	
														-	rim	ary I	ndic	ator	S		Se	con	dary	/ Ind	ıcato	ors			
		is > 50%	0	Vegetation	n Present?						Hue								C1)	(6)		(C3)	ın (C4)	ıts (D1)	(2)	(D4)	st (D5)	sent?	خ
Site	NWI Code ^a	Hydrophytic Dominants	Prevalence Index is ≤ 3.0	Problematic Hydrophytic Vegetation	Hydrophytic Vegetation Present?	Histosol or Histel (A1)	Histic Epipedon (A2)	Hydrogen Sulfide (A4)	Alaska Gleyed (A13)	Alaska Redox (A14)	Alaska Redox with 2.5Y Hue	Depleted Matrix (F3)	Hydric Soil Present?	Surface Water (A1)	High Water Table (A2)	Saturation (A3)	Sediment Deposits (B2)	Drift Deposits (B3)	Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)	Oxidized Rhizospheres	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	Geomorphic Position (D2)	Microtopographic Relief (D4)	Positive FAC-Neutral Test (D5)	Wetland Hydrology Present?	Is the Site in a Wetland?
002	U				N								Ν															N	Ν
004	U				N								Ν												Х			N	Ν
009	PSS1/EM1B	Х	Х		Υ	Х		Х					Υ		Χ	Х			Х						Х		Х	Υ	Υ
011	U				N								Ν												Х			Ν	Ζ
015	PSS1C	Χ	Х		Υ	Х							Υ	Χ	Χ	Х								Χ	Х		Χ	Υ	Υ
016	PEM1B	Χ	Х		Υ		Х						Υ		Χ	Х					Χ		Χ		Х		Χ	Υ	Υ
017	U	Χ			Υ								N		Χ	Х							Χ		Х			Υ	Ν
022	PSS1/EM1B	Χ			Υ					Χ			Υ			Χ									Х			Υ	Υ
023	U				N								N															N	Ν
028	PEM1B	Χ	Χ		Υ			Χ	Χ				Υ						Х			Χ	Χ		Χ		Χ	Υ	Υ
037	U				Ν								Ν									Χ						Ν	Ζ
040	PSS1C	Χ			Υ	Х		Χ					Υ	Χ	Χ	Χ	Χ		Χ		Χ			Χ	Χ			Υ	Υ
042	PSS1/4B	Χ	Χ		Υ						Χ		Υ			Χ						Χ					Χ	Υ	Υ
043a	PSS1/EM1B	Χ	Χ		Υ		Χ						Υ		Χ	Χ											Χ	Υ	Υ
045	PSS4/1B	Χ	Χ		Υ		Χ						Υ	Χ		Χ							Χ			Χ	Χ	Υ	Υ
054	U	Χ			Υ								Ν															N	Ν
500	U				N								Ν															N	Ν
501	PSS1C	Χ			Υ	Х		Х					Υ	Χ	Χ	Χ		Χ	Χ		Χ		Χ		Х			Υ	Υ
503	U	Χ			Υ								Ν												Х			Ν	N
504	PSS1/EM1B	Χ	Χ		Υ	Х							Υ		Χ	Χ												Υ	Υ
506	U				Ν								Ν															Ν	Ζ
508	PFO1/SS1C			Χ	Υ		Х						Υ		Χ	Х					Χ				Х			Υ	Υ
509	U				N								Z															Ν	Ν
513	PFO4/SS1B	Χ	Х		Υ	Х							Υ		Χ	Х					Χ					Х	Χ	Υ	Υ
514	U	Χ			Υ								Z															Ν	Ν
516	U				N								Z									Х			Х			Υ	Ν
520	PFO4/SS1C	Χ	Χ		Υ	Х							Υ	Х	Χ	Χ											Χ	Υ	Υ
522	PSS1B	Х			Υ		Х	Х					Υ		Х	Х			Х						Х	Х		Υ	Υ
528	PFO1/SS1C	Χ			Υ	Х							Υ		Χ	Х									Х		Χ	Υ	Υ



Appendix A: Summary of Wetland Indicators

			Vegetation Soil								y of Wetland Indicators Hydrology										l.								
			V	Jeta										Prima	arv I	ndic	ator	c	· · · y ·			dan	/ Ind	icato	ore			1	
															11111	ary i	Huic	alui	5		36	CON	uary	IIIu	lcall	ار			
		Hydrophytic Dominants is > 50%	Prevalence Index is ≤ 3.0	Problematic Hydrophytic Vegetation	Hydrophytic Vegetation Present?	Histosol or Histel (A1)	Histic Epipedon (A2)	Hydrogen Sulfide (A4)	Alaska Gleyed (A13)	Alaska Redox (A14)	Alaska Redox with 2.5Y Hue	Depleted Matrix (F3)	Hydric Soil Present?	Surface Water (A1)	High Water Table (A2)	Saturation (A3)	Sediment Deposits (B2)	Drift Deposits (B3)	Hydrogen Sulfide Odor (C1)	Water-Stained Leaves (B9)	Drainage Patterns (B10)	Oxidized Rhizospheres (C3)	Presence of Reduced Iron (C4)	Stunted or Stressed Plants (D1)	Geomorphic Position (D2)	Microtopographic Relief (D4)	Positive FAC-Neutral Test (D5)	Wetland Hydrology Present?	Is the Site in a Wetland?
Site 529	NWI Code ^a	エ	Ь	Д	I N	프	エ	Ŧ	٧	Α	A		НZ	S	Τ	S	S	О	I	×	О	O X	Ь	Ś	Э	2	Ъ	N	N Is
534	U				N								N		Х	Х						^		Х				Y	N
536	U				N								N		^	^								^				N	N
537	U				N					Х			Y		Х	Х					Χ	X			Х	Х		Y	N
547	PSS1/EM1B	Х			Y	Х		Χ		^			Y		X	X			Χ		X				Х	Х		Y	Y
550	U				N	<u> </u>							N															N	N
551	U				N							Х	Υ		Х	Χ												Υ	N
555	PFO1/SS1B	Х			Υ	Х						-	Y	Х	Х	Х				Х	Χ					Х		Y	Υ
556	U				N								N									Χ						N	N
561	U	Х			Υ								N									Х						N	N
570	U				N					Х			Υ	Х	Х	Х						Х	Х		Х			Υ	N
572	PFO4/SS1B	Х	Х		Υ		Х						Υ	Х	Х	Х												Υ	Υ
574	U				N								N			Х												Υ	N
577	U				N								N															N	N
579	PFO1/SS1B	Х			Υ							Х	Υ		Х	Х									Х			Υ	Υ
583	U	Х			Υ								N															N	Ν
584	PFO4/SS1B		Х		Υ							Х	Υ	Х	Х	Х							Х		Х	Х		Υ	
585	PFO4/SS3B	Х	Х		Υ					Х			Υ									Х			Х		Х	Υ	Υ
586	U	Х	Х		Υ								N														Х	N	N
587	PFO4/SS4C	Х	Х		Υ		Х						Υ	Х	Х	Х											Х	Υ	Υ
592	PSS4B	Х	Х		Υ	Х							Υ		Х	Х									Х		Х	Υ	Υ
593	PEM1/SS1B	Х			Υ		Х						Υ	Х	Х	Х									Х			Υ	Υ
594	U				N								Ν															Ν	Ν
595	U				N		Х						Υ		Х	Х									Х			Υ	Ν
596	U				N								N			Х												Υ	Ν
597	U				N								N		Х	Х						Х			Х			Υ	Ν
598	U	Х	Χ		Υ								Z															Ν	Ν

^a NWI: National Wetlands Inventory, Cowardin et al. 1979. See Table 4 for full descriptions.



Appendix A: Plant List

Species ^a	Abbreviation	Common Name	Indicator Status ^b		
Aconitum delphiniifolium	Aco del	Larkspur-Leaf Monkshood	FAC		
Alnus incana (Alnus tenuifolia)	Aln ten	Thinleaf alder	FAC		
Alnus viridis (Alnus crispa)	Aln cri	Mountain alter	FAC		
Alnus viridis (Alnus sinuata)	Aln sin	Sitka alder	FAC		
Andromeda polifolia	And pol	Bog rosemary	FACW		
Angelica genuflexa	Ang gen	Kneeling angelica	FACW		
Athyrium cyclosorum (Athyrium felix- femina)	Ath fel	Western lady fern	FAC		
Betula glandulosa	Bet gla	Resin birch	FAC		
Betula kenaica	Bet ken	Kenai birch	FACU		
Betula nana	Bet nan	Swamp birch	FAC		
Betula papyrifera	Bet pap	Paper birch	FACU		
Calamagrostis canadensis	Cal can	Bluejoint	FAC		
Carex aquatilis	Car aqu	Water sedge	OBL		
Carex disperma	Car disp	Soft-leaf sedge	FACW		
Carex laeviculmis	Car lae	Smooth-stem sedge	FACW		
Carex leptalea	Car lep	Bristly-stalk sedge	OBL		
Carex limosa	Car lim	Mud sedge	OBL		
Carex magelianica	Car mag	Boreal-bog sedge	OBL		
Carex microchaeta	Car mic	Alpine-tundra sedge	FAC		
Carex microglochin	Car microgl	Fewseeded bog sedge	OBL		
Carex media	Car med	Montana sedge	FACW		
Carex pauciflora	Car pau	Car pau Few-flower sedge			
Carex pluriflora	Car plu	Several-flower sedge	OBL		
Carex rotundata	Car rot	Pumpkin-fruit sedge	OBL		
Carex spectabilis	Car spe	Northwestern showy sedge	FACW		
Chamaedaphne calyculata	Cha cal	Leatherleaf	FACW		
Chamaenerion angustifolim	Cha ang	Narrow-leaf fireweed	FACU		
Comarum plaustre	Com pal	Purple marshlocks	OBL		
Cornus canadensis	Cor can	Canadian bunchberry	FACU		
Cornus suecica	Cor sue	Lapland cornel	FAC		
Dasiphora fruticose	Das fru	Golden-hardhack	FAC		
Delphinium glaucum	Del gla	Tower larkspur	FACW		
Dryopteris expansa	Dry exp, Dry dil	Spreading wood fern	FACU		
Empetrum nigrum	Emp nig	Black crowberry	FAC		
Equisetum arvense	Equ arv	Field horsetail	FAC		
Equisetum fluviatile	Equ flu	Water horsetail	OBL		
Equisetum pratense	Equ pra	Meadow horsetail	FACW		
Equisetum sylvaticum	Equ syl	Woodland horsetail	FAC		
Eriophorum scheuchzeri	Eri sch	White cotton-grass	OBL		
Galium triflorum	Gal triflor	Fragrant bedstraw	FAC		



Geranium erianthum	Ger eri	Woolly crane's-bill	FACU
Geocaulon lividum	Geo liv	False toadflax	FACU
Gymnocarpium dryopteris	Gym dry	Oak fern	FACU
Heracleum maximum (Heracleum lanatum)	Her max, Her lan	American cow-parsnip	FACU
Linnaea borealis	Lin bor	American twinflower	FACU
Lupinus nootkatensis	Lup noo	Nootka lupine	FACU
Lycopodium clavatum	Lyc cla	Running clubmoss	FACU
Menziesia feruginea	Men fer	Fool's huckleberry	FACU
Mertensia paniculata	Mer pan	Bluebells	FACU
Myrica gale	Myr gal	Sweetgale	OBL
Oplopanax horridus	Opl hor	Devil's-club	FACU
Orthilia secunda (Pyrola secunda)	Orth sec, Pyr sec	Sidebells	FACU
Picea glauca	Pic gla	White spruce	FACU
Picea mariana	Pic mar	Black spruce	FACW
Polemonium acutiflorum	Pol acu	Tall Jacob's-ladder	FAC
Populus balsamifera	Pop bal	Balsam poplar	FACU
Populus tremuloides	Pop tre	Quaking aspen	FACU
Pyrola asarifolia	Pyr asa	Pink wintergreen	FACU
Rhododendron groenlandicum	Rho gro	Rusty Labrador-tea	FAC
Rhododendron tomentosum	Rho tom	Marsh Labrador-tea	FACW
Ribes glandulosum	Rib gla	Skunk currant	FAC
Ribes hudsonianum	Rib hud	Northern black currant	FAC
Ribes triste	Rib tri	Red swamp currant	FAC
Rosa acicularis	Ros aci	Prickly rose	FACU
Rubus arcticus	Rub arc	Northern blackberry	FAC
Rubus chamaemorus	Rub cha	Cloudberry	FACW
Rubus idaeus	Rub ida	Common red raspberry	FACU
Rubus pedatus	Rub ped	Strawberry-leaf raspberry	FAC
Salix bebbiana	Sal beb	Bebb willow	FAC
Salix barclayi	Sal bar	Barclay's willow	FAC
Salix hastata	Sal has	Halberd willow	FAC
Salix pulchra	Sal pul	Diamond-leaf willow	FACW
Salix reticulata	Sal ret	Net-vein willow	FAC
Salix richardsonii	Sal rich	Richardson's willow	FACW
Salix scouleriana	Sal sco	Scouler's willow	FAC
Sambucus racemosa	Sam rac	Red elder	FACU
Sanguisorba canadensis	San can	Canadian burnet	FACW
Shepherdia canadensis	She can	Russet buffalo-berry	FACU
Sorbus scopulina	Sor sco	Cascade mountain-ash	FACU
Sorbus sitchensis	Sor sit	Sitka mountain-ash	FACU
Spinulum annotinum (Lycopodium annotinum)	Lyc ann	Interrupted club-moss	FACU
Spiraea stevenii	Spi ste	Steven's meadowsweet	FACU

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Streptopus amplexifolius	Str amp	Clasping twistedstalk	FACU
Swertia perennis	Swe per	Felwort	FACW
Thalictrum sparsiflorum	Tha spa	Few-flower meadow-rue	FACU
Thalictrum sp.	Tha sp.	Unidentified meadow-rue	-
Trientalis europaea	Tri eur	Arctic starflower	FACU
Urtica dioica	Urt dio	Stinging nettle	FACU
Vaccinium alaskaense	Vac ala	Alaska blueberry	FAC
Vaccinium ovalifolium	Vac ova	Oval leaved blueberry	FAC
Vaccinium oxycoccus	Vac oxy	Small cranberry	OBL
Vaccinium uliginosum	Vac uli	Bog blueberry	FAC
Vaccinium vitis-idaea	Vac vit	Northern mountain-cranberry	FAC
Veratrum viride	Ver vir	American false hellebore	FAC
Viburnum edule	Vib edu	Squashberry	FACU
Viola palustris (Viola epipsila)	Vio epi	Alpine-marsh violet	FACW
Viola sp.	Vio sp.	Unidentified violet	-

^a Species names in parentheses are synonyms recorded on the field forms.

b Wetland Indicator Status (USACE 2018a). FAC (Facultative): species equally likely to occur in wetlands and non-wetlands; FACU (Facultative Upland): species usually occurs in non-wetlands; FACW (Facultative Wetland): species usually occurs in wetlands; OBL (Obligate): species almost always occurs under natural conditions in wetlands.

WETLAND DETERMINATION DATA FORM - Alaska Region

Project: West Sy Access Borough/C										
Applicant/Owner: AINEA	Sampling Point #: 002									
Investigator(s): A-GRYUK, B-MERINGAC/ Lat. (dec.°) (41.981597 Long. 152.584338 ± N	Firm: HDR Alaska, Inc. AD 83 Recorded on GPS #: Marked on map? Field Map #:									
Subregion (circle one): SE Southcentral Western Aleutian Interior										
Local relief: Shape across slope: (inear/ convex / concave Shape up/de										
Photo nos /descriptions: Soil, NESW	Camera #: Pad Veg Type (Viereck Level 4 or other):									
Are climatic / hydrologic conditions on the site typical for this time of year?										
Are Vegetation N, Soil N, or Hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes No										
Are Vegetation N, Soil N, or Hydrology N naturally problematic?										
SUMMARY OF FINDINGS										
Hydrophytic Vegetation Present? Yes No										
Hydric Soil Present? Yes No	Is the sampled area within a wetland? Yes No									
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):									
VEGETATION (Use scientific names.) Estimate absolute % cover (not re										
	Dominance Test worksheet:									
Tree Stratum (dbh≥ 3")	V Dane Lat Municipal Contract Constant									
Species Cov.% Dom? Ind. Species Cov.%	% Dom? Ind. Number of Dominant Species That are OBL, FACW, or FAC:(A)									
2. Dic ala TO Y PACU 6.	Total Number of Dominant									
3. 7.	Species Across All Strata: (B)									
4 8										
Total Tree Cover: 40	Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)									
10	O Prevalence Index worksheets									
50% of total cover: 20% of total cover: Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:									
	9/ Dom2 Ind									
1. Vibedy 50 4 FACU 7. Salembas 3	OBL species X1=									
2. lab idl 5. FAW 8. Sor 340 T	FACW species X2= 80									
3. Shep con 3 FACU 9.	FAC species									
4. Car con 2 _ *AW 10	FACU species X4=_X4=									
5. Seo by T FACU 11.	UPL + NL species X5=									
6. Km aci 3 PAW 12.	Column Totals: 159 (A) 549 (B)									
Total Sapling/Shrub Cover: 66										
50% of total cover: 23 20% of total cover	: 13.2 Prevalence Index = B/A = 3.45									
Herb Stratum										
Abs. Cov. Dom? Ind. Abs. Cov.	% Dom? Ind.									
1. Equara 40 y PA(W 12.	Hydrophytic Vegetation Indicators:									
2. (hh My 5 PAW 13. FAW 14.	N_Dominance Test is>50%									
4. Pyr asa 3 RW15.	Prevalence Index is ≤3.0									
5. Car Can 5 EAC 16.	Morphological Adaptations¹ (Provide supporting									
6. Strang T PACU17.										
7 18	Problematic Hydrophytic Vegetation¹ (Explain)									
8 19										
9	- Indicates about 1 in the state of the stat									
10 21 21 22.	1 Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.									
10 -										
50% of total cover: 17.5 20% of total cover	Vegetation Ves No V									
Circular 1/10-ac plot ✓ or other plot dimension: % of ba	are ground: U present?									
% Cover of Wetland Bryophytes% Total Cover of Bryop (where applicable)	nytes _v%									
Pomorks:										
2% beetle killed Picgla										
Y										

IL .								Sampling Point #: 60
ofile Description: (Describe to t	he depth neede	d to document the	indicator	or confirm	the abs	ence of indica	tors)	
epth Horizon Soil N	oth Horizon <u>Soil Matrix</u> <u>Redox Features</u>						α,α dip.	
in.) (opt.) Color (mois	<u>%</u>	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/ neg)	Remarks_ (or use comment number
2-3 0 104RZ	12 100		_				11441	
		54R4/6	25	C	m	SiL		
9 A 104R 51		104R3/4	20	C	M	Lasa		
13 BZ 104R3/6		14 14 14 14				Sand	1 2 3	
714 Eb 254413	100					SOLG	125 7	
1-20 C 104R4/6	100				1-8-0	vergravell	Source	
					9			
ype: C = Concentration, D = Dep	letion RM = Re	duced Matrix CS=	Cnated	Sand Grain	—— ns ² l ocat	ion: Pl = Por	—— e Lining BC	= Root Channel M = Ma
ydric Soil Indicators (check one				*****				= 1100t Onamio, in = 10t
andard Indicators:	з пагарру, по	Indicators f					-,.	
Histosol or Histel (A1)		Alaska					One indicator	of hydrophytic vegetation
		7				Of	ne primary in	dicator of wetland
Histic Epipedon (A2) (8-16" or undertain by mineral soil with	ganics, sat'd, chroma ≤2\	Alaska	Alpine S	Swales (TA	(5)			l an appropriate landscap be present unless disturb
Black Histic (A3)		Alaska	Redox v	vith 2.5Y H	lue		r problematic	
Hydrogen Sulfide (A4) (within	12"of minoral	Alaeka	Gleved	without Hu	e 5V or I	40		f color change in Remar
surface; @* in this pit	12 OI THINETAL		erlying L		.5 01 01 1	.50051		
Thick Dark Surface (A12)		l Other	e.g., see	p.91 of 2007				
Alaska Gleyed (A13)		Supp	lement: ex	colain in Rei	marksì			
Alaska Redox (A14)								
Alaska Gleyed Pores (A15)								
		Drainage Cl		U.D			301	
Type:		Soil Map Un			н	ydric Soil Pre	esent?	Yes No
Depth (inches) omments:					н	ydric Soil Pre	esent?	Yes No
Type: Depth (inches) CDROLOGY Vetland Hydrology Indicators (chrimary Indicators (any one indicators) Very High Water Table (A2) (w/in 12) Vetland Hydrology Indicators (chrimary Indicators) Very High Water Table (A2) (w/in 12) Very Water Marks (B1) Very Sediment Deposits (B2) Very Drift Deposits (B3)	ator is sufficient Su Su Ini Sp Ma N Hy Dry	Soil Map Un	m soil s B6) Aerial Im Concave s	urface): nagery (B7 Surface (B	Sec	Condary Indicate Water-Stain Drainage Pa Oxid'd Rhizo Presence of (pos. q, q o Salt Deposit Stunted or S Geomorphic	ators (at leased Leaves (B10) aspheres on la Reduced Iron roll color of s (C5) atressed Planer Position (D2) attard (D3)	t 2 are required) 19) Living Roots (C3) (within on (C4) thange w/in 12") ats (D1)
Type: Depth (inches) Omments: DROLOGY Vetland Hydrology Indicators (chimary Indicators (any one indicators) Yether Water (A1) High Water Table (A2) (w/in 12) Very Saturation (A3) (w/in 12")	ator is sufficient Su Su Ini Sp Ma N Hy Dry	Soil Map Un apply, measure fro frace Soil Cracks (I andation Visible on arsely Vegetated C arl Deposits (B15) drogen Sulfide Odd y-Season Water Ta	m soil s B6) Aerial Im Concave s	urface): nagery (B7 Surface (B	Sec. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) aspheres on In Reduced Iron (C5) at ressed Plant (Position (D2) an perch H20 aphic Relief (I Test (D5)	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") 2) 2) w/in 12") (D4) (caused by water)
Type: Depth (inches) Omments: DROLOGY Tetland Hydrology Indicators (chrimary Indicators (any one indicators) High Water Table (A2) (w/in 12) Water Marks (B1) V Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ator is sufficient Su Su I') Su N Su	Soil Map Un apply, measure fro frace Soil Cracks (I andation Visible on arsely Vegetated C arl Deposits (B15) drogen Sulfide Odd y-Season Water Ta	m soil s B6) Aerial Im Concave s	urface): nagery (B7 Surface (B	Sec. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) aspheres on In Reduced Iron (C5) at ressed Plant (Position (D2) an perch H20 aphic Relief (I Test (D5)	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") ats (D1) 2) D w/in 12")
Type: Depth (inches) Omments: Too Dry for a a DROLOGY Vetland Hydrology Indicators (chimary Indicators (any one indicators Variace Water (A1) V High Water Table (A2) (w/in 12") V Water Marks (B1) V Sediment Deposits (B2) V Drift Deposits (B3) V Algal Mat or Crust (B4) Iron Deposits (B5)	ator is sufficient Su Su Inc Sp Na	Soil Map Un apply, measure fro frace Soil Cracks (I andation Visible on arsely Vegetated Corl ar Deposits (B15) drogen Sulfide Odd y-Season Water Ta	m soil s B6) Aerial Im Concave :	urface): nagery (B7 Surface (B	Sec. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) aspheres on In Reduced Iron (C5) at ressed Plant (Position (D2) an perch H20 aphic Relief (I Test (D5)	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") 2) 2) w/in 12") (D4) (caused by water)
Depth (inches) Depth (inches) DROLOGY Petland Hydrology Indicators (chrimary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Jeld Observations (in. from ground urface Water Present?	ator is sufficient Su Su In Sp Ma N Hy Dn Ott I surface):	Soil Map Un apply, measure fro frace Soil Cracks (I arracely Vegetated Court Deposits (B15) drogen Sulfide Odo y-Season Water Ta her (explain)	m soil s B6) Aerial Im Concave :	urface): nagery (B7 Surface (B	Sec. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) aspheres on In Reduced Iron (C5) atressed Plant (Position (D2) at perch H20 aphic Relief (I Test (D5)	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") 2) 2) w/in 12") (D4) (caused by water)
Type: Depth (inches) Omments: DROLOGY Tetland Hydrology Indicators (chrimary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) ield Observations (in. from ground urface Water Present? Yes	ator is sufficient L Su Su Su No No No No No No No No No N	Soil Map Un apply, measure fro frace Soil Cracks (I indation Visible on arsely Vegetated Co ind Deposits (B15) drogen Sulfide Odd y-Season Water Ta her (explain) Depth of wa Depth to wa	m soil s B6) Aerial Im Concave s or (C1) able (C2)	urface): nagery (B7 Surface (B	Sec. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) aspheres on In Reduced Iron (C5) atressed Plant (Position (D2) at perch H20 aphic Relief (I Test (D5)	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") 2) 2) w/in 12") (D4) (caused by water)
Type: Depth (inches) Omments: The Cry for a a DROLOGY Vetland Hydrology Indicators (chrimary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) ield Observations (in. from ground urface Water Present? Yes	ator is sufficient Sufficient	Soil Map Un Soil Map Un Soil Map Un Apply, measure fro Inface Soil Cracks (I Inface So	m soil s B6) Aerial Im Concave : or (C1) ater (in.) ater (in.)	urface): nagery (B7 Surface (B	Ser. A.	Condary Indicate Water-Stain Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Stail Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogn FAC Neutral (# OBL+FAI	ators (at leased Leaves (B10) pepheres on la Reduced Iron soil color of s (C5) atressed Plant Position (D3) an perch H20 aphic Relief (I Test (D5) CW dominants	t 2 are required) (19) Living Roots (C3) (within in (C4) hange w/in 12") (1sts (D1) (2) (2) (3) (4) (5) (5) (6) (7) (7) (7) (8) (8) (9) (9) (1) (1) (1) (1) (2) (3) (4) (5) (5) (6) (7) (7) (7) (8) (8) (9) (9) (1) (1) (1) (1) (1) (2) (3) (4) (5) (6) (7) (7) (7) (8) (9) (9) (1) (1) (1) (1) (2) (2) (3) (4) (4) (5) (6) (7) (7) (7) (8) (9) (9) (9) (1) (1) (1) (1) (1
Type: Depth (inches) Omments: DROLOGY Tetland Hydrology Indicators (chrimary Indicators (any one indicators) High Water Table (A2) (w/in 12) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Jeld Observations (in. from ground urface Water Present? Ves	ator is sufficient L Su Su Su No No No No No No No No No N	Soil Map Un apply, measure fro frace Soil Cracks (I andation Visible on arsely Vegetated Co ar Deposits (B15) drogen Sulfide Odd y-Season Water Ta her (explain) Depth of wa Depth to wa hat depth but not yo Depth to sa	m soil s B6) Aerial Im Concave : or (C1) ater (in.) ater (in.) at filled?:	urface): nagery (B7 Surface (B	Ser. A.	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral	ators (at leased Leaves (B10) pepheres on la Reduced Iron soil color of s (C5) atressed Plant Position (D3) an perch H20 aphic Relief (I Test (D5) CW dominants	t 2 are required) 19) Living Roots (C3) (within on (C4) hange w/in 12") 2) O w/in 12") (D4) (caused by water) > # FACU+UPL dominant
Type: Depth (inches) Omments: DROLOGY Vetland Hydrology Indicators (chrimary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Velded Observations (in. from ground urface Water Present? Ves Vater Table Present? Yes Acturation Present? Yes Includes capillary fringe)	ator is sufficient Sufficient	Soil Map University of Map University Programmer (Soil Cracks (Indation Visible on arsely Vegetated Court Deposits (B15) drogen Sulfide Oddy-Season Water Tainer (explain) Depth of was been depth but not you be to sail Endo	m soil s B6) Aerial Im Concave : or (C1) ble (C2) ater (in.) ater (in.) Unknown	urface): hagery (B7 Surface (B	See	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhize Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral (# OBL+FAI	ators (at leased Leaves (B10) pepheres on la Reduced Iron soil color of s (C5) atressed Plant Position (D3) an perch H20 aphic Relief (I Test (D5) CW dominants	t 2 are required) 19) Living Roots (C3) (within in (C4) hange w/in 12") 2) 2) 3) w/in 12") (D4) (caused by water) 3) * FACU+UPL dominants
Depth (inches) Depth (inches) Depth (inches) DROLOGY etland Hydrology Indicators (chimary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) eld Observations (in. from ground urface Water Present? Yes aturation Present? Yes includes capillary fringe)	ator is sufficient Sufficient	Soil Map University of Map University Programmer (Soil Cracks (Indation Visible on arsely Vegetated Court Deposits (B15) drogen Sulfide Oddy-Season Water Tainer (explain) Depth of was been depth but not you be to sail Endo	m soil s B6) Aerial Im Concave : or (C1) ble (C2) ater (in.) ater (in.) Unknown	urface): hagery (B7 Surface (B	See	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhize Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral (# OBL+FAI	ators (at leased Leaves (B10) pepheres on la Reduced Iron soil color of s (C5) atressed Plant Position (D3) an perch H20 aphic Relief (I Test (D5) CW dominants	t 2 are required) 19) Living Roots (C3) (within in (C4) hange w/in 12") 2) 2) 3) w/in 12") (D4) (caused by water) 3) * FACU+UPL dominants
Type: Depth (inches) Omments: DROLOGY Tetland Hydrology Indicators (chrimary Indicators (any one indicators) High Water Table (A2) (w/in 12) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Jeld Observations (in. from ground urface Water Present? Ves	ator is sufficient Sufficient	Soil Map University of Map University Programmer (Soil Cracks (Indation Visible on arsely Vegetated Court Deposits (B15) drogen Sulfide Oddy-Season Water Tainer (explain) Depth of was been depth but not you be to sail Endo	m soil s B6) Aerial Im Concave : or (C1) ble (C2) ater (in.) ater (in.) Unknown	urface): hagery (B7 Surface (B	See	Condary Indicate Water-Stains Drainage Pa Oxid'd Rhize Presence of (pos. q, q of Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral (# OBL+FAI	ators (at leased Leaves (B10) pepheres on la Reduced Iron soil color of s (C5) atressed Plant Position (D3) an perch H20 aphic Relief (I Test (D5) CW dominants	t 2 are required) 19) Living Roots (C3) (within in (C4) hange w/in 12") 2) 2) 3) w/in 12") (D4) (caused by water) 3) * FACU+UPL dominants

WETLAND DETERMINATION DATA FORM -	Alaska Region
Project: West SU Accest Borough/City: MSB	Date: 9/5/2020
Applicant/Owner: ATI DSA	
O GOLLAN D AND I	DR Alaska, Jr.C.
Lat. (dec.°) [4] 981239 Long. 152.594053 ± NAD 83 Recorded on	n GPS #: Marked on map? Field Map #:
	m: Swall Slope (%): 3 Aspect: E
Local relief: Shape across slope: linear / convex /concave Shape up/downslope: dinear convex /concave Shape up/	onvex / concave NWI classification:
	Veg Type (Viereck Level 4 or other): TA3c
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No:	If no, explain. HGM type: W/A
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circu	mstances" present? Yes V No
Are Vegetation M, Soil M, or Hydrology M naturally problematic? If needed, explain	answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No is the sampled are	
Hydric Soil Present? Yes No within a wetland?	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % car	
Tree Stratum (dbh≥ 3")	Dominance Test worksheet:
Species, Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
1. Pop bal 9 1 FAW 5.	That are OBL, FACW, or FAC:
2.110 you 15 1 PAU 6	Total Number of Dominant
4. 8.	Species Across All Strata: (B)
Total Tree Cover:	Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)
10	That are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
50% of total cover:	
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	Total % Cover of: Multiply by:
1. Vib alv 15 4 FACU 7	OBL species X1=
2. AM CO 5 FAC 8	FACW species X2=
3. Fr bes 80. 7 9.	FAC species 23 X3= 2149
4. Shep (an 3 FAW 10 FAW) 11	FACU species 6 \ X4= \ ZH4
6. Sal Nis T FIC 12	UPL + NL species X5=
Total Sapling/Shrub Cover: 36	Column Totals: 149 (A) 493 (B)
10	Prevalence Index = B/A = 3 45
50% of total cover:1020% of total cover:Herb Stratum	Prevalence Index = B/A = 3 H L
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. EAU ON 15 4 FAC 12.	Hydrophytic Vegetation Indicators:
2. Cha on T PACU13.	
3. Str and T PACULA.	
5. Del glat T FALW 16.	
6. Calcon 3. FAC 17.	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7. CMC PM 10 FACU 18	
8	Problematic Hydrophytic Vegetation¹ (Explain)
9	
10	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
Total Herb Cover: 98	, Production
144	Hadron bods
2578 Of total cover.	Hydrophytic Vegetation Yes No
Circular 1/10-ac plot or other plot dimension: 30160 % of bare ground: 5 % Cover of Wetland Bryophytes 6 % Total Cover of Bryophytes 6 %	Present?
(where applicable)	
Remarks: Stading plead beatle leveled Sprice needle	a
Stording clear beetle krited some was	red to swall

OIL							100			Sampling Point #: 004
Profile C	escription:	(Describe to the de	oth needed	to document the i	ndicator	r or confirm	the abse	nce of indic	cators)	
Depth Horizon Soil Matrix Redox Features							a,a dip),		
(in.)	(opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	(pos/	
0.4	Ae.	10422/1	3				No.		neg)	(or use comment number)
7-15	A	10412	70	2.54 6/1	15	D	M	Lann	1 _	
	_/	1-11-11-		7544414	15	C.	m			1 triburrel Oa 104K
15-21	Ba	254612	75	7.841410	75		m	Losa		2 10 1111000101
TA E	-124	-0.01016	10	41091-114	-				100	
						_	-	131		
_	_							1000		View York
-		-1								
1=						Cond Code		DI D		C - Deat Channel M - Matrix
										RC = Root Channel, M = Matrix
		ors (check ones that	apply, mea						ed):	
	d Indicators			Indicators fo					3One indicat	tor of hydrophytic vegetation,
_N His	stosol or His	tel (A1)		Alaska	Color C	hange* (T/	14)			indicator of wetland
His		n (A2) (8-16" organics		Alaska	Alpine S	Swales (TA	5)		hydrology, a	and an appropriate landscape
Die	_	mineral soil with chroma	1 52)	Alaska	Redox v	with 2.5Y H	lue		or problema	st be present unless disturbed
	ack Histic (A									s of color change in Remarks.
Hy	drogen Sulti rface: @	ide (A4) (within 12"of	minera!		erlying L	without Hu	16 21 01 1	readel		
	ick Dark Su			Other (e	e.g., see	p.91 of 2007				
	aska Gleyed			Supple	ement; e:	xolain in Rei	marks)			
	aska Redox									
		Pores (A15)		Designan Cla		Auto				
	ve Layer (if	present)		Drainage Cla		WD		dric Soil P	lennant?	Yes No
Type:		7	_	Soil Map Uni	t Name;		l ny	aric Soil P	resentr	res No
Depth									_	Visco in the second
1. †90 2. 3. HYDROI	LOGY FOI	aa		7		*				and the second
		/ Indicators (check o	nes that ap	ply, measure from	m soil s	surface):	Sec	ondary Ind	icators (at le	ast 2 are required)
	P.S. of School	(any one indicator is					N	Water-Sta	ined Leaves	(B9)
N Sur	face Water ((A1)	✓ Surf	ace Soil Cracks (E	36)			Drainage I	Patterns (B1	0)
		le (A2) (w/in 12")	1	ndation Visible on A		nagery (B7) 1	Oxid'd Rhi	izospheres c	on Living Roots (C3) (within 12")
Sat	uration (A3)	(w/in 12")	Spa	rsely Vegetated Co	oncave	Surface (B	8)		of Reduced	
	ter Marks (B			Deposits (B15)				(pos. a,a Salt Depo:		r change w/in 12")
	liment Depo			rogen Sulfide Odo	r (C1)				Stressed P	lants (D1)
	t Deposits (I			Season Water Tai					nic Position (
			1		J.O (4-)				guitard (D3)	
→ Alg	al Mat or Cn	ust (B4)	Oth	er (explain)				, (w/in 24",	can perch I	120 w/in 12")
_V Iron	n Deposits (6	35)								ef (D4) (caused by water)
							Δ	FAC Neut	ral Test (D5)) nts > # FACU+UPL dominants)
Field O	neen/stione	(in. from ground surfa	ice).					(# OBLTI	ACTY GOTTIETA	IIIS > # FACOTOR L GOMMENTS)
	Water Pres			Depth of war	ter (in.)					
	able Preser		No 1							
***	anie i lesei									
0-4				ardepth but not ye			307-		alamı Brazi	ent? Yes No √
	on Present?		No _V	200 mm			we	idano nyur	ology Pres	entr res No_t_
•	s capillary for	ringe) Data (stream gauge	monitoring	Epi Endo			tions) if a	vailable:		
Describ		Date (Streeth gauge	omomig	, want dental prioto:	of broad	mopou	,, 11 0	· · corrector (to)		ASSESSED AND ADDRESSED
Remark	(S: 1, /)	Λ .		hi	A.	1.1			
24 9	wall.	lots of squir	u actor	vity near p	b -	mough	arang pi	momi		
		7				V				

WETLAND DETERMINATION DATA	FORM – Alaska Region
Project: West an Access Borough/City:	MSB Date: 9/15/20
Applicant/Owner: ATDEA	Sampling Point #: OS9
Investigator(s): A. GRUK, B. Mishland	Firm: HDR Alaska, Inc.
Lat. (dec.°) 41.986747 Long. 152, 474547 ± NAD 83 Re	ecorded on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern	
Local relief: Shape across slope: linear / convex / concave Shape up/downslope:	accii 2
	ra #: Pad Veg Type (Viereck Level 4 or other): IFC2d
Are climatic / hydrologic conditions on the site typical for this time of year? Yes:	
Are Vegetation $\underline{\mathcal{N}}$, Soil $\underline{\mathcal{N}}$, or Hydrology $\underline{\mathcal{N}}$ significantly disturbed? Are "Nor	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed	explain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes V No	
Hydric Soil Present? Yes ✓ No within a	npled area wetland? Yes / No
Wetland Hydrology Present? Yes V	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cov	
	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom?	Ind. Number of Dominant Species 3
1. Species Cov. % Doin'r ind. Species Cov. % Doin'r	That are OBL, FACW, or FAC:
26	Total Number of Dominant
3 7	Species Across All Strata: 3 (B)
4	— Devent of Developed Consider
Total Tree Cover:	Percent of Dominant Species That are OBL, FACW, or FAC: (A/B)
50% of total cover: 20% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom?	Ind. OBL species 31 X1= 31
1. Fet nag 60 4 FAC 7.	FACW species 3 X2=
2 My gal 10 015L 8.	FAC species 107 x3= 321
3. ATTA VAL 2 4 10.	FACU species X4=
5. VOC OH	UPL + NL species X5=
6. DK m 3 PM 12.	Column Totals: 141 (A) 358 (B)
Total Sapling/Shrub Cover: 79	
50% of total cover: 39.5 20% of total cover: 15.8	Prevalence Index = B/A = 2.53
Herb Stratum	Trevalence made = b/A =
Abs.Cov,% Dom? Ind. Abs.Cov,% Dom?	Ind.
1. Car microchargo y Par 12.	Hydrophytic Vegetation Indicators:
2 Car lep 20 4 68L 13.	
3. Calcar 7 PAC 14.	Dominance Test is>50% Prevalence Index is ≤3.0
4 for not T OBL 15	
6. Rub arc. T FAC 17.	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
718	
819	Problematic Hydrophytic Vegetation¹ (Explain)
9 20	
10	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
11	be present unless disturbed of problematic.
Total Herb Cover:	
50% of total cover: 31 20% of total cover: 12.1	Vegetation Veg
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Procent?
% Cover of Wetland Bryophytes% Total Cover of Bryophytes	0_%
Remarks:	

							Sampling Point #: 009
rofile Description: (Describe to the c	lepth needed to	o document the in	dicator or confirm	the absence	e of indicato	ors)	
Depth Horizon Soil Matri	x	Redo	ox Features			a,a dip.	
(in.) (opt.) Color (moist) 0-2 0i 104/2 2/2	<u>%</u>	Color (moist)	% Type¹	Loc2	_Texture_	(pos/ neg)	Remarks (or use comment number
1-10 De 1042313							
L. C. Territo					1 1 1/34		
			_		11 15 35	10.11	
	7				r AU		
					W -		
ydric Soil Indicators (check ones th							= Root Channel, M = Mai
tandard Indicators:	at apply, meas		Problematic Hy			•	
Histosol or Histel (A1)		A /	olor Change ⁴ (TA		3OI		of hydrophytic vegetation
Histic Epipedon (A2) (8-16" organi	cs, sat'd,		Ipine Swales (TA				licator of wetland an appropriate landscap
undertain by mineral soil with chro Black Histic (A3)	ma ≤2)		edox with 2.5Y H		pos		e present unless disturbi
Hydrogen Sulfide (A4) (within 12"	of mineral	Alaska G	leyed without Hu	e 5Y or Red	40		color change in Remark
surface; in this pit			lying Layer g., see p.91 of 2007				
Thick Dark Surface (A12) Alaska Gleyed (A13)			nent: explain in Ren				
Alaska Redox (A14)							
Alaska Gleyed Pores (A15)							
lestrictive Layer (if present)		Drainage Clas	s: VPD				/
			o. 1) []				
Type:		Soil Map Unit		Hydi	ic Soil Pres	ent?	Yes No
Type: Depth (Inches) Comments:				Hydi	ic Soil Pres	sent?	Yes No
Depth (Inches) Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (checkerimary Indicators (any one indicator Modern Mode	is sufficient) N Surface N Inund N Spars Mari E Hydro N Dry-S N Other	Soil Map Unit	soil surface): i) arial Imagery (B7) ncave Surface (B8)	Second N W N D D D P S S S S S S S S S S S S S S S S	ndary Indicated Acter-Stained Pate Pate Pate Pate Pate Pate Pate Pate	ors (at least d Leaves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plant Position (D2) and (D3) perch H2C phic Relief (IFest (D5)	2 are required) 3) Iving Roots (C3) (within 13 or (C4) Iange w/in 12") Is (D1)
Depth (Inches) Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (checkerimary Indicators (any one indicator of the first of th	is sufficient) N Surface N Inund N Spars N Marl I Hydro N Dry-S N Other	soil Map Unit I iy, measure from the Soil Cracks (B6 ation Visible on Ac ely Vegetated Cor Deposits (B15) gen Sulfide Odor eason Water Tabl (explain) Depth of water Depth to water Depth but not yet Depth to sat.	soil surface): i) erial Imagery (B7) ncave Surface (B6) (C1) e (C2) or (in.) ir (in.)	Secondary Management of the se	ndary Indicated Acter-Stained Pate Pate Pate Pate Pate Pate Pate Pate	ors (at least d Leaves (Bi erns (B10) epheres on L Reduced Iror soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2C phic Relief (I) Fest (D5) W dominants	2 are required) 2) Living Roots (C3) (within 1 or (C4) Lange w/in 12") S (D1) W/in 12") W/in 12") O4) (caused by water) * # FACU+UPL dominants
Depth (Inches) Comments: 1. 2. 3. YDROLOGY Wetland Hydrology Indicators (checkerimary Indicators (any one indicator) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Nound Deposits (B2) In Deposits (B3) In In Deposits (B4) In In Deposits (B5) Field Observations (in. from ground surface Water Present? Water Table Present? Yes Set Saturation Present? Yes	is sufficient) N Surface N Inund N Spars N Marl I Hydro N Dry-S N Other rface): No eping in at that No	iy, measure from the Soil Cracks (B6 ation Visible on Ac ely Vegetated Cor Deposits (B15) gen Sulfide Odor eason Water Tabl (explain) Depth of wate Depth to wate depth but not yet Depth to sat. Epi Endo	soil surface): i) erial Imagery (B7) ncave Surface (B8 (C1) e (C2) or (in.) filled?: (in.) Unknown	Secondary Wetland	ndary Indicater Atter-Stained rainage Patron Researce of Fos. a.a. or alt Deposits tunted or Statement of Sta	ors (at least d Leaves (Bi erns (B10) epheres on L Reduced Iror soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2C phic Relief (I) Fest (D5) W dominants	2 are required) 2) Living Roots (C3) (within 1 or (C4) Lange w/in 12") S (D1) W/in 12") W/in 12") A (Caused by water) * # FACU+UPL dominants
Depth (Inches) Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (checkerimary Indicators (any one indicator High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Water Marks (B1) Norift Deposits (B2) Norift Deposits (B3) Norift Deposits (B3) Norift Deposits (B5) Field Observations (in. from ground surface Water Present? Water Table Present? Yes Set Saturation Present? Yes (includes capillary fringe)	is sufficient) N Surface N Inund N Spars N Marl I Hydro N Dry-S N Other rface): No eping in at that No	iy, measure from the Soil Cracks (B6 ation Visible on Ac ely Vegetated Cor Deposits (B15) gen Sulfide Odor eason Water Tabl (explain) Depth of wate Depth to wate depth but not yet Depth to sat. Epi Endo	soil surface): i) erial Imagery (B7) ncave Surface (B8 (C1) e (C2) or (in.) filled?: (in.) Unknown	Secondary Wetland	ndary Indicater Atter-Stained rainage Patron Researce of Foos. a,a or alt Deposits tunted or Statement of Sta	ors (at least d Leaves (Bi erns (B10) epheres on L Reduced Iror soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2C phic Relief (I) Fest (D5) W dominants	2 are required) 2) Living Roots (C3) (within 1 or (C4) Lange w/in 12") S (D1) W/in 12") W/in 12") V # FACU+UPL dominants

WETLAND DETERMINATION DATA FORM -	
Project: West Sy Access Borough/City: M8B	Date: 9/15/2020
Applicant/Owner: AT DEAT	Sampling Point #:
Investigator(s): A Gerek 8 Moorherd Firm: HE	
Lat. (dec.°) 61. 986939 Long. 152. 426842 ± NAD 83 Recorded on	
Subregion (circle one): SE Southcentra) Western Aleutian Interior Northern Landform	m: +olstage Slope (%): Aspect:
Local relief: Shape across slope linear convex / concave Shape up/downslope: dnaar/ co	
	Veg Type (Viereck Level 4 or other):
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: V No:	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circur	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain a	inswers here.
SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes No	
Is the sampled area	
Hydric Soil Present? Yes No within a wetland? Wetland Hydrology Present? Yes No	Yes No V Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can	total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. BC+ DAQ 1 Y FAW 6.	Total Number of Dominant
3. V Call 5 15 7	Species Across All Strata: (B)
4 8	Percent of Dominant Species 7 7
Total Tree Cover:	That are OBL, FACW, or FAC: 50 (A/B)
50% of total cover: 20% of total cover: 1,4	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	OBL species X1=
2. Hn Uni 2 FAC 8. Ve vit 2 FAC	FACW species 3 X2=6
3. Sall bor 15 4 FAC 9.	FAC species <u>U3</u> X3= <u>189</u>
4. Bet 10 PAC 10. Ges LV T FACV	FACU species
5. YEC WI 7 PAC 11. Bet pag 5 PAW	UPL + NL species X5=
6. Lin bor 2	Column Totals: 170 (A) 411 (B)
Total Sapling/Shrub Cover:	2 112
50% of total cover: 20% of total cover: 12.8	Prevalence Index = B/A = 3.43
Herb Stratum Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	
Abs.Cov.% Dom? Ind. 1. Col con 10 Y PAC 12.	
2. Pha ang & y PACU 13.	Hydrophytic Vegetation Indicators:
3. Equan 7 FAC 14.	N Dominance Test is>50% N Prevalence Index is ≤3.0
4. Grain Org 7 FACU 15.	A7 Prevalence index is \$3.0
5. Str can 3 FACU 16	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7. Dyr asu T PACU18.	
8. Km sld I F/C 19	Problematic Hydrophytic Vegetation¹ (Explain)
9. Lup host I PAU20.	
10. Pub pa 7 FAC 21	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
11. (a) FAW 22. Total Herb Cover: 49	, some series of presentation
445	Mudranhudia
4010 1012 40121	Hydrophytic Vegetation Yes No V
Circular 1/10-ac plot or other plot dimension: 15 a 20 % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes %	Present?
(where applicable)	
plot is at toeslope below ridge but ~3 in elev. a	Sove adjacent wetto. I
hay sould remain thinks hay a const.	ordinate worthing.

		o document the i	indicator or c	onfirm th	e absen	ce of indica	tors)	Sampling Point #: 01
Soil Matrix		A	dox Features				a,a dip.	
Color (moist)		Color_(moist)			Loc2	Texture	(pos/	Remarks
10482/1		THE COLUMN	- 5	14		200 e	<u>neg)</u>	(or use comment numbe
	160		100			SAL		-
			_		_	0 1	- parting	_
					_		No.	
		- 10	= -	_	_			
	4.			_	_		_	
MARRIN	100			_	_	UPU L		9
		2	-					•
ation. D = Depletion		ced Matrix, CS=		Grains	Location	n: PL = Por	e Lining, RC	= Root Channel, M = Ma
		Indicators fo	or Problema	tic Hydri	ic Soils		and the same	
el (A1)		N Alaska	Color Chang	e4 (TA4)				of hydrophytic vegetation
(A2) (8-16" organic	s. sat'd.	Alaska	Aleine Ewel	on (TAE)				dicator of wetland
								e present unless disturb
						40		f color change in Remark
de (A4) (within 12*of	mineral				Y or Re	dder	Joidilla U	. care, change in Hendlin
	1					1,141		
					ksì			
				5				
resent))				
		Soil Map Uni	t Name:		Hyd	ric Soil Pre	sent?	Yes No V
							+	
as has a addanged	7							
Indicators (check of		iy, measure from	m soil surfa	ce):	4 .			2 are required)
(any one indicator is	sufficient)			ce):	_\/v	/ater-Staine	ed Leaves (B	9)
(any one indicator is	sufficient) _//Surfac	ce Soil Cracks (B	16)		N v	Vater-Staine Frainage Pa	ed Leaves (B tterns (B10)	9)
(any one indicator is A1) e (A2) (w/in 12")	sufficient) _//Surfac _//Inunda	ce Soil Cracks (B ation Visible on A	l6) Aerial Imager	y (B7)	\ <u>\</u> \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Vater-Staine Prainage Pa Oxid'd Rhizo	ed Leaves (B tterns (B10) spheres on L	9) Living Roots (C3) (within 1
(any one indicator is A1) e (A2) (w/in 12") w/in 12")	sufficient) \[\sum_{\surface} \surface \[\sum_{\surface} \lnumber \] Spars	ce Soil Cracks (B ation Visible on A ely Vegetated Co	l6) Aerial Imager	y (B7)	\/ \v \/ \C \/ \P	Vater-Staine Prainage Pa Oxid'd Rhizo Presence of	ed Leaves (B tterns (B10) spheres on L Reduced Iro	9) Living Roots (C3) (within 1 n (C4)
(any one indicator is A1) e (A2) (w/in 12")	sufficient) \[\sum_{\surface} \surface \[\sum_{\surface} \lnumber \] Spars	ce Soil Cracks (B ation Visible on A	l6) Aerial Imager	y (B7)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Vater-Staine Prainage Pa Oxid'd Rhizo Presence of	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch	9) Living Roots (C3) (within 1
(any one indicator is A1) e (A2) (w/in 12") w/in 12")	sufficient) _//Surfac _//Inunda _//Spars _// Marl D	ce Soil Cracks (B ation Visible on A ely Vegetated Co	36) Aerial Imager oncave Surfa	y (B7)	N V V V V V V V V V V V V V V V V V V V	Vater-Staine trainage Par oxid'd Rhizo tresence of (pos. a,a o latt Deposite tunted or S	ed Leaves (B Iterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plant	9) Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1)
(any one indicator is A1) e (A2) (w/in 12") w/in 12")	Sufficient)	ce Soil Cracks (Bation Visible on Aely Vegetated Co	96) Aerial Imager oncave Surfa r (C1)	y (B7)	N V V V V V V V V V V V V V V V V V V V	Vater-Staine trainage Par oxid'd Rhizo tresence of (pos. a,a o latt Deposite tunted or S	ed Leaves (B Iterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plant	9) Living Roots (C3) (within 1 n (C4) nange w/in 12")
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) iits (B2)	Sufficient) A/Surfac A/Inunda M/ Spars M/ Mari E M/ Hydro Dry-Sa	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	96) Aerial Imager oncave Surfa r (C1)	y (B7)		Vater-Stained Prainage Paralinage	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plant Position (D2 itard (D3)	Uving Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) its (B2) 3) st (B4)	Sufficient)	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	96) Aerial Imager oncave Surfa r (C1)	y (B7)		Vater-Staines Prainage Pa Axid'd Rhizo Presence of Pr	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plant Position (D2 itard (D3) in perch H2C	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) iits (B2)	Sufficient) A/Surfac A/Inunda M/ Spars M/ Mari E M/ Hydro Dry-Sa	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	96) Aerial Imager oncave Surfa r (C1)	y (B7)	AND COMPANY OF STREET OF S	Vater-Staines rainage Pa Dxid'd Rhizo resence of (pos. α,α o east Deposite tunted or Secomorphic challow Aquiw/in 24", ca	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2 itard (D3) in perch H2C aphic Relief (Uving Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) its (B2) 3) st (B4)	Sufficient) A/Surfac A/Inunda M/ Spars M/ Mari E M/ Hydro Dry-Sa	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	96) Aerial Imager oncave Surfa r (C1)	y (B7)	AND COMPANY OF STREET OF S	Vater-Staine Prainage Pa Axid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1) It w/in 12") W/in 12") D4) (caused by water)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) its (B2) 3) st (B4)	Sufficient) L'Surfac L'Inunda Spars Mari E Hydro Dry-S Other	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	96) Aerial Imager oncave Surfa r (C1)	y (B7)	AND COMPANY OF STREET OF S	Vater-Staine Prainage Pa Axid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1) It w/in 12") W/in 12") D4) (caused by water)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") l) its (B2) 3) st (B4)	Sufficient) A/Surfac A/Inunda N/ Spars N/ Marl E N/ Hydro N/ Dry-Sa N/ Other	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat	Aerial Imager oncave Surfa r (C1) ble (C2)	y (B7) ace (B8)	AND COMPANY OF STREET OF S	Vater-Staine Prainage Pa Axid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") iits (B2) 3) st (B4) 5) n. from ground surfant?	Sufficient) A/Surfac A/Inunda N/ Spars N/ Marl E N/ Hydro N/ Dry-Sa N/ Other	ce Soil Cracks (Bation Visible on A ely Vegetated Co Deposits (B15) gen Sulfide Odo eason Water Tat (explain)	Aerial Imager oncave Surfa r (C1) ble (C2)	y (B7) ace (B8)	AND COMPANY OF STREET OF S	Vater-Staine Prainage Pa Axid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1) It w/in 12") W/in 12") D4) (caused by water)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) its (B2) 3) st (B4) 5) n. from ground surfa nt? Yes ? Yes	Sufficient) A Surface N Inunda N Spars N Mart D N Hydro N Other No No No No No No No No No N	ce Soil Cracks (Bation Visible on Action Visible Odoleason Water Tate (explain)	Aerial Imager oncave Surfa r (C1) ble (C2)	y (B7) ice (B8)	AND COMPANY OF STREET OF S	Vater-Staine Prainage Pa Axid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 n (C4) nange w/in 12") Is (D1) It w/in 12") W/in 12") D4) (caused by water)
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) iits (B2) 3) st (B4) 5) n. from ground surfa nt? Yes Yes Seep	Sufficient) A Surfac N Inunda N Spars N Marl D N Hydro N Other No No No No No No No No No N	ce Soil Cracks (Bation Visible on Alely Vegetated Collegen Sulfide Odoleason Water Tate (explain) Depth of wat Depth to wat depth but not ye	Aerial Imager oncave Surfa r (C1) ble (C2) der (in.)	y (B7) ace (B8)		Vater-Staine Prainage Pa Exid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2 itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 in (C4) nange w/in 12") Is (D1) Is (D1) Is (Win 12") W/in 12") D4) (caused by water) * # FACU+UPL dominants
(any one indicator is A1) e (A2) (w/in 12") w/in 12") iits (B2) 3) st (B4) 5) n. from ground surfa nt? Yes Yes Yes Yes	Sufficient) NSurfac NInunda NSpars NMarl E NHydro N Other No	ce Soil Cracks (Bation Visible on Action Visible Odoleason Water Tate (explain) Depth of wat Depth to wat depth but not ye Depth to sat.	Aerial Imager concave Surfa r (C1) ble (C2) ler (in.) ler (in.) t filled?:	y (B7) ace (B8)		Vater-Staine Prainage Pa Exid'd Rhizo Presence of Pre	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 in (C4) nange w/in 12") Is (D1) Is (D1) Is (Win 12") W/in 12") D4) (caused by water) * # FACU+UPL dominants
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) iits (B2) 3) st (B4) 5) n. from ground surfa nt? Yes Yes Seep	Sufficient) A/Surfac A/Inunda N/ Spars N/ Mari E N/ Hydro N/ Other No No No No No No No No No N	ce Soil Cracks (Bation Visible on Action Visible Odoleason Water Tation (explain) Depth of wat Depth to wat depth but not ye Depth to sat. Epi Endo	Aerial Imager concave Surfa r (C1) ble (C2) ler (in.) ler (in.) t filled?: Unknown	y (B7) ace (B8)	Wetland	Vater-Stained Palace P	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2 itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 in (C4) nange w/in 12") Is (D1) Is (D1) Is (Win 12") W/in 12") D4) (caused by water) * # FACU+UPL dominants
(any one indicator is A1) e (A2) (w/in 12") w/in 12") i) iits (B2) 3) st (B4) 5) n. from ground surfa nt? Yes Yes Yes nge)	Sufficient) A/Surfac A/Inunda N/ Spars N/ Mari E N/ Hydro N/ Other No No No No No No No No No N	ce Soil Cracks (Bation Visible on Action Visible Odoleason Water Tation (explain) Depth of wat Depth to wat depth but not ye Depth to sat. Epi Endo	Aerial Imager concave Surfa r (C1) ble (C2) ler (in.) ler (in.) t filled?: Unknown	y (B7) ace (B8)	Wetland	Vater-Stained Palace P	ed Leaves (B tterns (B10) spheres on L Reduced Iron r soil color ch s (C5) tressed Plan Position (D2 itard (D3) in perch H2C aphic Relief (I Test (D5)	Living Roots (C3) (within 1 in (C4) nange w/in 12") Is (D1) Is (D1) Is (Win 12") W/in 12") D4) (caused by water) * # FACU+UPL dominants
	IOYR 2/1 2 5 4 8 3/3 IOYR 4 14 2 5 4 6 14 IOYR 6 14	104R2/ 1545 2 100 54R3/3 100 104R4 4 100 104R3 4 100 10	10 R 2 1 100 10 10 10 10 10	10 R 2 100 10 10 100 10 10 10	10 R 2 10 10 10 10 10 10 10	104R2 150 15	SAL SAL	10 12 10 10 10 10 10 10

Applicant/Owner: A 10 EA Sampling Point #: 015 nvestigator(s): A (W/K, B MoorWard) Firm: HDR Alaska, Inc. Lat. (dec.º) W 5 703 Long. 152, 475612 + NAD 83 Recorded on GPS #: Marked on map? Field Map #: Subregion (circle one): SE Southcentral) Western Aleutian Interior Northern Landform: Survey Slope (%): Aspect: Sw. Local relief: Shape across slope: linear / convex concave Shape up/downslope: linear convex / concave NWI classification: PSS/C Photo nos./descriptions: CD N Carnera #: Veg Type (Viereck Level 4 or other): #152a Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No: If no, explain. HGM type: Skape Vegetation M, Soil M, or Hydrology M significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation M, Soil M, or Hydrology M naturally problematic? If needed, explain answers here.	WETLA	ND DETERMINATION DATA F	ORM – Alaska Region	
No.	Project: WEST SI ACCUST	Borough/City:	MSB	Date: 9/5/2020
No.	Applicant/Owner: AIDEA			_ Sampling Point #:
Subregion (circle one): SE Sufficient (Subre extremely Nestern Aleutian Interior, Northern Landforn: STABLE Slope extremely concave (Subre extremely Shape supprisonate):	Investigator(s): A (WK, B. Me	orphia .	Firm: HDR Alaska, Inc.	
	Lat. (dec.") 61 98 5 703 Long. 15	2.475612 ± NAD 83 Re	corded on GPS #: 1 Marke	d on map? Fleid Map #:
	Subregion (circle one): SE Southcentral) West	ern Aleutian Interior Northern	Landform: Swall	Slope (%):! Aspect: <u>SW</u>
McM type: McM	Local relief: Shape across slope: linear / convex	concave Shape up/downslope:	inear convex / concave N	VI classification: P88/C
McM type: McM	Photo nos./descriptions: CON NESW	Carner	#: Veg Type (Viereck L	evel 4 or other): #B2a
Are Vegelation M. Soil M. or Hydrology M. naturally problematic? If needed, explain answers here.	Are climatic / hydrologic conditions on the site typ	ical for this time of year? Yes:	No: If no, explain.	HGM type: Slope
Summary OF FINDINGS Hydrophytic Vegetation Present? Yes	Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Non	mal Circumstances" present?	Yes No
Hydrophytic Vegetation Present? Yes	Are Vegetation M, Soil M, or Hydrology N	naturally problematic? If needed	explain answers here.	
Hydric Soil Present? Yes	SUMMARY OF FINDINGS			<u> </u>
Hydroc Soil Present? Yes	Hydrophytic Vegetation Present? Yes V	No Is the same	pled area	
VEGETATION (Uses scientific names.) Estimate absolute % cover (not relative cover). % can total >100%.	Hydric Soil Present? Yes			
Dominance Test worksheet: Number of Dominant Species Speci	Wetland Hydrology Present? Yes		Remarks (e.g., n	narginal?):
	VEGETATION (Use scientific names.) Estimate	absolute % cover (not relative cover	er). % can total >100%.	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. Number of Dominant Species That are OBL, FACW, or FAC: S. (A)	Tree Stratum (dbh> 3")		Dominance Test w	orksheet:
2		Species Cov.% Dom?		
Species Across All Strata: Adals across All Strata: Abs.Cov. & Dom? Ind. Ind. Species Across All Strata: Species Across All Strata: Abs.Cov. & Abs.Cov. & Dom? Ind. Ind. Abs.Cov. & Dom? Ind. Ind			That are OBL, FAC	W, or FAC:(A)
8.				les .
Total Tree Cover: Sapiling/Shrub Stratum (woody plants < 3" dbh) Abs. Cov.% Dom? Ind. Ind.	3		Species Across Ail	Strata:(B)
Solve Saping/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind.	Total Tree Co.			
Sapiling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Ind.	Total flee Cov	OI.		77, 01 1 7.O. (70D)
Solid Solid Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species 53 X1 = 53	_			
1. 2				
Column C		Abs.Cov.% Dom?	OBL species	4.1
S.			FACW species _	17 x2= 24
4. An A			FAC species	57 x3= 150
Total Sapiking/Shrub Cover: S72			FACU species	X4=
Total Sapling/Shrub Cover: G7 20% of total cover: 18.4	5. Va Ciuli. # FAC 11.		UPL + NL species	X5=
Solidate Stratum Abs. Cov.	6 12		Column Totals:	117 (A) 233 (B)
Herb Stratum				1 40
Abs. Cov.% Dom? Ind. Abs. Cov.% Dom? Ind. Abs. Cov.	50% of total cover:	20% of total cover:10	Prevalence Ind	ex = B/A =
1.				
2. SM of 13			Ind.	
3.			Hydrophytic Vege	tation Indicators:
Prevalence Index is ≤3.0 Prevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Problematic Hydrophytic Vegetation¹ (Explain) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Problematic Hydrophytic Vegetation Present unless disturbed or problematic. Problematic Hydrophytic Vegetation Present? Prevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation Present? Problematic Hydrophytic Vegetation Present Hydrophyti				
6			Prevalence	Index is ≤3.0
6	5		- Morphologic	al Adaptations ¹ (Provide supporting
8				
9			Problematic	Hydrophytic Vegetation¹ (Explain)
10			-1	
11		· -	1 Indicators of hydr	ic soil and wetland hydrology must
Total Herb Cover:				
50% of total cover: 12.5 20% of total cover: 5 Hydrophytic Vegetation Present? Circular 1/10-ac plot or other plot dimension: % of bare ground: % (where applicable) Remarks:				30
Circular 1/10-ac plot or other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes % (where applicable) Remarks:	176		Hydrophytic	1
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% (where applicable) Remarks:			Vegetation	Yes No
(where applicable) Remarks:				
	(where applicable)			AL A
I I UNIA CATINA		And the second	21	
Joe Stone	LIC Stor Storks		od .	

SOIL										Sampling Point #: 015
		(Describe to the de		d to document the in	ndicato	or confirm	the abse	nce of indicato	ors)	
Depth	Horizon	Soil Matrix		Rec	tures	-30		a,a dip.		
(in.)	(opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	(pos/ neg)	Remarks (or use comment number)
19-4	Oct	104R211							Hedi	(or use comment humber)
111	vez	LOVK312			-					v 4
		-						2.5		
-	-									
	-	- M	-							
	-									
					-					
		-								
Type: C	C = Concent	ration, D = Depletion	, RM = Re	duced Matrix, CS=C	coated s	Sand Grain	s ² Locatio	n: PL = Pore	Lining, RC =	= Root Channel, M = Matrix
Hydric S	oil indicate	ors (check ones that	apply, me	easure from top of	minera	l layers un	less othe	erwise noted):	100	
Standar	a indicators	3:		Indicators for	Proble	ematic Hyd	dric Soils	3.		
. 3	stosol or Hist			Alaska (Color CI	nange4 (TA	4)			of hydrophytic vegetation,
// His	tic Epipedor	n (A2) (8-16" organics	s, sat'd,	N/ Alaska A	Alpine S	wales (TAS	5)			licator of wetland an appropriate landscape
N Bla	nck Histic (A:	mineral soil with chroma	a ≤2)			vith 2.5Y Hu		posi	tion must be	e present unless disturbed
. 1		de (A4) (within 12"of		0/				401	roblematic.	color change in Remarks.
sur	face; @	" in this pit	mineral		aleyed of	without Hue	5Y or Re	edder	e details of	color change in Hemaiks.
N Thi	ck Dark Sur	face (A12)		Other (e.	g., see p	91 of 2007				
40	ska Gleyed			Supple	ment: ex	plain in Rem	arks)			
AI	ska Redox (
		Pores (A15)								
	ve Layer (if p			Drainage Clas	s: \/	710				
Type:				Soil Map Unit	-		Hyc	Iric Soil Prese	ent?	Yes No
Depth	(inches)_									140
Commen 1. W00 2. 3.	1 .1.1	T .								, t
YDROL	OGY									
		Indicators (check of		oply, measure from	soil su	urface):				2 are required)
1		any one indicator is					AZ	Water-Stained)
N.	ace Water (A			ace Soil Cracks (B6				Drainage Patte		1
W		e (A2) (w/in 12")	AL	dation Visible on A		No.	and I	Oxid'd Rhizosp	heres on Li	ving Roots (C3) (within 12")
Satu	ration (A3) (w/in 12")	_/v Spa	rsely Vegetated Cor	ncave S	Surface (B8)) —	Presence of Re (pos. a,a or s	oil color cha	(C4) ange w/in 12")
Wate	er Marks (B1)	4/	Deposits (B15)				Salt Deposits (C5)	
	ment Depos			rogen Sulfide Odor			4 8	Stunted or Stre	essed Plants	s (D1) alder
□ Drift	Deposits (B3	3)	N Dry-	Season Water Tabl	e (C2)		1	Geomorphic Po		
_ Algal	Mat or Crus	st (B4)	N Othe	er (explain)				Shallow Aquita		
Al Iron I	Deposits (B5							(w/in 24", can		04) (caused by water)
non t	Deposits (Do	"						FAC Neutral T		(caused by water)
					3,00	1,14		(# OBL+FACW	dominants	> # FACU+UPL dominants)
		. from ground surface		Double of water	- (in)	1.				
	Vater Preser	./	No	_ Depth of wate		14		,		
Vater Tal	ble Present?		No	_ Depth to wate		10				
		Seepir	73.	at depth but not yet		0				
	Present?	Yes _/_	No	_ Depth to sat. (<u> </u>	Wetl	and Hydrolog	y Present?	Yes No
	capillary frin	ge) ata (stream gauge, n	nonitoring	Epi Endo	Unkno		ne) if a	nilable:	-	
escribe	Hecorded D	ata (stream gauge, i	nonitoring	well, aeriai priolos,	previou	is inspectio	ns), ir ava	allable;		
lemarks:	1	5 12 5/20		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				-		
MA	611	not inlet	him	019 - 1	6 /	John	(
10	1000	not hove	Jan.	00. W	0 (A NAME	7			

WETLAND DETERMINATION DATA FORM -	Alaska Region	TO a
Project: MUST SU ACCOUNT Borough/City: MSB	9-	Date: 9/10/20
Applicant/Owner: A. ERILL, B. MoorMack		Sampling Point #: 0 0
	DR Alaska, Inc.	
Lat. (dec.°) 61.555502 Long. 150-717669 ± NAD 83 Recorded on	GPS,#: Marked	on map? Field Map #;
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landford	m: Xielilly bollomy	Slope (%): Aspect:
Local relief: Shape across slope: linear / convex / concave Shape up/downslope: linear / co	onvex / concave NWI	classification: PEM 18
Photo nos./descriptions:Camera #: PM	Veg Type (Viereck Lev	vel 4 or other): TIAZa
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: V No:		
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circuit		es <u>//</u> No
Are Vegetation N , Soil N , or Hydrology N naturally problematic? If needed, explain a	answers here.	
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present? Yes V No Is the sampled area	1	
Hydric Soil Present? Yes No within a wetland?	Yes V No_	
Wetland Hydrology Present? Yes V No No	Remarks (e.g., mar	rginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can		
Tree Stratum (dbh≥ 3")	Dominance Test wo	rksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant	
1	That are OBL, FACW	, or FAC:(A)
2	Total Number of Dom	
3	Species Across All St	rata;(B)
Total Tree Cover:	Percent of Dominant	Species /00
Total Tree Cover;	That are OBL, FACW	, or FAU:(A/B)
50% of total cover: 20% of total cover:	Prevalence Index wo	
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cove	er of: Multiply by:
1. Alp & Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	OBL species	2 X1= 2
2 8	FACW species	5 x2= 10
3	FAC species	NO X3= 300
4	FACU species	X4=
5 11	UPL + NL species _	X5=
6	Column Totals:	107 (A) 312 (B)
Total Sapling/Shrub Cover:		
50% of total cover: 20% of total cover:	Prevalence Index	= B/A = 1.92
Herb Stratum		
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	1/1	
1. Cal can 1800 4 FAC 12. 2. Equ ora 5 FRCW3.	Hydrophytic Vegeta	tion indicators:
3 FRAU VAN Z OBL 14	Dominance Te	est is>50%
4	Prevalence Inc	dex is ≤3.0
5 16	Morphological	Adaptations¹ (Provide supporting
6 17		arks or on a separate sheet)
7 18	Problematic H	ydrophytic Vegetation¹ (Explain)
8		
9 20 10 21	1 Indicators of hydric	soil and wetland hydrology must
11 22		sturbed or problematic.
Total Herb Cover: 107		
50% of total cover: 53.5 20% of total cover: 21.4	Hydrophytic	1
	Vegetation	res No No
Circular 1/10-ac plot or other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes % (where applicable)	Present?	
Remarks:		

OIL			L. P. L. Marie					Sampling Point #: 016
Profile Description	on: (Describe to the dep	th needed	to document the in	ndicator or confir	n the abse	nce of indica	ators)	
Depth Horizon	Horizon Soil Matrix Redox Features						a,α dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	% Type ¹	Loc2	Texture	(pos/ neg)	Remarks (or use comment number)
0-8 Oi	104R3/2						-	tor doo comment themosty
8-18 A	104R 3/2			Tell		Loum	+	
18-72 ach	104P-313	_					withinson	
10 1- 0-05	1041-01			-	_		1000	TELEVISION
					_		70	- 9,
-					_		-	31
					_		- V	
					_	1.0		7.0
					_	- 1		
Type: C = Conce	entration, D = Depletion,	RM = Red	luced Matrix, CS=0	Coated Sand Grain	ins ² Location	on: PL = Po	re Lining, RC :	= Root Channel, M = Matrix
Hydric Soil Indic	ators (check ones that	apply, mea	sure from top of	mineral layers u	nless oth	erwise note	ed):	
Standard Indicat	ors:		Indicators fo	r Problematic H	ydric Soils	s ³ :		
N Histosol or I	Histel (A1)		∧/ Alaska	Color Change ⁴ (T	A4)			of hydrophytic vegetation,
J	don (A2) (8-16" organics	eat'd						licator of wetland an appropriate landscape
underlain	by mineral soil with chroma	i ≤2)	Alaska	Alpine Swales (Ta	45)			e present unless disturbed
N Black Histic	and the second s		// Alaska	Redox with 2.5Y	Hue	ċ	or problematic.	
- /		mineral	Alaska	Gleyed without H	ue 5Y or R	ledder 4	Give details of	color change in Remarks.
surface; @	ulfide (A4) (within 12"of	ппона	-	erlying Layer				
	Surface (A12)		/ V Other (e	e.g., see p.91 of 200				
N Alaska Gley			Suppl	ement: explain in Re	marksi			
_ h./								
Alaska Red								
	ed Pores (A15)		T	60				
Restrictive Layer	(if present)		Drainage Cla		- 21			/
Type:			Soil Map Uni	t Name:	Ну	dric Soit P	resent?	Yes No
Depth (inche	s)							
Primary Indicator		sufficient)Surf	ace Soil Cracks (E	36)	N	Water-Stair Drainage P	ned Leaves (Bratterns (B10)	
High Water	Table (A2) (w/in 12")	_∆/ Inur	ndation Visible on A	Aerial Imagery (B.	/) <u>//</u>			iving Roots (C3) (within 12")
Saturation (/	A3) (w/in 12")	Spa	rsely Vegetated C	oncave Surface (l	B8) —	(pos. a.a	of Reduced Iron or soil color ch	1 (C4) nange w/in 12")
Water Marks	s (B1)	_	Deposits (B15)		<u>/V</u>	Salt Depos		
N Sediment De			rogen Sulfide Odo	r (C1)	N	Stunted or	Stressed Plani	ts (D1)
N Drift Deposit			Season Water Ta		4	Geomorphi	ic Position (D2	
					N		juitard (D3)	-
Algal Mat or	Crust (B4)	_IV Oth	er (explain)				can perch H2C) w/in 12")
Nron Deposit	s (B5)				<u> </u>	FAC Neutr	al Test (D5)	D4) (caused by water) > # FACU+UPL dominants)
Field Observation	ns (in. from ground surfa	ace):						
Surface Water F		No_v	Depth of wa	ter (in.)				
Water Table Pre	,	No	The second secon	ter (in.) 16				
			at depth but not ye	An				
				~	144-	Manal Disaber	alaan Daaaant	? Yes \(\sum_
Saturation Prese		No			We	mano Hydro	ology Present	r 162 NO
(includes capilla			Epi Endo	Unknown	-41			
	led Data (stream gauge							
Remarks				33.7		-		
Some pa	tches of surj	ace w	offer in dra	image feat	ver 4	- low s	pots, but	no endere of
1110NN(N)A	1 Octross merin	W,						

WETLAND DETERMINATION I	DATA FORM - Alaska Regi	ion
Project: WEST SV A COURS Borough/City	MSB	Date: 9/16/2020
Applicant/Owner: A10 EA		Sampling Point #:_ 617
Investigator(s): A. GOCLEK. B. Moorheld	Firm: HDR Alaska, In	
Lat. (dec. °) (al. 5547 28 Long. 150.718141 ± 'NAD	83 Recorded on GPS #:	Marked on map? Field Map #:
Subregion (circle one): SE Southcentral) Western Aleutian Interior No	orthern Landform: Lowland	Slope (%): Aspect: NE
Local relief: Shape across slope: (linear/ convex / concave Shape up/down	nslope: (near) convex / concav	ve NWI classification:
Photo nos./descriptions: 801 NES	Camera #: Psd Veg Type (Vi	ereck Level 4 or other):IB2a
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es: V No: If no, explair	n. HGM type: NIA
Are Vegetation N, Soil N, or Hydrology N significantly disturbed?	re "Normal Circumstances" pre	sent? Yes No
Are Vegetation N , Soil N , or Hydrology N naturally problematic? If	needed, explain answers here.	*
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present? Yes No Is	the sampled area	7 + *
Hydric Soil Present? Yes No _/_ w	ithin a wetland? Yes	No <u>√</u>
Wetland Hydrology Present? Yes	Remarks	(e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not rela		
Tree Stratum (dbh≥ 3")	Dominance	Test worksheet:
Species Cov.% Dom? Ind. Species Cov.% 1. Let Dan 25 1 FACU 5.		Dominant Species L, FACW, or FAC:(A)
3		er of Dominant oss All Strata: (B)
4 8		cominant Species 15 (A/B)
50% of total cover: 20% of total cover:		Index worksheet: -
Sapling/Shrub Stratum (woody plants < 3" dbh)	Tota	al % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.%	Dom? Ind. OBL species	x1=
1.411 + 20 1 FAC 7	EACW SEE	ies X2=
2. Cal 15 10 FRCV 9. FRCV 9.		117 221
4. VIL PRU 7 PRU 10.		116
5. Sor Sco 2 PAW11.		pecies X5=
6 12	Column Total	111 677
Total Sapling/Shrub Cover: 52		N N
50% of total cover: 20% of total cover:	18.4 Prevale	nce Index = B/A = 3.30
1. Ath let 40 Y FAC 12. Abs. Cov.%	4	
2 (a) Can 20 4 PAC 13.	Hydrophyti	c Vegetation Indicators:
3. Fall 300 PRC 14	<u> </u>	inance Test is>50% alence Index is ≤3.0
5.4r+ dib 2 FAW 16		hological Adaptations¹ (Provide supporting
6.Vio 50	dat	a in Remarks or on a separate sheet)
7 18	Prob	lematic Hydrophytic Vegetation ¹ (Explain)
8		
10		of hydric soil and wetland hydrology must
11	be present	unless disturbed or problematic.
Total Herb Cover:		
50% of total cover: 20% of total cover:	10.0 Hydrophyti	
Circular 1/10-ac plot or other plot dimension: % of bare % Cover of Wetland Bryophytes & Total Cover of Bryophy (where applicable)	ground: Vegetation Present?	Yes No
Remarks:	**	

IL .				4		4-310		Sampling Point #: 017
rofile Description	n: (Describe to the de	epth needed	d to document the i	ndicator or confi	m the abse	nce of indica	itors)	
epth Horizon	Soil Matrix	K	Rec	dox Features			a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	% Type¹	Loc2	_Texture	(pos/	_Remarks_
1-2 Oe	WR 211	601					neg)	(or use comment numbe
-14 A	104K2/2				0	SIL	+	I Wak a c
IL BW	IUYR4/3	100			SiL	-		Weak a-a rxi
		100			SIL			
121 Ab	104R 3/2	100			214			
				19-11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				v
						_		
			- 1					
ype: C = Conce	tration, D = Depletion	n, RM = Red	duced Matrix, CS=0	Coated Sand Gra	ins ² Locatio	on: PL = Por	re Lining, RC	= Root Channel, M = Mar
dric Soil Indica	tors (check ones tha	at apply, me	asure from top of	mineral layers	unless oth	erwise note	d):	
andard Indicato	rs:			r Problematic H	_	_		
Histosol or Hi	stel (A1)		N Alaska	Color Change ⁴ (1	TA4)			of hydrophytic vegetation
Histic Epiped	on (A2) (8-16" organic	cs, sat'd,	Alaska	Alpine Swales (T	Δ5\			dicator of wetland an appropriate landscap
underlain b	y mineral soil with chron	ла ≤2)						pe present unless disturb
Black Histic (A3)		Alaska	Redox with 2.5Y	Hue	O	r problematic	The same of the same
Hydrogen Su	Ifide (A4) (within 12"of	f mineral	Alaska	Gleyed without F	lue 5Y or R	edder (Give details o	f color change in Remark
surface; @	" in this pit			rlying Layer	_			
Thick Dark S	urface (A12)			e.g., see p.91 of 20 ement: explain in R				
Alaska Gleye	d (A13)		Dubon	arrang anadari ii, i	oa			
Alaska Redo:	c (A14)							
Alaska Gleye	d Pores (A15)							10
				0.1	-			70 17
estrictive Laver (i	present)		I Drainage Cla	ss: DPD				
2	f present)		Drainage Cla		Hv	dric Soil Pre	egent?	Yes No 1/
Type:	_	least 60	Soil Map Unit		Ну	dric Soil Pre	esent?	Yes No
Type:	+ present mat		Soil Map Unit	Name:				
Type: Depth (inches Depth (inc	present mat	ones that ap	Soil Map Unit	Name:	Sec	ondary Indica	ators (at leasi	2 are required)
Type: Depth (inches Depth (inc	present mat	ones that a	Soil Map Unit	n soil surface);	Sec.	ondary Indica Water-Stain	ators (at least	2 are required) 9)
Type: Depth (inches or ments: DROLOGY etland Hydrologimary Indicators Surface Water	present mat	ones that ap	Soil Map Unit	n soil surface);	Sec.	ondary Indica Water-Stain Drainage Pa	ators (at leasi ed Leaves (B attems (B10)	2 are required) 9)
Type: Depth (inches or ments: DROLOGY etland Hydrologimary Indicators Surface Water High Water Ta	present in at y Indicators (check (any one indicator is (A1) ble (A2) (w/in 12")	ones that ap	Soil Map Unit	n soil surface); 6) terial Imagery (B	Sec.	ondary Indica Water-Stain Drainage Pa Oxid'd Rhizo	ators (at least ed Leaves (B attems (B10)	2 are required) 9) Living Roots (C3) (within 1
Type: Depth (inches Depth (inc	present in at y Indicators (check (any one indicator is (A1) ble (A2) (w/in 12")	ones that ap	Soil Map Unit	n soil surface); 6) terial Imagery (B	Sec.	ondary Indica Water-Stain Drainage Pa Oxid'd Rhizo Presence of	ators (at least ed Leaves (B atterns (B10) ospheres on L Reduced Iro	2 are required) 9) Living Roots (C3) (within 1 in (C4)
Type: Depth (inches of the content o	y Indicators (check (any one indicator is (A1) ble (A2) (w/in 12")	ones that ap	Soil Map Unit	n soil surface); 6) terial Imagery (B	7) N B8) -	ondary Indica Water-Stain Drainage Pa Oxid'd Rhizo Presence of	ators (at least ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color cl	2 are required) 9) Living Roots (C3) (within 1
Depth (inches or ments: DROLOGY etland Hydrologimary Indicators Surface Water High Water Ta	y Indicators (check (any one indicator is (A1) ble (A2) (w/in 12")) (w/in 12")	ones that applies sufficient) V Surficient V Surficient N Spa	Soil Map Unit	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N B8) Y	ondary Indica Water-Stains Drainage Pa Oxid'd Rhize Presence of (pos. a.a. c Salt Deposit	ators (at least ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color cl	2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12")
Type: Depth (inches Depth (inc	y Indicators (check (any one indicator is (A1)) ble (A2) (w/in 12")) (w/in 12") B1) osits (B2)	ones that applies sufficient) V Surficient Inur V Spa Mari	Soil Map Unit	n soil surface); 6) Aerial Imagery (Boncave Surface (Sec V N N N N N N N N N	ondary Indica Water-Stains Drainage Pa Oxid'd Rhizo Presence of (pos. α,α o Salt Deposit Stunted or S	ators (at leas) ed Leaves (B atterns (B10) ospheres on I Reduced Iro or soil color cl ss (C5) Stressed Plan	2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12")
Depth (inches omments: DROLOGY etiand Hydrologimary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Dep	y Indicators (check (any one indicator is (A1) ble (A2) (w/in 12")) (w/in 12") B1) osits (B2) (B3)	ones that applies sufficient) Surficient Surficient Note: Surfi	Soil Map Unit /o of A Luyur pply, measure from face Soil Cracks (Bendation Visible on Aursely Vegetated Country 1 Deposits (B15) Irogen Suffide Odor Season Water Tab	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N N N N N N	ondary Indica Water-Staine Drainage Pa Oxid'd Rhizo Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic	ators (at leasi ed Leaves (B atterns (B10) ospheres on I Reduced Iro or soil color of s (C5) Stressed Plan Position (D2	2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12")
Type: Depth (inches omments: DROLOGY Tetland Hydrology of the discrete of th	y Indicators (check (any one indicator is (A1)) (W/in 12") ble (A2) (W/in 12") b) (w/in 12") B1) osits (B2) (B3) rust (B4)	ones that applies sufficient) Surficient Surficient Note: Surfi	Soil Map Unit	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N N N N N N	ondary Indica Water-Staine Drainage Pa Oxid'd Rhizo Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu	ators (at leasi ed Leaves (B atterns (B10) ospheres on I Reduced Iro or soil color of s (C5) Stressed Plan Position (D2	2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12") its (D1)
Type: Depth (inches Depth (inc	y Indicators (check (any one indicator is (A1)) (W/in 12") ble (A2) (W/in 12") b) (w/in 12") B1) osits (B2) (B3) rust (B4)	ones that applies sufficient) Surficient Surficient Note: Surfi	Soil Map Unit /o of A Luyur pply, measure from face Soil Cracks (Bendation Visible on Aursely Vegetated Country 1 Deposits (B15) Irogen Suffide Odor Season Water Tab	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Stain Drainage Pa Oxid'd Rhizo Presence of (pos. q. q Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra	ators (at least ed Leaves (B atterns (B10) ospheres on I Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12") its (D1)
Depth (inches of the content of the	y Indicators (check (any one indicator is (A1)) (W/in 12") ble (A2) (W/in 12") b) (w/in 12") B1) osits (B2) (B3) rust (B4)	ones that applies sufficient) Surficient Surficient Note: Surfi	Soil Map Unit /o of A Luyur pply, measure from face Soil Cracks (Bendation Visible on Aursely Vegetated Country 1 Deposits (B15) Irogen Suffide Odor Season Water Tab	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Staine Oxid'd Rhize Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", ca Microtopogn FAC Neutra	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 in (C4) in 12") its (D1) 0 w/in 12") D4) (caused by water)
Depth (inches omments: DROLOGY etland Hydrologimary Indicators Surface Water High Water Ta Saturation (A3 Water Marks (Sediment Depty Drift Deposits Algal Mat or Co Iron Deposits	present in at a present in a	ones that applies sufficient) Surficient Surficient Inur Mari Hyd Other	Soil Map Unit /o of A Luyur pply, measure from face Soil Cracks (Bendation Visible on Aursely Vegetated Country 1 Deposits (B15) Irogen Suffide Odor Season Water Tab	n soil surface); 6) Aerial Imagery (Boncave Surface (7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Staine Oxid'd Rhize Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", ca Microtopogn FAC Neutra	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 or (C4) or (C4) or (C4) ange w/in 12") b w/in 12") D4) (caused by water)
Depth (inches of the property	y Indicators (check (any one indicator is (A1)) (W/in 12") (B1) osits (B2) (B3) rust (B4) (B5)	ones that applies sufficient) Surficient Note Note Note Other	Soil Map Unit To of A lays pply, measure from face Soil Cracks (B ndation Visible on A arsely Vegetated Co 1 Deposits (B15) Irogen Sulfide Odor Season Water Tab er (explain)	n soil surface); 6) terial Imagery (Boncave Surface (cr. (C1)) ole (C2)	7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Staine Oxid'd Rhize Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", ca Microtopogn FAC Neutra	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 or (C4) or (C4) or (C4) ange w/in 12") b w/in 12") D4) (caused by water)
Depth (inches of the property	y Indicators (check (any one indicator is (A1)) (w/in 12") B1) (w/in 12") B1) (B3) (B5) (in. from ground surfisent? Yes	ones that applies sufficient) V Surficient N Surficient N Spa N Marr N Dry- Other face):	Soil Map Unit To A A Layer pply, measure from face Soil Cracks (B indation Visible on A irsely Vegetated Co in Deposits (B15) Irogen Sulfide Odor Season Water Tab er (explain)	n soil surface): 6) Aerial Imagery (Bencave Surface (color) ble (C2)	7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Staine Oxid'd Rhize Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", ca Microtopogn FAC Neutra	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 or (C4) or (C4) or (C4) ange w/in 12") b w/in 12") D4) (caused by water)
Type: Depth (inches of the property of the pro	y Indicators (check (any one indicator is (A1)) (Win 12") B1) (win 12") B1) osits (B2) (B3) rust (B4) (B5) (in. from ground surf sent? Yes	ones that applies sufficient) Surficient No Surficient No Surficient No N	pply, measure from face Soil Cracks (Badation Visible on Aarsely Vegetated Color Deposits (B15) Irogen Sulfide Odor-Season Water Taber (explain) Depth of water Depth to water Depth to water Soil Cracks (B15) Irogen Sulfide Odor-Season Water Taber (explain)	n soil surface): 6) Aerial Imagery (Boncave Surface (cr. (C1) ole (C2) er (in.)	7) N Y N N N N N N N N N N N N N N N N N	ondary Indica Water-Staine Oxid'd Rhize Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", ca Microtopogn FAC Neutra	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 or (C4) or (C4) or (C4) ange w/in 12") b w/in 12") D4) (caused by water)
Depth (inches omments: DROLOGY Vetland Hydrolog of omment Indicators High Water Ta Saturation (A3 Water Marks (Sediment Deposits Algal Mat or Co Iron Deposits Iron Deposits Jeld Observations Urface Water Preservators Urface Water Preservators	y Indicators (check (any one indicator is (A1)) (W/in 12") B1) osits (B2) (B3) rust (B4) (B5) (in. from ground surf sent? Yes	ones that applies sufficient) Surficient Surficient Inur No Mari Other Face): No Mari	Soil Map Unit To of A Layer pply, measure from face Soil Cracks (B ndation Visible on A arsely Vegetated Co 1 Deposits (B15) Irogen Sutfide Odor Season Water Tab er (explain) Depth of wate Depth to wate	n soil surface): 6) Aerial Imagery (Boncave Surface (C1) Die (C2) er (in.) er (in.) t filled?: !	7) Sec V V V V V V V V V V V V V V V V V V V	ondary Indica Water-Stains Oxid'd Rhizo Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", or Microtopogn FAC Neutra (# OBL+FAI	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan e Position (D2 uitard (D3) an perch H2C aphic Relief (I Test (D5) CW dominants	2 are required) 9) Living Roots (C3) (within 1 in (C4) in (C4) in (C4) in (C4) its (D1) b) w/in 12") D4) (caused by water) > # FACU+UPL dominants
Type: Depth (inches omments: DROLOGY Tetland Hydrology of the Hydrology o	y Indicators (check (any one indicator is (A1)) (W/in 12") B1) (w/in 12") B1) (B3) (B4) (B5) (in. from ground surfice sent? Yes	ones that applies sufficient) Surficient No Surficient No Surficient No N	Soil Map Unit To A A Luyur pply, measure from face Soil Cracks (B indation Visible on A irsely Vegetated Co if Deposits (B15) Irogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate at depth but not yet Depth to sat.	n soil surface): 6) Aerial Imagery (Bencave Surface (C1) ble (C2) er (in.) er (in.) 19 t filled?: 11 (in.) 9	7) Sec V V V V V V V V V V V V V V V V V V V	ondary Indica Water-Stains Oxid'd Rhizo Presence of (pos. α,α o Salt Deposit Stunted or S Geomorphic Shallow Aqu, (w/in 24", or Microtopogn FAC Neutra (# OBL+FAI	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan is Position (D2 uitard (D3) an perch H2C aphic Relief (ITest (D5)	2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12") its (D1) 9) w/in 12") D4) (caused by water) > # FACU+UPL dominants
Type: Depth (inches of the property of the pro	y Indicators (check (any one indicator is (A1)) (W/in 12") B1) (w/in 12") B1) (B3) (B3) (B5) (in. from ground surfice sent? Yes	ones that apis sufficient) V Surficient No Marrie Month Face): No Month	pply, measure from face Soil Cracks (Budation Visible on Aursely Vegetated Colling Season Water Tabler (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	er (in.) er (in.) Unknown	7) Sec. 4/2 / 1/2	ondary Indica Water-Stain Drainage Pa Oxid'd Rhize Presence of (pos. α,α α Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", α Microtopogra FAC Neutra (# OBL+FA	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan e Position (D2 uitard (D3) an perch H2C aphic Relief (I Test (D5) CW dominants	2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12") its (D1) 9) w/in 12") D4) (caused by water) > # FACU+UPL dominants
Type: Depth (inches of the property of the pro	y Indicators (check (any one indicator is (A1)) (W/in 12") B1) (w/in 12") B1) (B3) (B4) (B5) (in. from ground surfice sent? Yes	ones that apis sufficient) V Surficient No Marrie Month Face): No Month	pply, measure from face Soil Cracks (Budation Visible on Aursely Vegetated Colling Season Water Tabler (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	er (in.) er (in.) Unknown	7) Sec. 4/2 / 1/2	ondary Indica Water-Stain Drainage Pa Oxid'd Rhize Presence of (pos. α,α α Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", α Microtopogra FAC Neutra (# OBL+FA	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan e Position (D2 uitard (D3) an perch H2C aphic Relief (I Test (D5) CW dominants	2 are required) 9) Living Roots (C3) (within 1 in (C4) in (C4) in (C4) in (C4) its (D1) b) w/in 12") D4) (caused by water) > # FACU+UPL dominants
Type: Depth (inches omments: DROLOGY Tetland Hydrology of the Hydrology	y Indicators (check (any one indicator is (A1)) (W/in 12") B1) (w/in 12") B1) (B3) (B3) (B5) (in. from ground surfice sent? Yes	ones that apis sufficient) V Surficient No Marrie Month Face): No Month	pply, measure from face Soil Cracks (Budation Visible on Aursely Vegetated Colling Season Water Tabler (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	er (in.) er (in.) Unknown	7) Sec. 4/2 / 1/2	ondary Indica Water-Stain Drainage Pa Oxid'd Rhize Presence of (pos. α,α α Salt Deposit Stunted or S Geomorphic Shallow Aqu (w/in 24", α Microtopogra FAC Neutra (# OBL+FA	ators (at leasi ed Leaves (B atterns (B10) ospheres on L Reduced Iro or soil color of is (C5) Stressed Plan e Position (D2 uitard (D3) an perch H2C aphic Relief (I Test (D5) CW dominants	2 are required) 9) Living Roots (C3) (within 1 in (C4) in ange w/in 12") its (D1) 9) w/in 12") D4) (caused by water) > # FACU+UPL dominants

WETLAND DETERMINATION DATA	FORM - Ala	ska Region	
Project: West 80 Access Borough/City:	MSB		Date: 9/16/2020
Applicant/Owner: AIDER			Sampling Point #: 022
	Firm: HDR	Alaska, Inc.	
Lat. (dec. °) (1.555500 Long. 50 715448 ± NAD 83 Re	corded on GF	S#: Marked	l on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern	Landform:	frighterely.	Slope (%): Aspect:
Local relief: Shape across stope: linear / convex / concave Shape up/downslope:	(nea) / conve	x concave NW	I classification: PSSI IEM IB
Photo nos /descriptions: Soil 17 NEW Camer	a #: Ve	g Type (Viereck Le	evel 4 or other): TBZb
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: Ves: Vertex			HGM type: Slupe
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Nor	mal Circumsta	ances" present? Y	es No
Are Vegetation _\(\mu\), Soil _\(\lambda\), or Hydrology _\(\lambda\) naturally problematic? If needed	, explain ansv	vers here.	
SUMMARY OF FINDINGS			
Hydrophytic Vegetation Present? Yes No Is the san	pied area	,	
		Yes No _	
Wetland Hydrology Present? Yes No		Remarks (e.g., ma	rginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover)			
Tree Stratum (dbh≥ 3")	Do	ominance Test wo	orksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom?	Ind. Nu	umber of Dominant	Species 7
1 5	Tr	nat are OBL, FACW	V, or FAC:(A)
2 6		tal Number of Don	tembro.
3	— si	pecies Across All S	(B)
Total Tree Cover:		ercent of Dominant	
- '		nat are OBL, FACV revalence Index w	
50% of total cover: 20% of total cover:	— ' '		
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom?	Ind.	Total % Cov	
1. Anten 45 Fre 7.	IIId. OI	BL species	X1=
2 Sal par 8 FAC 8.	F	ACW species	3 X2= 6
3 FALV 9.		C species	140 x3= 410
4.4.6 10.		ACU species	X4= 99
6.540 Sto 3 TAC 12.		PL + NL species _	X5=
	Co	olumn Totals:	154 (A) 470 (B)
Total Sapling/Shrub Cover:			2 00
50% of total cover:		Prevalence Inde	$x = B/A = \frac{3.05}{}$
Herb Stratum Abs.Cov.% Dom? Ind. Abs.Cov.% Dom?	Ind.		
1. Calcan 35 4 FKC 12.			
2. Herlan 3 FAW 13.		ydrophytic Vegeta	ation indicators:
3. Ath fel + FAC 14		Dominance T	
4. TA WY 7 PAW 15.		/ Prevalence III	idex is 53.0
5. FIV 172 3 FHCW 16. PAC 17.	_		Adaptations¹ (Provide supporting
6. STL T PRC 17.	_		narks or on a separate sheet)
8		Problematic F	Hydrophytic Vegetation ¹ (Explain)
9			
10 21			soil and wetland hydrology must
11 22	De	present unless di	sturbed or problematic.
Total Herb Cover:			,
50% of total cover: 44 20% of total cover: 17.6		ydrophytic	V \/ N-
Circular 1/10-ac plot vor other plot dimension: % of bare ground:	P	egetation resent?	162 140
% Cover of Wetland Bryophytes % Total Cover of Bryophytes \$\sum_{\text{where applicable}}\$	%		
Remarks:			

SOIL Profile C	Description:	(Describe to the de	onth need	ed to document the i	indicator	or confirm	the abea	nce of indicate	one)	Sampling Point #: 022		
							i ii ie abse	INCO OT ITTOICER				
Depth (in.)	(opt.)	Color (moist)	<u>%</u>	Color (moist)	dox Fea <u>%</u>	Type ¹	Loc2	Texture	a,a dip. (pos/ neg)	Remarks (or use comment number)		
3-5	De A	104R3/2	100		-			STL		\(\frac{1}{2}\)		
5-6	Oas	1042211						Cal				
0.20	Ab	5 431Z	10	54R414	10 10	0	PL	>1L-				
10-10	Bg	D4 41	80	54×414	10		12,1	Buscusk				
_		DIE	_				-	_				
			_		_	_	_					
¹Type: C	C = Concent	ration. D = Depletion	 . RM = B	educed Matrix, CS=0	Coated 5	Sand Grain	ns ² l ocatio	on PI = Pore	Lining BC	= Root Channel, M = Matrix		
		ors (check ones that			_	_				- Hoot Onathes, W - Wattix		
	d indicators			indicators fo								
M His	M Histosol or Histel (A1) M Alaska Color Change (TA4)					3O1		of hydrophytic vegetation,				
His	stic Epipedor	n (A2) (8-16" organics	s, sat'd,	__ Alaska	Alpine S	wales (TA	.5)			ficator of wetland an appropriate landscape		
Bla	underlain by ack Histic (A:	mineral soil with chrom	a ≤2)			· vith 2.5Y H		pos		e present unless disturbed		
		de (A4) (within 12°of	mineral			without Hu		40		color change in Remarks.		
	rface; @		IIIIII GIGI		erlying L		0010011	eddel				
Thi	ick Dark Sur	face (A12)				o.91 of 2007 colain in Rer						
Ala	aska Gleyed	(A13)					, and the same of					
	iska Redox (
		Pores (A15)		1.60								
	ve Layer (if p	oresent)		Drainage Cla		PD						
Type:	(ib)			Soil Map Unit	t Name:		Hy	Hydric Soil Present? Yes 1/ No				
Depth	(inches) _							700				
1.	ns.											
3.												
HYDROL	OGV	No.										
		Indicators (check o	nes that	apply, measure from	n soil sı	urface):	Seco	ondary Indicat	ors (at least	2 are required)		
		(any one indicator is					N	Water-Stained	Leaves (B	9)		
N Surf	ace Water (/	A1)	N Su	ırface Soil Cracks (B	6)		N	Drainage Patt	ems (B10) _			
// High	Water Tabl	e (A2) (w/in 12")	<u> </u>	undation Visible on A	Verial Im	agery (B7)	IV.	Oxid'd Rhizos	pheres on L	iving Roots (C3) (within 12")		
Satu	ıration (A3) ((w/in 12")	N Sp	parsely Vegetated Co	oncave S	Surface (B	8) A/	Presence of P	Reduced from Soil color ch	ı (C4) ange w/in 12")		
	er Marks (B			arl Deposits (B15)			N	Salt Deposits	(C5)			
	iment Depos			drogen Sulfide Odor				Stunted or Sti				
A.	Deposits (B			y-Season Water Tab	ole (C2)			Geomorphic F				
/// Alga	I Mat or Cru	st (B4)	_/VOt	her (explain)			10	Shallow Aquit (w/in 24", car		w/in 12")		
<u> </u> Iron	Deposits (B	5)					N			D4) (caused by water)		
							\sim	FAC Neutral		> # FACU+UPL dominants)		
Field Ob:	servations (i	n. from ground surfa	ce):					(# OBETI NO	TY GOTTINGING	> #1 AOOTO! E dominiants)		
1	Water Prese		No A	Depth of wat	er (in.) _							
Water Ta	able Present	? Yes	No _	Depth to wat	er (in.) _	10						
12		Seep	ing in at t	hat depth but not ye	t filled?:		20					
	n Present?	Yes _V	No _	Depth to sat.	(in.)[0	Wet	land Hydrolo	gy Present	? Yes No		
	capillary fri		montinet-	Epi Endo			lees) if co	a Dabla				
Describe	necorded L	Data (stream gauge,	inonitortr	iy well, aenał pnotos	, previoi	us inspecti	ions), it av	allable:				
Remarks	:7	01 12000 01	o/									
Strea	m	0, from by	Mt,									

The state of the s	DETERMINATION	DATA FORM - A	-	011	110.00 3
Project: West SV Acces	Borough/Ci	ty: M81	3	Date: 9	6/2020
Applicant/Owner: AIVEA			0 1	Sampling Point	#: 023
Investigator(s): A (18 dek. B. Moorn and		Firm: HD	R Alaska, Jac.		
Lat. (dec.") 61. 594217 Long. 15 0.81	111 ± ' NA	D 83 Recorded on	GPS #: Marked	on map? Fi	eld Map #:
Subregion (circle one): SE Southcentrat Western					
Local relief: Shape across slope: (Inear/ convex / convex /					
			Veg Type (Viereck Le		
Are climatic / hydrologic conditions on the site typical f					
Are Vegetation <u>N</u> , Soll <u>N</u> , or Hydrology <u>N</u> sign	ificantly disturbed?	Are "Normal Circum	stances" present? Y	es No	4
Are Vegetation _/, Soil _/, or Hydrology _/ nati					•
SUMMARY OF FINDINGS		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Hydrophytic Vegetation Present? Yes	No V				16.7
Hydric Soil Present? Yes	No.	s the sampled area within a wetland?	Yes No	/	
Wetland Hydrology Present?	No Z	Willim a Meliana:	Remarks (e.g., ma		
		letter cover 0/ co		3	
VEGETATION (Use scientific names.) Estimate abs	olute % cover (not re	lative cover). % can	Dominance Test wo	orksheet:	
Tree Stratum (dbh≥ 3")			Alternatives of December	t Caralac	1
Species Coy.% Dom? Ind. Species 1 DIA DAD 3 FAW 5.	es Cov.%	Dom? Ind.	Number of Dominan That are OBL, FACV		(A)
1. Det pap 3 _ FACO 5			Total Number of Dor		
3 7.	K		Species Across All S		1 (B)
4. 8				-	(0)
Total Tree Cover:	me. in striba		Percent of Dominant That are OBL, FACV		50 (A/B)
			Prevalence Index v		(700)
50% of total cover:(woody plants < 3" dbh)	20% of total cover:		Total % Cov	ver of:	Multiply by:
Abs.Cov.% Dom? Ind.	Abs.Cov.	% Dom? Ind.			-
1. V b cow 20 1 EXW 7.			OBL species		1=
0.1			FACW species		2= 14
3 Rios aca 2 TAW 9.			FAC species		3= 345
		1	FACU species		4= 212
Total Control of the			UPL + NL species		5=
6 12	- 0	4.	Column Totals:	175 (A)	_571 (B)
Total Sapling/Shrub Cover:	28	,			2 01
50% of total cover:	20% of total cover:	5.6	Prevalence Inde	ex = B/A =	5. 26
Herb Stratum					
	Abs. Cov.				
			Hydrophytic Veget	tation indicators	
			N Dominance 1	Test is>50%	
			Prevalence I	ndex is ≤3.0	
5. Cha Bris 8 FACU 16.			Morphologica	al Adaptations¹ (F	Provide supporting
				narks or on a ser	
			Problematic	Hydrophytic Veg	etation [†] (Explain)
			11-di-at-a-A byodale	- sell and wetland	d budgeleast must
	-		Indicators of hydric be present unless d	isturbed or probl	ematic.
	100		- 111 - 1)		
Total Herb Cover:	1414	19.U			,
50% of total cover:	20% of total cover:		Hydrophytic Vegetation	YesN	lo V
Circular 1/10-ac plot or other plot dimension:	% of ba	re ground:	Present?		
% Cover of Wetland Bryophytes% (where applicable)	lotal Cover of Bryop	nytes%			
Remarks:					

SOIL				*						Sampling Point #: 023
Profile D	escription:	(Describe to the de	pth needde	d to document the	indicator	or confirm	the abse	nce of indic	ators)	
Depth	Horizon	Soil Matrix		Re	dox Fea	tures			a,a dip.	
<u>(in.)</u>	(opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture	(pos/	Remarks
1-3	A	104R 212	100					FLoSa	neg)	(or use comment number)
3-5	E	2.54 5/1	100		_			FLoSa	_	
5-14	BW	164R 413	too		_		_	FLoSa		100
14-72	Bw2	2.54 57		IDYRUIU	30	C	m	PloSa		
FIN	DWT	2.01.4	40	(a then lat	12.0		111	1 54 700	-	-
			-		_					
			-		_					
(0)		_			_			-		
			-		_					
										= Root Channel, M = Matrix
Hydric S	oil Indicato	ors (check ones that	apply, me	easure from top of	minera	l layers un	less othe	erwise note	ed):	
	d Indicators			Indicators fo	or Proble	ematic Hye	dric Soils	s³:		
N His	tosol or Hist	el (A1)		Alaska	Color Ch	nange ⁴ (TA	4)			of hydrophytic vegetation,
His	tic Epipedor	(A2) (8-16" organics	, sat'd,	Alaska	Alnina S	wales (TA	5)			dicator of wetland an appropriate landscape
		mineral soil with chroma	(≤2)				•			pe present unless disturbed
H Bla	ck Histic (A3	3)		Alaska	Redox w	ith 2.5Y H	пе		or problematic.	
Hyd	drogen Sulfic face; @	de (A4) (within 12"of	nineral			without Hue	e 5Y or R	edder	Give details of	f color change in Remarks.
					orlying La					
	ck Dark Surl					o.91 of 2007 plain in Rem	narks)			
	ska Gleyed									
1 1	ska Redox (
		Pores (A15)								
Restrictiv	e Layer (if p	resent)		Drainage Cla	ss: w	4)				
Type:				Soil Map Unit	t Name:		Hy	dric Soil Pr	esent?	Yes No
Depth	(inches) _									
Commen	B.									
2. 700 (try for a-	0								
3.										
HYDROL	ngy				_		-		-	44
		Indicators (check or	as that ar	niv measure from	n soil ei	rfaco):	Soor	andanı ladio	otom /et leset	2 are required)
		any one indicator is		ppiy, measure non	11 3011 31	mace);			ed Leaves (B	
VSurfa	ce Water (A	(1)	A/	ace Soil Cracks (B	6)					
		e (A2) (w/in 12")		dation Visible on A		Manu (87)	1	Origina Drie	atterns (B10) _	Index Death (CO) (and (co)
4									ospheres on L f Reduced Iror	iving Roots (C3) (within 12")
4	ration (A3) (· ·	4.0	rsely Vegetated Co	ncave S	urface (B8)	(pos. a,a	or soil color ch	ange w/in 12")
1.4	r Marks (B1		C/	Deposits (B15)			_N	Salt Deposi	ts (C5)	160
	ment Deposi		B.F	rogen Sulfide Odor					Stressed Plant	
N Drift	Deposits (B	3)	Dry-	Season Water Tab	le (C2)				Position (D2)	
N Algal	Mat or Crus	st (B4)	N Othe	er (explain)			_/v	Shallow Aqı		
Al Iron I	Deposits (B5	3)					Λ/.		an perch H2O	
14 110111	pehosits (D:	"								04) (caused by water)
							7	FAC Neutra (# OBL+FA		> # FACU+UPL dominants)
Field Obs	ervations (ir	n. from ground surfac	:e):	,				(- without of a domination
Surface V	Vater Preser	nt? Yes	No_V	Depth of water	er (in.) _					
Water Tal	ble Present?	Yes	No	Depth to water			-			
		Seepir	ng in at tha	depth but not yet						
Saturation	Present?	Yes	No _v	/			Watt	and Hydrol	logy Present?	Yes No
	capillary frin				Unknow		****	and riyuru	ogy rieseill	163 140
		ata (stream gauge, n	nonitorina				ns), if ava	ailable		
		Jg-7/	9		, p. 4-164			page Transmit Plad ()		
Remarks:	duil	1	1	1.11 1	. 1	-1.	-11		do	· la act
MARI	Miner	steam chan	ner ~	WW.	1 cal	MAY V	-5 W	MALIN	W. M.	Chialine.
01	New	U			J			1000		
	1 10-10									

100000000000000000000000000000000000000	WETLAND DET	ERMINATION	DATA FORM - A	laska Region		
Project: West SU Acee	24-	Borough/City	<u> </u>	8B	Date:	1/16/2020
Applicant/Owner: ATOEA				X 1	Sampling Poir	nt #: 028
	B. Moorhead		Firm: HD			-
Lat. (dec.°) 6.594296 L	ong. 150.82929	TO ± NAD	83 Recorded on	GPS #: Marked	l on map? l	ield Map #:
Subregion (circle one): SE Southcer	ntra Western Aleu	tian Interior N	orthern Landform	1:5 Kam Kribil	_Slope (%):	Aspect: N
Local relief: Shape across slope: (inea						
Photo nos./descriptions: 501/ Lt	NESW Sfrea	MTLA	_Camera #: \	veg Type (Viereck Le	vel 4 or other):	7 AZa_
Are climatic / hydrologic conditions on	the site typical for this	s time of year? Y	'es: No:	If no, explain.	HGM type: _	slope
Are Vegetation $\underline{\mathcal{N}}$, Soil $\underline{\mathcal{N}}$, or Hydi						
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydi	rology N naturally	problematic? If	needed, explain ar	nswers here.		
SUMMARY OF FINDINGS			-			
Hydrophytic Vegetation Present?	Yes / No	0	the sampled area			
Hydric Soil Present?	Yes _/ No		vithin a wetland?	Yes / No		
Wetland Hydrology Present?	Yes No	0		Remarks (e.g., ma	arginal?):	- 5
VEGETATION (Use scientific names		% cover (not rela	tive cover). % can	total >100%.		
				Dominance Test wo	orksheet:	
Tree Stratum (dbh≥ 3") Species Cov.% Dom?	Ind. Species	Cov.%	Dom? ind.	Number of Dominant	Species	2
1	5			That are OBL, FACV		(A)
2	6			Total Number of Dor	ninant	1
3	7			Species Across All S	Strata:	(B)
4	8			Percent of Dominant	Species	19
Tota	al Tree Cover:			That are OBL, FACV		180 (A/B)
50% of total cover:	20%	of total cover: _		Prevalence Index w	orksheet:	4
Sapling/Shrub Stratum (woody plants	s < 3" dbh)			Total % Cov	er of:	Multiply by:
Abs.Cov.% Dom?	Ind.	Abs.Cov.%	Dom? Ind.	OBL species	2	X1= 2.
1. Alaca. 10 4	PAC 7.			FACW species	-	X2=
2.52 300 1				FAC species	122	x3= 366
3				FACU species		X4= -
5				ÛPL + NL species	_	X5=
6	12				124 (A)	369 (B)
Total Sanling	/Shrub Cover: 1	2			(* 1)	(0)
		of total cover: _	2.4	Prevalence Inde	v - R/A -	297
Herb Stratum	20%	of total cover		Flevalence mue	X - D/X	
Abs.Cov.% Dom?	Ind.	Abs. Cov.%	Dom? Ind.			
1. Cal Can 100 4	FAC 12.			Hydrophytic Veget	ation Indicator	s:
2. FAU AN 10	PNC13.			<u> </u>		112
3. Equ 1/4 2	0BL14.			Dominance T		
4					-	
5					al Adaptations¹ (narks or on a se	Provide supporting
7						
8				Problematic I	Hydrophytic Ve	getation¹ (Explain)
9	20					
10				1 Indicators of hydric		
11	22			be present unless d	erannea or brod	กษาเสนับ.
Total	al Herb Cover:					
50% of total cover:		of total cover: _		Hydrophytic	v /	No
Circular 1/10-ac plot or other pl % Cover of Wetland Bryophytes (where applicable)	ot dimension: 10 1/2	20 % of bare Cover of Bryophy	ground: <u>10</u> rtes <u>10</u> %	Vegetation Present?	res <u>y</u>	110
Remarks:						10

SOIL Profile D	escription:	(Describe to the de	oth needer	d to document the	indicato	r or confirm	the abco	non of Indicat	tom)	Sampling Point #: 078		
Depth	Horizon	Soil Matrix					1 1116 0036	ilos of lituloa				
(in.) () - 4	(opt.)	Color (moist)	%	Color (moist)	dox Fea <u>%</u>	Type ¹	Loc2	_Texture_	a,a dip. (pos/ nea)	Remarks (or use comment number)		
4-20	A	104411	80	542414	20		M,PL	SIL	pos			
√*			= :	TE TE	Ξ	- 4		- 10	10			
				30					_			
					_		=		_			
¹Type: C	= Concentra	ation, D = Depletion	 RM = Rec	duced Matrix, CS=	Coated :	Sand Grain	ns ² Locatio	on: PL = Pore	Lining, RC =	Root Channel, M = Matrix		
Hydric Sc	oil Indicator	rs (check ones that	apply, mea	asure from top of	minera	l layers ur	nless othe	erwise noted	i):	7		
	Indicators:			Indicators fo	r Proble	ematic Hy	dric Soils	33:				
N_ Hist	osol or Histe	el (A1)		Alaska	Color Cl	hange ⁴ (TA	(4)			f hydrophytic vegetation,		
		(A2) (8-16" organics	. sat'd.							cator of wetland		
1		nineral soil with chroma				Swales (TA vith 2.5Y H		po		n appropriate landscape present unless disturbed		
Hyd		le (A4) (within 12"of	mineral	(-		without Hu	e 5Y or R	40		color change in Remarks.		
	k Dark Surfa			\ Other (e		ayer p.91 of 2007 colain in Ren						
	ka Gleyed (OGDEN	J. 110111. 0x	wall in 1 (bi)	HEINST					
	ka Redox (A	•										
	ka Gleyed F				FE.	7.0						
	e Layer (if pr	esent)		Drainage Cla		'U						
Type: Depth	(inches)	*		Soil Map Unit	Name:		Hyd	dric Soil Pre	sent? Y	'es <u>/</u> No		
Comment 1. 2. 3.												
		ndicators (check or	nes that an	nly measure from	n enil eı	urface\:	Soco	andani Indian	tors (at least 2	(am enguland)		
D. L	D			ply, measure non	11 3011 31	uriace).			d Leaves (B9)			
M Surfac	ce Water (A	1)		ace Soil Cracks (B	6)		4					
TV High V	Water Table	(A2) (w/in 12")	N Inune	dation Visible on A	erial Im:	egery (R7)	4					
A/	ation (A3) (v		A I	sely Vegetated Co			V .	Presence of i	Reduced Iron			
	Marks (B1)		4.1	Deposits (B15)			4/1	Salt Deposits	(C5)	1 /2 N		
	nent Deposit Deposits (B3		. "	ogen Sulfide Odor					ressed Plants	(D1)		
A/			./	Season Water Tab	le (C2)			Geomorphic (, ,	-11 11		
Algal	Mat or Crus	t (B4)	/V Othe	r (explain)			_ // -	Shallow Aquii (w/in 24", cai	iard (D3) n perch H2O v	v/in 12")		
_ N Iron D	eposits (B5))						Microtopogra	phic Relief (De	1) (caused by water)		
_							+	FAC Neutral (# OBL+FAC)	Fest (D5) W dominants >	# FACU+UPL dominants)		
Field Obse	ervations (in	. from ground surfac	:e): /									
Surface W	ater Presen	t? Yes	No V	_ Depth of water	er (in.) _	-		4.41				
Water Tab	le Present?		No	Depth to water								
Cotuestina	D10		- /	t depth but not yet				7				
Saturation		Yes	No V				Wetl	and Hydrolo	gy Present?	Yes No		
	capillary fring Recorded Da	ge) ata (stream gauge, r	nonitoring		Unkno		ine) if au	ailahle:		mer are per to all		
Remarks:			- Incritioning	wen, denai priotos.	, praviou	is inspection)	anable.				
ad 40	ent to s	tream - R3	NBH,	4' wide,	8" d	lep, gl	If no	on here -	low grad	into Equilium		
CAMI	TUC								U			

	WETLAND DE	5-254	A (10)			diala
roject: WEST SV to	ass	Borough/City:	1/1810	-70	Date:	118/2020
pplicant/Owner:	SA .		1731		Sampling Poi	nt #: <u>037</u>
vestigator(s):	, , , , , , , , , , , , , , , , , , , ,			OR Alaska, Inc.	./	16
at. (dec.°) 61.531262		((± NAD 83			ed on map?	Field Map #:
ubregion (circle one): SE So						Aspect: NE
ocal relief: Shape across slope						47.C A
hoto nos./descriptions: 90:1					_evel 4 or other):	
re climatic / hydrologic conditio	1.0				HGM type:	
re Vegetation <u>N</u> , Soil <u>N</u> , o	. 1				Yes No	-
re Vegetation _//, Soil _//_, o	or Hydrology/V naturall	y problematic? If need	ded, explain a	nswers here.		
UMMARY OF FINDINGS	-40 V (1- 1				
Hydrophytic Vegetation Preser			sampled area		-,-	
Hydric Soil Present?			n a wetland?) <u>/</u>	i .
Wetland Hydrology Present?		No <u>/</u>		Remarks (e.g., n	narginai?):	*
EGETATION (Use scientific	names.) Estimate absolut	3 % cover (not relative o	cover). % can	total >100%. Dominance Test v	vorksheet:	*
Tree Stratum (dbh≥ 3")				40.		A
Species Cov % D	om? Ind. Species		n? Ind.	Number of Domina That are OBL, FAC		(A)
2. PAP TC 5	9 - 4 - 1			96		AC.
3. Pit gla 3			and the same of th	Total Number of De Species Across All		
4. PTC ALL SMP2 12	8					(0)
4	Total Tree Cover:	13	7	Percent of Domina That are OBL, FAC		20 (A/B)
50% of total cover:	.5	% of total cover:	.6	Prevalence Index		<i>PU</i> (<i>NB</i>)
Sapling/Shrub Stratum (wood)		78 OI IOIAI COVEI.	25	Total % Co	over of:	Multiply by:
Abs.Cov.% D		Abs.Cov.% Doi	m? Ind.	OBL species		X1=
1. Men K 75 >	FATU 7			FACW species		X2=
2 March 15 _	FAC 8			FAC species	20	x3= 117
3. An Cr 2 2	- A & A & A & A			FACU species	12/1	X4= 536
5. (Liss sich 8	-aAd-1			UPL + NL species		X5=
6. Soi Sol 13	FAW 12.			Column Totals: _	173 (A)	653 (B)
1 1	Sapling/Shrub Cover: _	115		Column rotals	(A)	(0)
	-7-	1	12	Orașialanea las	lou - 0/A -	3.77
50% of total cover: Herb Stratum	20	% of total cover:2	,	Prevalence inc	lex = B/A =	<i>D</i>
Abs.Cov.% Do	om? Ind.	Abs. Cov.% Do	m? Ind.			
1. Cal can 10	FAC 12.			Hydrophytic Vege	station Indicator	's:
2. Vry 011 10	M PACU 13.					41
3. Lybo an 3 4. Fall syl 2	P/W 14			N Dominance Prevalence		
5. Rut Old T	PAC 16.		-			
6.				Morphologic	cal Adaptations' (emarks or on a se	(Provide supporting eparate sheet)
7						getation¹ (Explain)
8				Problemand	: Hydropriyac ve	getation (Explain)
9	20			1		
10	21			¹ Indicators of hydr be present unless	ic soil and wetlar disturbed or prof	nd hydrology must olematic.
11	22	<u> </u>	-	35 p. 355 81 NOSS		
	.76		1			
50% of total cover: _		% of total cover:	+	Hydrophytic Vegetation	Yes	No _ ✓
Circular 1/10-ac plot or c % Cover of Wetland Bryophyt	ther plot dimension:	% of bare grou	ind: 15	Present?		

OIL								Sampling Point	#: 037	
Profile Description: (Describe to the de	pth needed to				n the absenc	e of indic				
Depth Horizon Soil Matrix			dox Fea				a,a dip. (pos/	Rema	ırks	
(in.) (opt.) Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	neg)	(or use comme		
1-2 <u>0e</u> 104K3/2	-		-			611		-		
15 E 154411	00		_	-	_	51			37.	
1.5991	160		-			21		industris of a	4	
5-18 131 2.54412	85 3	542314	15		PLEL, M	S.L.	-	redox on SA	d Milusa	
3-20 BZ 1.545/4		414 416	10		RLympec	الماز ك	- =	-		
	10									
							- —			
			_		_					
Type: C = Concentration, D = Depletion								= Root Channel	, M = Matr	
lydric Soil Indicators (check ones that	apply, meas						ed):			
Standard Indicators: M Histosol or Histel (A1)		Indicators fo					One indicator	of hydrophytic v	enetation	
					A4)			dicator of wetlan		
Histic Epipedon (A2) (8-16" organic undertain by mineral soil with chrom	s, sat'd, a ≤2ì	Alaska	Alpine S	Swales (T/	A5)			an appropriate		
Black Histic (A3)	4-2,	Alaska	Redox v	with 2.5Y	Hue - No Pr	muny 1	position must i or problematic	be present unles	s disturbed	
Hydrogen Sulfide (A4) (within 12"of	mineral				<i>y</i> ue 5Y or Red	4.1.		of color change in	Remarks.	
surface; @* in this pit	Inflicial		erlying L		ue 31 01 11e0	idei		-		
Thick Dark Surface (A12)		Other (c	e.g., see	p.91 of 200						
Alaska Gleyed (A13)		Suppl	ement: e:	colain in Re	marks)					
Alaska Redox (A14)										
Alaska Gleyed Pores (A15)			-							
Restrictive Layer (if present)		Drainage Cla	ISS:	WD			3.1			
Type:		Soil Map Uni			Hydr	ic Soil P	resent?	Yes	No V	
Depth (inches)		Con map on			,					
2. 3. YDROLOGY Wetland Hydrology Indicators (check		ly, measure from	m soil s	urface):				t 2 are required)		
Primary Indicators (any one indicator is					7V W	ater-Stai	ned Leaves (E	19)		
/V Surface Water (A1)		e Soil Cracks (B			7V D	rainage P	atterns (B10)		-	
High Water Table (A2) (w/in 12")		ation Visible on A			AID	Oxid'd Rhizospheres on Living Roots (C3) (within 12") A/ Presence of Reduced Iron (C4)				
Saturation (A3) (w/in 12")		ely Vegetated Co	oncave	Surface (E				hange w/in 12")		
Water Marks (B1)		Deposits (B15)			_// S	alt Depos	its (C5)			
Sediment Deposits (B2)	47	gen Sulfide Odo					Stressed Plan			
V Drift Deposits (B3)	_// Dry-S	eason Water Tal	ble (C2)				ic Position (D2	2)		
N Algal Mat or Crust (B4)	N Other	(explain)			_//s	hallow Ac	quitard (D3)	O	V	
√Iron Deposits (B5)		(,,			47.		can perch H20	D W/IN 12") (D4) (caused by w	-11	
TY ITON Deposits (B5)	7						rapnic Heller al Test (D5)	(D4) (caused by w	aterj	
						(# OBL+F	ACW dominants	> # FACU+UPL	dominants)	
Field Observations (in. from ground surf		Denth 4	0							
	No V	Depth of wat								
	Ale V	Depth to wat	ter (in.)							
Water Table Present? Yes	No								1	
Water Table Present? Yes	ing in at that	depth but not ye		10					. /	
Water Table Present? See Saturation Present? Yes Yes		Depth to sat	. (in.)	19	Wetla	nd Hydro	ology Present	t? Yes	No	
Water Table Present? See Saturation Present? Yes Yes (includes capillary fringe)	oing in at that	Depth to sat Epi Endo	. (in.) Unkn	l9 own			ology Present	t? Yes	No <u>√</u>	
Water Table Present? See Saturation Present? Yes Yes (includes capillary fringe)	oing in at that	Depth to sat Epi Endo	. (in.) Unkn	l9 own			ology Present	t? Yes	No <u></u>	
Water Table Present? Yes	oing in at that	Depth to sat Epi Endo	. (in.) Unkn	l9 own			ology Presen	t? Yes	No _	

198	WETLAND D	ETERMINATIO	N DATA FORM -	Alaska Region	
Project: West SU Acc	213	Borough/0	City: MSF	3	Date: 9/18/2020
Applicant/Owner: AIDFA			.,,		Sampling Point #: 040
	N. Hotel	~	Firm: H	DR Alaska, Inc.	
	Long. 150.49	2835 ± ' N			I on map? V Field Map #: 15
Subregion (circle one): SE Southo					Slope (%): 3 Aspect: Sw
Local relief: Shape across slope: line					I classification: PSSIC
Photo nos./descriptions: 501 %	Z NEW	suface flow	Camera #: 1204	Veg Type (Viereck Le	vel 4 or other): IB25
Are climatic / hydrologic conditions or					
Are Vegetation N, Soli /, or Hy	drology $_{N}$ signif	icantly disturbed?	Are "Normal Circu	mstances" present? Y	es No
Are Vegetation, Soil, or Hy	drology _//_ natur	ally problematic?	. If needed, explain a	answers here.	
SUMMARY OF FINDINGS	/			6 //	
Hydrophytic Vegetation Present?	Yes	No	Is the sampled are	a /	
Hydric Soil Present?	Yes	No	within a wetland?	Yes_V No_	
Wetland Hydrology Present?	Yes V	No		Remarks (e.g., ma	rginal?):
VEGETATION (Use scientific name	es.) Estimate absol	ute % cover (not r	elative cover). % car	total >100%. Dominance Test wo	all a la sate
Tree Stratum (dbh≥ 3")				Dominance rest wo	irksneet:
Species Cov.% Dom?	Ind. Species	Cov.9	% Dom? Ind.	Number of Dominant That are OBL, FACW	
2	6.	-		Total Number of Don	
3	7			Species Across All S	
4	8				
То	tal Tree Cover:			Percent of Dominant That are OBL, FACW	
50% of total cover:		20% of total cover:		Prevalence Index w	orksheet:
Sapling/Shrub Stratum (woody plan				Total % Cov	er of: Multiply by:
Abs.Cov,% Dom?	Ind.	Abs.Cov.	.% Dom? Ind.	OBL species	X1=
1. Aln ten col 1	PAC 7.			FACW species	X2=
3. Rib ta 5	FM. 9.	111		FAC species	147 x3= 441
4	10			FACU species	10 X4= Y0
5	11			UPL + NL species _	X5=
6	12			Column Totals:	57 (A) 481 (B)
Total Saplin	g/Shrub Cover:	70	70 311		0 0
50% of total cover:	35	20% of total cover	140	Prevalence Inde:	x = B/A = 3,00
Herb Stratum					
Abs. Cov. % Dom?	Ind. PKC 12.	Abs. Cov.	% Dom? ind.	-105- 6	
2. FAU GIV 5	FAC 13.		Di The Land	Hydrophytic Vegeta	ation Indicators:
3. SON CON I	FMW14.			Dominance T	
4. Cymony +	PAW 15			Prevalence In	dex is ≤3.0
5. 11 50 T				Morphologica	Adaptations ¹ (Provide supporting
6. Rub and T	~D-11	-		data in Rem	arks or on a separate sheet)
8. Mu d. 1 7	FAW19.			Problematic H	lydrophytic Vegetation¹ (Explain)
9. 1	20				
10	21,				soil and wetland hydrology must
11	22			pe present unless di	sturbed or problematic.
То	tal Herb Cover:	87	.7.,		/
50% of total cover:		20% of total cover		Hydrophytic Vegetation	Yes No
Circular 1/10-ac plot or other p	olot dimension:	% of ba	re ground: 15	Present?	163110
% Cover of Wetland Bryophytes (where applicable)		m was and	hytes <u>5</u> %		and the same of th
Gryn dry, by dil, The sp	ac on dow	red treed-	ent of styling	Hed 2011 - M	iteralist deposits

SOIL		Sampling Point #: OYO
Profile Description: (Describe to the depth needed	to document the indicator or confirm the	ne absence of indicators)
Depth Horizon Soil Matrix	Redox Features	α,α dip.
(in.) (opt.) Color (moist) %	Color (moist) % Type¹	Loc² Texture (pos/ Remarks neg) (or use comment number)
16-20 A 10-41-311 Por -	1/4 / 1/2	PSUL -
	AND THE RESERVE OF THE PERSON	
¹Type: C = Concentration, D = Depletion, RM = Redu	uced Matrix, CS=Coated Sand Grains	Location: PL = Pore Lining, RC = Root Channel, M = Matrix
Hydric Soil Indicators (check ones that apply, mea		
Standard Indicators:	Indicators for Problematic Hydri	
Histosol or Histel (A1)	Alaska Color Change ⁴ (TA4)	³ One indicator of hydrophytic vegetation,
Mistic Epipedon (A2) (8-16" organics, sat'd, underlain by mineral soll with chroma ≤2)	Alaska Alpine Swales (TA5)	one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed
Bfack Histic (A3) Hydrogen Sulfide (A4) (within 12*of mineral surface; @* in this pit	Alaska Redox with 2.5Y Hue Alaska Gleyed without Hue 5	or problematic.
surface; @VI* in this pit V_Thick Dark Surface (A12)	Underlying Layer Other (e.g., see p.91 of 2007	
Alaska Gleyed (A13)	Supplement: explain in Remar	ks)
Alaska Redox (A14)	ac at	
Alaska Gleyed Pores (A15)		
Restrictive Layer (if present)	Drainage Class: VPD	
Type:	Soil Map Unit Name:	Hydric Soil Present? Yes No
Comments: 1, 2. 3.		
HYDROLOGY		
Wetland Hydrology Indicators (check ones that app	ly, measure from soil surface):	Secondary Indicators (at least 2 are required)
Primary Indicators (any one indicator is sufficient) Y Surface Water (A1) N Surface	ce Soil Cracks (B6)	₩ Water-Stained Leaves (B9)
	ation Visible on Aerial Imagery (87)	Drainage Patterns (B10)
V	ely Vegetated Concave Surface (B8)	✓ Oxid'd Rhizospheres on Living Roots (C3) (within 12") — Presence of Reduced Iron (C4)
.1	Deposits (B15)	/ (pos. a,a or soil color change w/in 12") Salt Deposits (C5)
Sediment Deposits (B2)	gen Sulfide Odor (C1)	I Stunted or Stressed Plants (D1) aldes
N Dry-S	eason Water Table (C2)	Geomorphic Position (D2) Grully
· Algal Mat or Crust (B4)	(explain)	/\Shallow Aquitard (D3) , (w/in 24", can perch H2O w/in 12")
✓ Iron Deposits (85)		Microtopographic Relief (D4) (caused by water) N FAC Neutral Test (D5)
Field Observations (in. from ground surface):		(# OBL+FACW dominants > # FACU+UPL dominants)
Surface Water Present? Yes No	Depth of water (in.) 2-8	
Water Table Present? Yes No	Depth to water (in.) 17	#
Seeping in at that	depth but not yet filled?: 4	
Saturation Present? Yes V No	Depth to sat. (in.)	Wetland Hydrology Present? Yes Vo No
(includes capillary fringe)	Epi Endo Unknown	
Describe Recorded Data (stream gauge, monitoring w	eir, aerial photos, previous inspections	s), if available:
Remarks: Strum ~120': tost atosa. Sulares	Now through out auth bottom	. High rains this well.
stram ~120'tost atoss. Surface (plot. Endere of Schimer	+ oleposits on vag throughout.

WETLAND DETERMINATION DATA FORM -	- Alaska Hegion
Project: West SV Heass Borough/City: MSB	Date: 9/18/2020
Applicant/Owner: AIDEA	Sampling Point #: 612
Investigator(s): A GULL N. HOCK Firm: H	IDR Alaska, Inç.
/ Fig and sent sent	n GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfo	1 - 1
Local relief: Shape across slope: finea / convex / concave Shape up/downslope: finear / convex / concave	DECILIA
	Veg Type (Viereck Level 4 or other): TC3- glack prove
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: V No:	-08/2
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circu	
Are Vegetation 1, Soil 1, or Hydrology 1 naturally problematic? If needed, explain	
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No.	
Hydric Soil Present? Yes No within a wetland?	
Wetland Hydrology Present? Yes Vo	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % call	n total >100%
	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
1. PIC MOV 15 Y FACU 5.	That are OBL, FACW, or FAC:
2. Bet pag 3 FAC 6.	Total Number of Dominant
3	Species Across All Strata:
4 8	Percent of Dominant Species
Total Tree Cover:	That are OBL, FACW, or FAC: (A/B)
50% of total cover: 9 20% of total cover: 3.6	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	OBL species X1=
1 PIC MAY 20 4 FACW 7 AMM C/1 3 FACU 8 Spi Ste 2 FACU	FACW species 40 X2=60
3 Rho gro 15 PAC 9. VILL OVA 7 FAC	FAC species 64 X3= 19Z
4 FMP NIA 1 FAC 10.	FACU species 28 X4= 112
5 VOCVIT 2 PRC 11.	UPL + NL species X5=
6. Bet non 8 PAC 12.	Column Totals: 132 (A) 394 (B)
Total Sapling/Shrub Cover: 83	
11 E	Prevalence Index = B/A = 2.91
50% of total cover: 20% of total cover: 115 20% of total cover: 155 20% of tot	Trovalence mack = 5/1 =
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Calcon 16 4 EXC 12.	Hydrophytic Vegetation Indicators:
2. Ly (ann 1 FACU 13	N Dominance Test is>50%
3 Equisil 7 4 FRC14.	Prevalence Index is ≤3.0
4. Car later 5 FRW15	
5. 17.	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
6	
7	Problematic Hydrophytic Vegetation¹ (Explain)
9 20	
10	¹ Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 3	,
50% of total cover: 15.5 20% of total cover: 6.2	Hydrophytic
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Vegetation Yes No
% Cover of Wetland Bryophytes% Total Cover of Bryophytes%	
(where applicable)	
Remarks: Old is whin slightly transition al crea, slightly higher in	I dev. then larger wetlend.

SOIL				(E)		190005	ندو را را ندود		Sampling Point #: 042		
Profile Descrip	otion: (Describe to the	depth needed	I to document the	indicator	or confirm	the abser	nce of indic	ators)	Albania I		
Depth Horiz	on Soil Mat	rix	Re	edox Feat	ures			a,a dip.	Dame I.		
(in.) (opt.		<u>%</u>	Color (moist)	%	Type ¹	Loc2	_Texture	(pos/ neg)	Remarks (or use comment number)		
0-3 00	10yR2/1	180				1700	Cled				
3-5 A	254512	109				5	SIL		inclusions of charload		
5-11 B	2.54 413	9 5	54R3/6	P	<u>C</u>	PLIL	2,2		0		
INTE B	2 2.54313	<u> </u>	L.54K313	15 60	<u>C</u>	PL	Sil		PL=sandgy4ing		
17-10 0	3 545/2	40	54R414	60	C	PL	Salo				
_				1125		_	-				
	-			. —							
				. —			_				
									= Root Channel, M = Matrix		
	licators (check ones to	nat apply, me						ed):			
Standard India			Indicators f					30	- f f d		
// Histosol o	or Histel (A1)		_// Alaska	Color Ch	ange⁴ (TA	(4)			of hydrophytic vegetation, dicator of wetland		
	pedon (A2) (8-16" organ			Alpine S	wales (TA	5)		hydrology, and	an appropriate landscape		
N Black His	ain by mineral soil with chr tic (A3)	uma sz)	_Y_ Alaska	Redox w	ith 2.5Y H	lued [/]		position must b or problematic.	pe present unless disturbed		
	Sulfide (A4) (within 12	of minoral	N Alaska						f color change in Remarks.		
surface; (in this pit	OI IIIIII BIBI		lerlying La		0 0 0	60061				
N_ Thick Da	k Surface (A12)	(5)	Other		.91 of 2007 plain in Rer						
N Alaska G	leyed (A13)		Odbi	nemont. ex	Diam in 1101	Halkai					
Alaska R	edox (A14) 🖈										
A Alaska G	leyed Pores (A15)		- *								
Restrictive Lay	er (if present)		Drainage CI	ass:	SPD				1		
Туре:			Soil Map Un	it Name:		Нус	Hydric Soil Present? Yes No				
Depth (inc	hes)			710 -	1.						
Comments:	atra sa el e	ahabus 1	16" wilso	151 A	- 1 Dr	1 00	Alada .	nee D7	while 2" of satisfying		
2. All Oa	lon (starts at	diamilia.	01 0 00/111	10 9	411.41	1 001 1	quijut 1	180, 05	WHERE IN STANISHIN		
3. AL PU	MY (SIMIS ON	14),						1	3		
HYDROLOGY							- 4.6				
3 - F	ology Indicators (chec			om soil s	urface):			The STATE OF THE S	2 are required)		
	tors (any one indicato					A .		ned Leaves (B			
✓ Surface W ✓ V ✓ Surface W ✓ V ✓ V ✓ V ✓ V ✓ V ✓ V ✓ V ✓			ace Soil Cracks ((0.00)			Patterns (B10)			
1.1	r Table (A2) (w/in 12")		ndation Visible on			AZ.		zospheres on L of Reduced Iro	Living Roots (C3) (within 12")		
1 4.	(A3) (w/in 12")	A .	rsely Vegetated C	Concave S	Surface (B	A	(pos. a,a	or soil color ch	hange w/in 12")		
Water Mai		4.4	t Deposits (B15)			/1/	Salt Depos				
7.4	Deposits (B2)	4.	rogen Sulfide Ode				/V Stunted or Stressed Plants (D1)				
N Drift Depo		<u>/</u> V Dry	Season Water Ta	able (C2)				ic Position (D2)		
1 Algal Mat	or Crust (B4)	<u></u> ∕V Oth	er (explain)			<u>//</u>		quitard (D3) can perch H2C) w/in 12")		
_/Iron Depo	sits (B5)					N			D4) (caused by water)		
								al Test (D5)			
Field Observed	i (i- f	reference):					(# OBL+F	ACW dominants	> # FACU+UPL dominants)		
Surface Water	ions (in. from ground si Present? Yes	No <u>√</u>	Depth of wa	ater (in)							
Water Table P		No V	Depth to wa								
			at depth but not y								
Saturation Pre						Wet	land Hydr	ology Present	2 Vac No		
(includes capil		1.0		Unkno		1000	and tryul	vg, i resellt	. 100 110		
	rded Data (stream gau	ge, monitoring				ions), if av	ailable:	1-			
Pomortes		-0				5		1-8			
Remarks:	a a Lateral	hora.	a bas to	+ au	10 1	2010	VMA-	oit ela	+ ES M + Parishin		
2 di Man	-1 1	J. Ora	111	0 24.		000	/ 1	Pill	1. 0.		
war	slight rise.	SWILLE	mate of	serve	in	wette	ny to	NEIOUS	it is M transitive		
		11									

WETLAND DETERMINATION DATA FORS	W – Alaska Region
And the A	8B Date: 9/18/7070
Applicant/Owner:	Sampling Point #: 0490
	n: HDR Alaska, Inc.
	ed on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Lar	ndform: LawLand Slope (%): Aspect:
Local relief: Shape across slope: Inear/ convex / concave Shape up/downslope: Inear	s/convex/concave NWI classification: PSSIR-MIB
Photo nos./descriptions: SOILZ VEW Camera #:	Pay Veg Type (Viereck Level 4 or other): #2
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: 📈 No:	If no, explain. HGM type:
Are Vegetation <u>M</u> , Soil <u>M</u> , or Hydrology <u>M</u> significantly disturbed? Are "Normal C	Circumstances" present? Yes No
Are Vegetation	ain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No Is the sampled	
Hydric Soit Present? Yes/_ No within a wetla	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). %	can total >100%.
	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. 1 5	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2 6	Total Number of Dominant
3 7	Species Across All Strata: (B)
4 = 8 =	Percent of Dominant Species
Total Tree Cover:	That are OBL, FACW, or FAC: [90 (A/B)
50% of total cover: 20% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? In	d. OBL species X1=
1. My gal 30 y OBL 7	FACW species 17 X2= 3 4
2. Bot 900 15 4 FMC 8.	FAC species 35 x3= 105
3. Pha cal 10 EMW 9.	
4. Val 0+4 3 08210	FACU species X4=
6. Sal 11 2 = 1 wh2.	UPL + NL species X5=
	Column Totals: 170 (A) 20+ (B)
Total Sapling/Shrub Cover: (5	Providence Index = B/A = 1,73
50% of total cover: 32.5 20% of total cover: 13	Prevalence Index = B/A =
A .	d.
1. Cal ca 5 - PAC 12	Hydrophytic Vegetation Indicators:
3.60 sch 30 4 0BL 14.	y Dominance Test is>50% y Prevalence Index is ≤3.0
4. <u>Ch. Ch. M. M. K. M. L. M. L. L.</u>	Morphological Adaptations¹ (Provide supporting
7 17 18	data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation¹ (Explain)
9	
10 21	1 Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 55	
50% of total cover: 17.5 20% of total cover: 11	Hydrophytic
Circular 1/10-ac plot ✓ or other plot dimension: % of bare ground:	Vegetation Yes No
% Cover of Wetland Bryophytes% Total Cover of Bryophytes%	% Present?
Remarks: Sphaym	
U	

IL rofile Description	: (Describe to the de	oth neede	d to document the i	indicator	or confirm	the abse	nce of indi	icators)	Sampling Point #:
epth Horizon	Soil Matrix		0	dox Feat	Per			a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Textur	(nos/	Remarks
)-4 0 i		-			1,12			neg)	(or use comment number
-11 De	7.5 YR312	-		Desire la	_	-	-	s	
11 1/2	104412			Details.	_	<u></u>	-		-
17 A	10 912/1	100		-	_	SIL			
				_			-		
				_					
(i - 1 % 1 1 1 1					2 0				
	7 (CX)			-01					
				_	1		23		
ype: C = Concent	ration, D = Depletion	, RM = Re	duced Matrix, CS=	Coated S	and Grain	ns ² Locati	on: PL = P	ore Lining, RC	= Root Channel, M = Ma
ydric Soil Indicat	ors (check ones that	apply, me	asure from top of	mineral	layers u	nless oth	erwise no	ted):	
- tandard Indicator			Indicators fo						
N Histosol or His	tel (A1)				ange ⁴ (T			³ One indicator	of hydrophytic vegetation
u u	n (A2) (8-16" organics	e cat'd	i						dicator of wetland
	mineral soll with chrom		Alaska	Alpine S	wales (TA	15)			d an appropriate landsca; be present unless disturb
Black Histic (A	.3)		Alaska	Redox w	ith 2.5Y h	lue		or problematic	
	ide (A4) (within 12"of	mineral	Alaska	Gleved v	vithout Hu	e.5Y or P	ledder	4Give details of	of color change in Remark
surface; @	" in this pit	El	- 1	erlying La					
Thick Dark Su	rface (A12)		Other (e.g., see p	.91 of 200				
Alaska Gleyed			Supol	ement; exi	olain in Re	marks)			A
Alaska Redox									
Alaska Gleyed			10		-				
estrictive Layer (if	present)		Drainage Cla	155:	PD	1000			
					4 63				11 1 1
	* 1		Soil Map Uni			Ну	dric Soil I	Present?	Yes No
Depth (inches) comments: //DROLOGY Vetland Hydrology rimary Indicators // Surface Water High Water Tat // Saturation (A3) // Water Marks (E) // Sediment Depo // Drift Deposits (I) // Algal Mat or Cr	y Indicators (check of (any one indicator is (A1) ole (A2) (w/in 12") (w/in 12") (sits (B2) B3)	Sufficient) \[\subseteq \subseteq \subseteq \lambda \] \[\subseteq \lambda \] \[\subseteq \subseteq \lambda \subseteq \lambda \] \[\subseteq \subseteq \subseteq \lambda \	pply, measure fro	m soil su 36) Aerial Ima oncave S	urface): agery (87	Sec 1/2 1/2 1/8) //	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24"	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iros or soil color cosits (C5) or Stressed Planhic Position (D3), can perch H20	t 2 are required) 39) Living Roots (C3) (within on (C4) change w/in 12") ats (D1) 2) O w/in 12")
Depth (inches) comments: DROLOGY Vetland Hydrology rignary Indicators V Surface Water High Water Tat Saturation (A3) V Water Marks (EV V Sediment Depot V Drift Deposits (IV V Algal Mat or Cr V Iron Deposits (IV	y Indicators (check of (any one indicator is (A1)) ble (A2) (w/in 12") (w/in 12") 31) bits (B2) B3) ust (B4)	Sufficient) \(\sum \) \(\s	pply, measure from face Soil Cracks (Endation Visible on A arsely Vegetated C of Deposits (B15) drogen Sulfide Odd Season Water Ta	m soil su 36) Aerial Ima oncave S	urface): agery (87	Sec A/ N (8) A/ N N	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or soil color cosits (C5) ar Stressed Planhic Position (D3), can perch H20 agraphic Relief tral Test (D5)	at 2 are required) 39) Living Roots (C3) (within ton (C4) change w/in 12") ats (D1)
Depth (inches) comments: DROLOGY Vetland Hydrology Vetland Hydrol	y Indicators (check of (any one indicator is (A1)) ble (A2) (w/in 12") (w/in 12") (st) (st) (st) (st) (st) (st) (st) (st	Sufficient) V Sur V Spa V Spa V Hyo V Oth	pply, measure from the face Soil Cracks (Endation Visible on a carsely Vegetated Corl Deposits (B15) drogen Sulfide Odder-Season Water Taller (explain)	m soil su 36) Aerial Ima oncave S or (C1) ble (C2)	urface): agery (B7 Surface (B	Sec A/ N (8) A/ N N	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or soil color cosits (C5) ar Stressed Planhic Position (D3), can perch H20 agraphic Relief tral Test (D5)	Living Roots (C3) (within on (C4) change w/in 12") on (D1) on w/in 12") O w/in 12") (D4) (caused by water)
Depth (inches) Comments: COMMENT OF THE PROPERTY OF THE PROPE	y Indicators (check of (any one indicator is (A1)) ble (A2) (w/in 12") (w/in 12") B1) bisits (B2) B3) bust (B4) B5) (in. from ground surfacent? Yes	Sufficient) Sur Inu Spa W Spa W Hyo Oth Ace): No	pply, measure from the face Soil Cracks (Endation Visible on American Proposits (B15) drogen Sulfide Odder-Season Water Tailer (explain)	m soil su 36) Aerial Ima oncave S or (C1) ble (C2)	urface): agery (87 Surface (8	Sec A/ N (8) A/ N N	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or soil color cosits (C5) ar Stressed Planhic Position (D3), can perch H20 agraphic Relief tral Test (D5)	Living Roots (C3) (within on (C4) change w/in 12") on (D1) on w/in 12") O w/in 12") (D4) (caused by water)
Depth (inches) Comments: COMMENT	y Indicators (check of (any one indicator is (A1) ole (A2) (w/in 12") (w/in 12") (sits (B2) B3) ust (B4) (in. from ground surfacent? Yes	Sufficient) \(\subseteq \text{Sur} \\ \superseteq \text{Nound} \) \(\subseteq \text{Nound} \) \(\subseteq \text{Nound} \) \(\subseteq \text{Sur} \) \(\subseteq \text{Nound} \)	pply, measure from the face Soil Cracks (Endation Visible on Acres Vegetated Control Deposits (B15) drogen Sulfide Odder-Season Water Tailer (explain) Depth of was Depth to was	m soil su m soil su 36) Aerial Ima oncave S or (C1) ble (C2)	agery (B7	Sec A/ N (8) A/ N N	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or soil color cosits (C5) ar Stressed Planhic Position (D3), can perch H20 agraphic Relief tral Test (D5)	Living Roots (C3) (within on (C4) change w/in 12") on (D1) on w/in 12") O w/in 12") (D4) (caused by water)
Depth (inches) Comments: COMMENT	y Indicators (check of (any one indicator is (A1)) le (A2) (w/in 12") (w/in 12") 31) sits (B2) B3) ust (B4) B5) (in. from ground surfacent? Yes TYES Seep	Sufficient) VSur VSur VSpa VSpa V Hyc VOth ace): No Sing in at the	pply, measure from the face Soil Cracks (Endation Visible on Arsely Vegetated Corl Deposits (B15) drogen Sulfide Odder-Season Water Tainer (explain) Depth of was not depth but not yet.	m soil su 36) Aerial Ima oncave S or (C1) ble (C2)	urface): agery (B7 Surface (B	Sec A/ A/ A/ A/ A/ A/ A/ A/	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorpi Shallow A (w/in 24", Microtopo FAC Neur (# OBL+	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or or soil color crosits (C5) ar Stressed Planhic Position (D3), can perch H20 ographic Relief tral Test (D5) FACW dominants	Living Roots (C3) (within for (C4) thange w/in 12") O w/in 12") O w/in 12") (D4) (caused by water) s > # FACU+UPL dominants
Depth (inches) Comments: Depth (inches) Comments: Depth (inc	y Indicators (check of (any one indicator is (A1)) le (A2) (w/in 12") (w/in 12") (sits (B2) (B3) ust (B4) (in. from ground surfacent? Yes Yes Yes	Sufficient) \(\subseteq \text{Sur} \\ \superseteq \text{Nound} \) \(\subseteq \text{Nound} \) \(\subseteq \text{Nound} \) \(\subseteq \text{Sur} \) \(\subseteq \text{Nound} \)	pply, measure from the face Soil Cracks (Endation Visible on American Proposits (B15) drogen Sulfide Odder-Season Water Tailer (explain) Depth of was per depth to was the depth but not yet to sail	m soil sums: m soil sums: 36) Aerial Ima oncave S or (C1) ble (C2) ter (in.) _ et filled?: t. (in.) _	agery (B7 Surface (B	Sec A/ A/ A/ A/ A/ A/ A/ A/	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorpi Shallow A (w/in 24", Microtopo FAC Neur (# OBL+	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or soil color cosits (C5) ar Stressed Planhic Position (D3), can perch H20 agraphic Relief tral Test (D5)	Living Roots (C3) (within the control of (C4) within 12") Ints (D1) O w/in 12") (D4) (caused by water) S > # FACU+UPL dominants
Depth (inches) comments: DROLOGY detiand Hydrology rimary Indicators Surface Water High Water Tat Saturation (A3) Water Marks (E V Sediment Deposits (includes Capillary for Capillary	y Indicators (check of (any one indicator is (A1)) ole (A2) (w/in 12") (w/in 12") osits (B2) B3) ust (B4) B5) (in. from ground surfacent? Yes ont? Yes ringe)	Sufficient) Sur Inu Spa W Spa W Hyo Oth Ace): No Who in at the	pply, measure from the face Soil Cracks (Endation Visible on American Proposits (B15) drogen Sulfide Odder-Season Water Tailer (explain) Depth of water Depth to water to sail the face of the face o	m soil su 36) Aerial Ima oncave S or (C1) ble (C2) ter (in.) _ et filled?: Unkno	agery (B7 Surface (B	Sec Au N N N N We	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur (# OBL+)	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or or soil color crosits (C5) ar Stressed Planhic Position (D3), can perch H20 ographic Relief tral Test (D5) FACW dominants	Living Roots (C3) (within for (C4) thange w/in 12") O w/in 12") O w/in 12") (D4) (caused by water) s > # FACU+UPL dominants
Depth (inches) omments: DROLOGY retiand Hydrology rigary Indicators Surface Water High Water Tat Saturation (A3) Water Marks (EV Sediment Deposits (IV Algal Mat or Cr Iron Deposits (IV Iron	y Indicators (check of (any one indicator is (A1)) le (A2) (w/in 12") (w/in 12") (sits (B2) (B3) ust (B4) (in. from ground surfacent? Yes Yes Yes	Sufficient) Sur Inu Spa W Spa W Hyo Oth Ace): No Who in at the	pply, measure from the face Soil Cracks (Endation Visible on American Proposits (B15) drogen Sulfide Odder-Season Water Tailer (explain) Depth of water Depth to water to sail the face of the face o	m soil su 36) Aerial Ima oncave S or (C1) ble (C2) ter (in.) _ et filled?: Unkno	agery (B7 Surface (B	Sec Au N N N N We	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur (# OBL+)	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or or soil color crosits (C5) ar Stressed Planhic Position (D3), can perch H20 ographic Relief tral Test (D5) FACW dominants	Living Roots (C3) (within for (C4) thange w/in 12") O w/in 12") O w/in 12") (D4) (caused by water) s > # FACU+UPL dominants
Depth (inches) Comments: DROLOGY Vetland Hydrology Vetland Hydrol	y Indicators (check of (any one indicator is (A1)) ole (A2) (w/in 12") (w/in 12") osits (B2) B3) ust (B4) B5) (in. from ground surfacent? Yes ont? Yes ringe)	Sufficient) Sur Inu Spa W Spa W Hyo Oth Ace): No Who in at the	pply, measure from the face Soil Cracks (Endation Visible on American Proposits (B15) drogen Sulfide Odder-Season Water Tailer (explain) Depth of water Depth to water to sail the face of the face o	m soil su 36) Aerial Ima oncave S or (C1) ble (C2) ter (in.) _ et filled?: Unkno	agery (B7 Surface (B	Sec Au N N N N We	ondary Inc Water-Sta Drainage Oxid'd Rh Presence (pos. a.c Salt Depo Stunted o Geomorp Shallow A (w/in 24" Microtopo FAC Neur (# OBL+)	dicators (at lease ained Leaves (B10) aizospheres on of Reduced Iron or or soil color crosits (C5) ar Stressed Planhic Position (D3), can perch H20 ographic Relief tral Test (D5) FACW dominants	Living Roots (C3) (within for (C4) thange w/in 12") O w/in 12") O w/in 12") (D4) (caused by water) s > # FACU+UPL dominants

WETLAND DETERMINATION DATA FORM - Alaska Region Date: _Borough/City:_ Applicant/Owner:__ Sampling Point #:_ - GRICK, N. Platel Investigator(s): Firm: HDR Alaska, Inc. Long. 150 451730 * NAD 83 Recorded on GPS #: Marked on map? __ Field Map #: Subregion (circle one): SE Southcontral Western Aleutian Interior Northern Landform: Slope (%): __ Photo nos./descriptions: 887 VL NESTO Camera #: Pad Veg Type (Viereck Level 4 or other): 1130 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: 📈 No: ____ If no, explain. Are Vegetation $\frac{\mathcal{N}}{\mathcal{N}}$, Soil $\frac{\mathcal{N}}{\mathcal{N}}$, or Hydrology $\frac{\mathcal{N}}{\mathcal{N}}$ significantly disturbed? Are "Normal Circumstances" present? Yes $\frac{\mathcal{N}}{\mathcal{N}}$ No Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Yes V Hydrophytic Vegetation Present? Is the sampled area Hydric Soil Present? Yes within a wetland? Wetland Hydrology Present? Remarks (e.g., marginal?): No VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100% **Dominance Test worksheet:** Tree Stratum (dbh≥ 3") Species **Number of Dominant Species** Dom? Dom? Ind. Species That are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: Percent of Dominant Species **Total Tree Cover:** That are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet: 10 20% of total cover: 50% of total cover: _ Sapling/Shrub Stratum (woody plants < 3" dbh) Total % Cover of: Multiply by: Abs.Cov.% Dom? Abs.Cov.% **OBL** species T FIL **FACW** species **FAC** species FILLU FACU species UPL + NL species Column Totals: Total Sapling/Shrub Cover: Prevalence Index = B/A = 50% of total cover: _ 20% of total cover: Herb Stratum Abs.Cov.% Dom? Abs. Cov.% Dom? Ind. Ind. **Hydrophytic Vegetation Indicators:** Dominance Test is>50% Y Prevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Total Herb Cover: **Hydrophytic** 20% of total cover: 50% of total cover: _ Vegetation % of bare ground: 5 Circular 1/10-ac plot 🗸 or other plot dimension: __ Present? % Cover of Wetland Bryophytes 40 % Total Cover of Bryophytes 40 (where applicable) Remarks: depressions

SOIL								4		Sampling Point #: 045
Profile (Description:	(Describe to the dep	oth needed	I to document the i	indicator	or confirm	the abse	nce of indicato	ors)	
Depth	Horizon	Soil Matrix		Re	dox Fea	tures	27		α,α dip.	
(in.)	(opt.)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type¹	Loc²	Texture	(pos/ neg)	Remarks (or use comment number)
1-10	4	10 44 2/2			_			STL		
11-10	_2_	7.54122513			_		_	Siv	+	Jant an high
					_		-		-	
										-
				•			r Parily			
_				T	_				70	+-
										= Root Channel, M = Matrix
	Soil Indicator d Indicators:	s (check ones that	apply, me						•	
4 .	tosol or Histe			Indicators fo				_	e indicator	of hydrophytic vegetation,
1.1				Alaska	Color Ci	nanger (TA	(4)			dicator of wetland
	underlain by m	(A2) (8-16" organics, nineral soil with chroma	sard, ≤2)	Alaska	Alpine S	wales (TA	5)			an appropriate landscape e present unless disturbed
N Bla	ick Histic (A3))		Alaska	Redox w	vith 2.5Y H	ue	orp	problematic.	
	drogen Sulfid face; @	e (A4) (within 12*of n	nineral		Gleyed verying La	without Hu	e 5Y or Re	edder	ve details of	color change in Remarks.
	ck Dark Surfa	3-21		Other (e	a.g., see p	.91 of 2007				
Ala	ska Gleyed (A13)		Supple	ement: ex	plain in Ren	narks)			
Ala	ska Redox (A	114)								40
Ala	ska Gleyed F	ores (A15)								
	ve Layer (if pr	esent)		Drainage Cla		PD				
Type:				Soil Map Unit	t Name:		Нус	tric Soil Pres	ent?	Yes No
Depth	(inches)									4-16 mm
Commer 1.	its:						-			
2.		一种		7 day.				****		
3.		16.5					12	14.5	-	
HYDROL		-di-store (-book or	tht	- t						
		ndicators (check on any one indicator is s		piy, measure fron	n soll st	ırtace):		indary Indicate Water-Stained		2 are required)
M	ace Water (A			ace Soil Cracks (B	6)			valer-stained Drainage Patti		·
ル High	Water Table	(A2) (w/in 12")		dation Visible on A		agery (B7)				iving Roots (C3) (within 12")
	ration (A3) (w			rsely Vegetated Co		4,77	4.1	Presence of R	educed Iron	ı (C4)
	er Marks (B1)			Deposits (B15)),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	anaco (De	1.7	(pos. a,a or: Salt Deposits	soil color ch	ange w/in 12")
	ment Deposit		4.	rogen Sulfide Odor	r (C1)			Stunted or Str		s (Dt)
	Deposits (B3			Season Water Tab				Geomorphic P		
A/ Alna	Mat or Crus	(B4)	.1	er (explain)	,,		./	Shallow Aquita		
100			-th Onle	n (explain)			· //	(w/in 24", can	perch H2O	
_/V_Iron	Deposits (B5))								04) (caused by water) (Light 44)
							+,	FAC Neutral T (# OBL+FACV	est (U5) V dominants	> # FACU+UPL dominants)
Field Ob	servations (in	. from ground surfac	e):							
Surface \	Nater Presen	t? Yes	No	_ Depth of wate		1				
Water Ta	ble Present?	Yes	No	_ Depth to water	er (in.) _	17				
		Seepin	g in at tha	it depth but not yet	filled?:	10				,
	n Present?	Yes	No	_ Depth to sat.	(in.)		Weti	and Hydrolog	y Present	Yes No
	capillary fring			Epi Endo	Unkno			350	8-	
Describe	Hecorded Da	ata (stream gauge, n	nonitoring	well, aerial photos	, previou	ıs inspectio	ons), if ava	ailable:		4
Remarks		•								
SW	ace wal	er m depr	elan	9						
U		, , , ,	- 00.0							
4										

WETLAND DETERMINATION DAT				401
Project: West Si), ACUST Borough/City:	1/81	3	Date:	9/19/2020
Applicant/Owner: A IDLA			Sampling Po	oint #: 05U
nvestigator(s): A. KIRIUL, N. HOW	Firm: HD	R Alaska, Inc.		
(1 = 4 - 2)		GPS #: Marked	d on map?	Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northe	ern Landforn	: Knob	_Slope (%): _	Z Aspect SE
ocal relief: Shape across slope: linear / convex/ concave Shape up/downslop	pe: (linea) / cor	ivex / concave NW	I classification	:_ V
Photo nos./descriptions: SPT X2 NEW Car	mera #: \	Veg Type (Viereck Le	evel 4 or other)	: IC1-Blacks
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: 3	✓ No:	If no, explain.	HGM type:	NA
Are Vegetation M , Soil M , or Hydrology M significantly disturbed? Are "	'Normal Circum	stances" present? Y	'es <u>/</u> No	_
Are Vegetation N , Soil N , or Hydrology N naturally problematic? If nee	ded, explain a	nswers here.		
SUMMARY OF FINDINGS				
Hydrophytic Vegetation Present? Yes No Is the	sampled area			
	n a wetland?	Yes No	_	
Wetland Hydrology Present? Yes No		Remarks (e.g., ma	arginal?):	.30
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative	cover). % can			A.
Tree Stratum (dbh≥ 3")		Dominance Test wo	orksheet:	
Species Cov.% Dom? Ind. Species Cov.% Dor	m? Ind.	Number of Dominant		5
1. Picmar 15 Y FAOU 5.		That are OBL, FACV	V, or HAU:	(A)
2. 13ct pap 10 4 PAW 6.		Total Number of Don Species Across All S		1
3 7		Species Acioss Air S	ıllala.	(B)
Total Tree Cover: 15		Percent of Dominant		71% (A/B)
17.6	5	That are OBL, FACV Prevalence Index w		(A/B)
50% of total cover: 20% of total cover:				Maritimbe bye
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Do	m? Ind.	Total % Cov	er or.	Multiply by:
1. Pic Mar 10 FACW 7.	100	OBL species	25	X1=
2 Men KV 60 Y FAW 8 EMPANY I	FAL	FACW species	33	GG
3. VILL EVA 70 4 FAC 9. Vac VIT T	<u>F/C</u>	FAC species		X3= 7 1
4. Bet 940 3 FAW 10		FACU species	77	X4= 500
5. M BOD 2 FACU 11		UPL + NL species _	20	X5=
0		Column Totals:	35 (A)	(B)
Total Sapling/Shrub Cover: 180	20			3.20
50% of total cover 20% of total cover		Prevalence Inde	x = B/A =	3.70
Herb Stratum Abs.Cov.% Dom? Ind. Abs. Cov.% Do	om? Ind.			
1. Rub ped 2 Y FAC 12.	Jitt: 1114.			
2.4.54 5 4 F/C 13.		Hydrophytic Veget	ation indicate	ers:
3. Car Con 3 4 FAC14.		Dominance T		
4. CAT COS T EACU 15.			IORY 12 20'0	
5				(Provide supporting
6				eparate sheet)
8		Problematic I	Hydrophytic Ve	egetation ¹ (Explain)
9				
10		1 Indicators of hydric	soil and wetla	and hydrology must
11		be present unless d	isturbed of pro	wieinauc.
Total Herb Cover: 10				
50% of total cover: 5 20% of total cover:	2	Hydrophytic	Vac V	No
Circular 1/10-ac plot or other plot dimension: % of bare ground	und: _O	Vegetation Present?	162 V	140
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% where applicable)	10 %			
Remarks:				

OIL					1011		100	د نفس		Sampling Point #: 054
Profile D	escription	: (Describe to the de	oth neede	ed to document the i	ndicator	or confirm	the abser	nce of indic	ators)	
Depth	Horizon	Soil Matrix		Re	dox Fea	tures			a,a dip.	
(in.)	De	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	_Texture	<u>(pos/</u>	Remarks_ (or use comment number)
431	BI	2514/2	85 .	7.54R 313 4.54R 25/1	5 10	OSN/chax	CS MI NCLU	Josi		inclusions of said + the
11-17	<u>B2</u>	10424/2	80	7.5423/4	20		<u> </u>	Sand		
-	-0.0	11 1								
										= Root Channel, M = Matrix
		ors (check ones that	apply, m	200211000000000000000000000000000000000					ed):	
His					Color C Alpine S	hange ⁴ (TA Swales (TA	4) 5)		one primary ir hydrology, and	of hydrophytic vegetation, dicator of wetland d an appropriate landscape be present unless disturbed
Hy	ick Histic (A drogen Sulf	ide (A4) (within 12*of	mineral	100000		with 2.5Y How without Hue			or problematic	
SUI	face; @ ick Dark Su	" in this pit			erlying L	ayer p.91 of 2007				
	iska Gleyed					colain in Rem	arks)			
	ska Redox									
Ala	ska Gleyed	Pores (A15)				V.				
Restricti	ve Layer (if	present)		Drainage Cla	iss:	WD			94	7
Type: Depth	-			Soil Map Uni	t Name:		Hy	dric Soil P	resent?	Yes No
3. IYDROI Wetland Primary	LOGY I Hydrology Indicators	y Indicators (check of	nes that	apply, measure fro		urface):	N	Water-Stai	ned Leaves (E	et 2 are required) 39)
		(A1)		rface Soil Cracks (E			N	Drainage F	atterns (B10)	
N Sati	n Water Tab uration (A3) ter Marks (E		N Sp	undation Visible on A arsely Vegetated C arl Deposits (B15)) //	made and a	of Reduced Iro	Living Roots (C3) (within 12*) on (C4) hange w/in 12")
1/	liment Depo		17.	drogen Sulfide Odo			- 4		Stressed Plan	
Alga	t Deposits (I al Mat or Cr Deposits (I	ust (B4)		y-Season Water Ta her (explain)	ble (C2)		<u>N</u>	Shallow Ad (w/in 24",	ic Position (D: quitard (D3) can perch H20	
	Deposits (i	55)						FAC Neutr	al Test (D5)	> # FACU+UPL dominants)
Field Ot	servations	(in. from ground surfa	ice):							
	Water Pres		No _							
Water T	able Preser		No _/	V Depth to wa hat depth but not ye				91		,
Saturati	on Present?		No _	Depth to sat			Wet	land Hydro	ology Presen	t? Yes No
(include	s capillary f	ringe)		Epi Endo	Unkn	own			00	
Describ	e Recorded	Data (stream gauge,	monitorir	ng well, aerial photo	s, previo	ous inspecti	ons), if av	/ailable:		1
Remark	s:									

WETLAND DETERMINATION DATA FORM – Alaska Region

	DETERMINATION DATA TO		Date: 9/15/2020
Project: West Su	Borough/City: MSB		Sampling Point #: 500
Applicant/Owner: A IDEA	1000 Nom 11 -		Sampling Fort #
COLL CHANNING THE	NUCH HUICH FIN	m: HDH Alaska, Inc.	- man 2 / Field Man #: 1/2
Lat. (dec.°) 61. 977642 Long. 152.5	1789+± NAD 83 Hecorde	on GPS #: gree Markeu C	Slene (%): 20 Aspect: S
Subregion (circle one): SE Southcentral Western	Aleutian Interior Northern Lar	ndiomi: Missass Nati	classification: 7/
Local relief: Shape across slope: linear convex con	cave Shape up/downslope: dhea Camera #:1	onvex / concave INVIII	old or other): I.C. Za.
Photo nos /descriptions: SOILS × 2, NESW	Camera #:1	Veg Type (Viereck Lev	HGM type: N#
Are climatic / hydrologic conditions on the site typical f	or this time of year? Yes: V. No:	if no, explain.	
Are Vegetation N, Soil N, or Hydrology N sign	ificantly disturbed? Are "Normal to	Urcumstances present re	5110
Are Vegetation M , Soil M , or Hydrology M nati	urally problematic? If needed, exp	nam answers nere.	
SUMMARY OF FINDINGS	No. of		
Hydrophytic Vegetation Present? Yes	No V Is the sampled		
Hydric Soil Present? Yes	No V within a wetle	and? Yes No _V Remarks (e.g., mar	oinal?):
Wetland Hydrology Present? Yes	No V		giriai : /.
VEGETATION (Use scientific names.) Estimate abs	olute % cover (not relative cover).	% can total >100%. Dominance Test wor	ksheet:
Tree Straturn (dbh≥ 3")		- U	- AP-
Species Cov.% Dom? Ind. Speci	es Cov.% Dom? Inc	 Number of Dominant : That are OBL, FACW 	
1. Pica glanca 20 Y Frem 5.			
2 Bet pap 5 - PACH 6.		Total Number of Dom Species Across All St	rata: 9 (B)
3 Bot Ken 13 Y FREN 7			
Total Tree Cover:		Percent of Dominant That are OBL, FACW	Species or FAC: 44/0 (A/B)
Total files Cover.	48	Prevalence Index w	orksheet:
50% of total cover:	20% of total cover:	Total % Cove	
Sapling/Shrub Stratum (woody plants < 3" dbh)	Abs.Cov.% Dom? 1	nd	
Abs.Cov.% Dom? Ind.		OBL species	X1=
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		FACW species	- X2= - 165 X3= 195
3. Bet ken 5 FRIM 9. Vac	ivt 2 - 1	THE THE SPECIES	2.1 4 4 1.0
4. Ly6 ann 18 Y PACH 10. Spir		FACU species	X4= 730
5. Lyc clarkath It Y FORM 11. POP	<u> </u>	UPL + NL species _	X5=
6. Linn bor 5 - PACM 12. VID	edulo 3	Column Totals:	179 (A) 651 (B)
Total Sapling/Shrub Cover:	71		210
50% of total cover:35.5	20% of total cover: 14.2	Prevalence Inde	x = B/A = . 3.63
Herb Stratum			
Abs.Cov.% Dom? Ind.	, 100, 0011/0	Ind.	
The state of the s		Hydrophytic Veget	ation Indicators:
		Dominance T	
	115	Prevalence In	ndex is \$3.0
		Morphologica	al Adaptations¹ (Provide supporting
			narks or on a separate sheet)
		Problematic	Hydrophytic Vegetation ¹ (Explain)
		Indicators of hydric	soil and wetland hydrology must
10,		be present unless d	isturbed or problematic.
Total Herb Cover:	10	7	1
20	20% of total cover: 12	Hydrophytic	
50% of total cover:	20% of total cover: 12		Yes No
Circular 1/10-ac plot or other plot dimension: % Cover of Wetland Bryophytes %	Total Cover of Bryophytes	Present?	
Remarks: 1 cef with cross some of	bare gurund		H.

SOIL			- 6				Sampling Point #: 500
Profile Description: (Describe	to the depth needed	to document the	indicator or confin	m the abse	ence of indica	tors)	
Depth Horizon Se	oil Matrix	Re	dox Features			a,a dip.	
1-8 3-12 3-12 10-17 10-1	2/1 DO 5/2 DO 3/4 DO 4/0 DO 5/0 DO 5/0 DO 5/0 DO Depletion, RM = Redictiones that apply, means that apply, means that apply in the chroma ≤2)	uced Matrix, CS=0 sure from top of Indicators fo Alaska Alaska N Alaska Unde Other (a	% Type!	niess other ydric Soils A4) A5) Hue Je 5Y or Re	erwise noted s³: on hy po	Lining, RC Lining, RC in e indicator e primary induology, and sitton must be problematic.	of hydrophytic vegetation, dicator of wetland i an appropriate landscape be present unless disturbed
Alaska Redox (A14)							
A Alaska Gleyed Pores (A15)				-11			
Restrictive Layer (if present)		Drainage Clas				- 191	/
Type: NONE Depth (inches)		Soil Map Unit	Name:	Hyd	dric Soil Pre:	sent?	Yes No _V
Comments: 1. Drzy; too dry to alp! 2. 3.	na alpha						
HYDROLOGY		The same			-		
Wetland Hydrology Indicators (check ones that app	ly, measure from	soil surface):	Seco	ndary Indicat	ors (at least	2 are required)
Primary Indicators (any one ind					Water-Stained		
N Surface Water (A1)		e Soil Cracks (B6			Drainage Patt	erns (B10) _	
M High Water Table (A2) (w/in 12") ✓ Saturation (A3) (w/in 12") ✓ Water Marks (B1)	✓ Spars ✓ Marl D	ation Visible on Ae ely Vegetated Cor Deposits (B15)	ncave Surface (Bl	3) <u>MT</u> F	Presence of F	leduced Iron soil color ch	iving Roots (C3) (within 12") I (C4) ange w/in 12")
Sediment Deposits (B2)		gen Sulfide Odor eason Water Table			Stunted or Str		
N Drift Deposits (B3) N Algal Mat or Crust (B4) Iron Deposits (B5)	~ 8	Geomorphic F Shallow Aquit (w/in 24", can dicrotonograf	ard (D3) perch H2O				
					FAC Neutral 7	est (D5)	
Field Observations (in. from groun	nd surface):				(# OBL+FACV	v dominants :	> # FACU+UPL dominants)
Surface Water Present? Yes	No No	Depth of water	r (in.)				
Water Table Present? Yes	No V	Depth to water					
	Seeping in at that						
Saturation Present? Yes	No V	Depth to sat. (Wetla	and Hydrolog	v Present?	Yes No
(includes capillary fringe)		Epi Endo	Unknown			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	163 NO <u>-</u>
Describe Recorded Data (stream	gauge, monitoring w	ell, aerial photos,	previous inspection	ons), if ava	ilable:		
Remarks:							
			17				1 1 1 1 1

WETLAND DETERMINATION DATA FORM - Alaska Region

Lat. (dec.°) 61.977585 Long. 152.547242 ±	## Date: 9 15 2020 Sampling Point #: 50 Firm: HDR Alaska, Inc.
Lat. (dec.°) 61.977585 Long. 152. 547242 ±	Firm: HDR Alaska, Inc.
Submitted to the service of Court and Market Alaustin Inter-	NAD 83 Recorded on GPS #: [4 🔑 Marked on map? 🗹 Field Map #: _
Subregion (circle one): SE Southcentral Tyrestem Aleutian Intel	r Northern Landform: Swale Slope (%): 3 Aspect:
	downslope Inea / convex / concave NWI classification: PSS1C
	Camera #: Veg Type (Viereck Level 4 or other): IB1d
Are climatic / hydrologic conditions on the site typical for this time of ye	? Yes: ✓ No: If no, explain. HGM type: SLU E
Are Vegetation _N, Soil _N , or Hydrology _N _significantly disturb	? Are "Normal Circumstances" present? Yes No
Are Vegetation _N_, Soil _N_, or Hydrology _N_ naturally problemat	If needed, explain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No	Is the sampled area
Hydric Soil Present? Yes No	within a wetland? Yes V No
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (r	
Tree Stratum (dbh≥ 3")	Dominance Test worksheet:
	% Dom? Ind. Number of Dominant Species That are OBL FACW or FAC:
1 5	That are OBL, FACW, or FAC:
2 6	Total Number of Dominant Species Across All Strata:
3 7	Species Across All Strata:
4 8	Percent of Dominant Species
Total Tree Cover:	That are OBL, FACW, or FAC: 80%
50% of total cover: 20% of total co	r: Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by
At the state of th	v.% Dom? Ind. OBL species X1=
1. Alnus sin 40 1 PAC 7. 2. Eubes fri 10 - FAC 8.	FACW species 180 X2= 20
35 Lix par 20 Y FRE/9	FAC species 100 X3= 300
4. SALIK VILL 10 - FARMO.	FACU species 21 - X4= 84
5. Sorthes celt 5 - Dray 1.	
6 12	Column Totals: 131 (A) 404
Total Sapling/Shrub Cover: 85	
50% of total cover: 42.5 20% of total co	er: 17 Prevalence Index = B/A = 3.08
Herb Stratum	
Abs.Cov.% Dom? Ind. Abs. C	/.% Dom? Ind.
1. ESQUI ACV 10. Y FAT 12.	Hydrophytic Vegetation Indicators:
2 Tri evr	Y Dominance Test is>50%
3. Dry dilateta 7 - FACTA. 4. Polemon aun 2 - FACT 15.	Prevalence Index is ≤3.0
4. Polemon au 2 - 120 15. 5. Yiela 50 2 - 16.	
6. Galing tri 2 - 1900 17.	— — Morphological Adaptations¹ (Provide supprint data in Remarks or on a separate sheet)
7. Athy fel-fem 10 Y FM 18.	
8. Vitica diocia B Y FMM19.	Troblematic trydrophytic vegetation (Expi
9. Aron de 1 - Pac 20.	
10. Cal can 3 - VMV 21.	1 Indicators of hydric soil and wetland hydrology not be present unless disturbed or problematic.
11 22	be present unless disturbed of problematic.
Total Herb Cover: 48	01
50% of total coyer: 24 20% of total co	er: 9.0 Hydrophytic Vegetation Yes No
Circular 1/10-ac plot ✓ or other plot dimension: % o	are ground: 20 Present?
% Cover of Wetland Bryophytes % Total Cover of Br (where applicable)	phytes%
Remarks: Sprue tees on edge but not in	
	· fortale / Dieff

1.5	(nescrine to frie de	ptn needed	to document the	indicator or conf	irm the ab	sence of Indicato	ors)	
Depth Horizon	Soil Matrix		Re	dox Features			a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	% Type	Loc2	_Texture_	(pos/	Remarks
1-16 Oa	10482/1					MACHILS	neg)	(or use comment numb
2-14	7.54R25/2	50%				1	pos	7-11-15
4-16 V	10 YR 2/1	20.10 _		_		-	=	(not tested)
	10110-11							(not troted)
MOHEST OF	- 19			1	_			
				-	_		_	
							_	
ype: C = Concentra	ation, D = Depletion,	RM = Red	uced Matrix, CS=0	Coated Sand Gr	ains ² Loca	tion: PL = Pore	Lining, RC	= Root Channel, M = Ma
ydric Soil Indicator	rs (check ones that	apply, mea	sure from top of	mineral layers	unless of	herwise noted)	•	
andard Indicators			Indicators fo	r Problematic	Hydric So	ils³:		
Histosol or Histe	el (A1)		Alaska	Color Change ⁴ (TA4)			of hydrophytic vegetation
Histic Epipedon	(A2) (8-16" organics,	sat'd,	Alacka	Alpine Swales (TAE	one	primary in	dicator of wetland
undertain by n	nineral soil with chroma	s2)				DOS	irology, and sition must l	l an appropriate landscap De present unless disturb
Black Histic (A3)		Alaska	Redox with 2.5Y	' Hue	or p	roblematic	
Hydrogen Sulfid	e (A4) (within 12*of n	nineral	Alaska	Gleyed without l	Hue 5Y or	Redder ⁴ Gi	ve details o	f color change in Remark
surface; • 9				rlying Layer				
Thick Dark Surfa				e.g., see p.91 of 20 ement; explain in F				
Alaska Gleyed (A13)							
Alaska Redox (A	\14)							
Alaska Gleyed F	Pores (A15)							
estrictive Layer (if pr	resent)		Drainage Clas	ss: SPD				,
Type: NONC			I Soil Map Unit	Name:	Н	vdric Soil Pres	ent?	Vec V No
Depth (inches)	sol (on) - 4	pand of	Soil Map Unit	12 (50%)	ij	ydric Soil Pres		Yes_V No
Depth (inches) Promments: His to	rics (wood cl	pand of hunks.	7.54RZ.51	12 (50%)	ij			Yes_V No
Depth (inches) Promments: + (15 to Aurical arganization)	rics /wood cl	hunks.	7.54RZ.5/	12 (50%)	Mon	12414 INC	hec	Yes V No
Depth (inches) Promments: +(is to find any and any any and any any and any any and any	rics /wood cl	es that app	7.54RZ.5/	12 (50%)	Mon	12414 INC	kcc ors (at least	
Depth (inches) Promments: +(is to Aurical argains) DROLOGY etland Hydrology in imary indicators (as	nces /wood cl	es that app	7.5782.5/thoughout.	/2_ (50%)	Mon Se	condary Indicate	ers (at least Leaves (B	9)
Depth (inches) Promments: + (is to Aurical arguments) Browner Aurical arguments (inches) Properties (inch	ndicators (check on any one indicator is s	es that app sufficient)	7.5YRZ.5/ twohot. Dly, measure from ce Soil Cracks (Be	/2_ (50%) soil surface):	Wron Se	condary Indicate Water-Stained Drainage Patte	ors (at least Leaves (B:	9)
Depth (inches) Promments: +(15 to be dependent of the first of the fir	ndicators (check on any one indicator is s	es that app sufficient)	F 7.5YR2.5/ two-short. Dly, measure from Ce Soil Cracks (Belation Visible on A	n soil surface):	Yeon See H	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp	Drs (at least Leaves (Bions) Debers on L	9) Living Roots (C3) (within 1)
Depth (inches) Promments: + (is to find a company) DROLOGY etland Hydrology in imary Indicators (a company) Surface Water (A company) High Water Table Saturation (A3) (w	ndicators (check on any one indicator is s (A2) (w/in 12")	es that app sufficient)	7.5YRZ.5/ twohot. Dly, measure from ce Soil Cracks (Be	n soil surface):	Yeon See H	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re	Drs (at least Leaves (Bions) Debers on Leaduced from	9) Living Roots (C3) (within 1:
Depth (inches) Promments: + (is to find a company) DROLOGY etland Hydrology in imary Indicators (a company) Surface Water (A company) High Water Table Saturation (A3) (w	ndicators (check on any one indicator is s (A2) (w/in 12")	es that appropriate (in the sufficient) Sufficient) Sufficient) Spars	F 7.5YR2.5/ two-short. Dly, measure from Ce Soil Cracks (Belation Visible on A	n soil surface):	Yeon See H	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s	Description of the color of the	9) Living Roots (C3) (within 1)
Depth (inches) Depth (inches)	ndicators (check on any one indicator is s (A2) (w/in 12")	es that app sufficient) Surfa Inund Spars	Programmer of the Soil Cracks (Be lation Visible on Activity Vegetated Co.	n soil surface): in soil surface): in soil surface): in soil surface):	Yeon Se N Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. q,q or s Salt Deposits (Description of the color of the	iving Roots (C3) (within 1: 1 (C4) eange w/in 12")
Depth (inches) Promments: Buried organization (A3) (water Marks (B1))	ndicators (check on any one indicator is s (A2) (w/in 12") v/in 12")	es that appsufficient) Surfaction Inund Spars H Marl I Y Hydro	Property of the Control of the Contr	n soil surface): 5) erial Imagery (B ncave Surface (Yeon Se N Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre	Drs (at least Leaves (Bit) Deprise on Leduced from soil color chrosoil chro	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12")
Depth (inches) Demments: Buried or a Brology etland Hydrology in imary Indicators (a Surface Water (A: High Water Table Saturation (A3) (w Water Marks (B1) Sediment Deposits (B3)	ndicators (check on any one indicator is s (A2) (w/in 12") (B2) (B2)	es that appropriate tha	Programme of the self of the s	n soil surface): 5) erial Imagery (B ncave Surface (Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe	Drs (at least Leaves (Bt Leaves (Bt) Debers on Leduced from Soil color ch C5) Dessed Plant Desition (D2)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12")
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (in 12") (in 12")	es that appropriate tha	Property of the Control of the Contr	n soil surface): 5) erial Imagery (B ncave Surface (Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can	prs (at least Leaves (B10) pheres on L educed from coil color ch C5) passed Plant position (D2) ard (D3) perch H2O	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (in 12") (in 12")	es that appropriate tha	Programme of the self of the s	n soil surface): 5) erial Imagery (B ncave Surface (Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can	prs (at least Leaves (B10) pheres on L educed from coil color ch C5) passed Plant position (D2) ard (D3) perch H2O	iving Roots (C3) (within 1: 1 (C4) lange w/in 12") s (D1)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (in 12") (in 12")	es that appropriate tha	Programme of the self of the s	n soil surface): 5) erial Imagery (B ncave Surface (Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquite (w/in 24", can Microtopograp) FAC Neutral Te	prs (at least Leaves (Bt press on Leduced from coil color ch C5) pressed Plant position (D2) prd (D3) perch H2O hic Relief (I pest (D5)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1) w/in 12")
Depth (inches) Depth	ndicators (check on any one indicator is so it (A2) (w/in 12") (A2) (w/in 12") (S (B2) (B4)	es that appsufficient) Surfaction of Spars H Mari I Y Hydro N Dry-S Other	Programme of the self of the s	n soil surface): 5) erial Imagery (B ncave Surface (Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquite (w/in 24", can Microtopograp) FAC Neutral Te	prs (at least Leaves (Bt press on Leduced from coil color ch C5) pressed Plant position (D2) prd (D3) perch H2O hic Relief (I pest (D5)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface	es that appsufficient) Surfaction of Spars H Mari I Y Hydro N Dry-S Other	F 7.5Yk2.5/ Locy hand, oly, measure from ce Soil Cracks (Be lation Visible on Ar sely Vegetated Cor Deposits (B15) ogen Sulfide Odor leason Water Table (explain)	n soil surface): in soil surfac	Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. q, q or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral Te (# OBL+FACW	prs (at least Leaves (Bt press on Leduced from coil color ch C5) pressed Plant position (D2) prd (D3) perch H2O hic Relief (I pest (D5)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1) w/in 12")
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B2) (B4) from ground surface Yes	es that appsufficient) Surfa Inund Spars Hydro Hydro Other	Property of water Depth of water	n soil surface): in soil surfac	Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquite (w/in 24", can Microtopograp) FAC Neutral Te	prs (at least Leaves (Bt press on Leduced from coil color ch C5) pressed Plant position (D2) prd (D3) perch H2O hic Relief (I pest (D5)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1) w/in 12")
Depth (inches) Depth	ndicators (check on any one indicator is so it) (A2) (w/in 12") (A2) (w/in 12") (A3) (B4) from ground surface it? Yes Yes Yes	es that appsufficient) Surfaction Inund Spars Hydro Hydro Other No No No No No No No No No N	F 7.5YR2.5/ Coly, measure from the cell of Cracks (Bell attention Visible on Article of Color Selection Visible Odor the cell of Color (explain) Depth of water Depth to water Depth to water Color of	n soil surface): in soil surfac	Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. q, q or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral Te (# OBL+FACW	prs (at least Leaves (Bt press on Leduced from coil color ch C5) pressed Plant position (D2) prd (D3) perch H2O hic Relief (I pest (D5)	Julying Roots (C3) (within 1: 1 (C4) Lange w/in 12") s (D1) w/in 12")
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface Yes Yes Seeping	es that appsufficient) Surfa Inund Spars Hydro TO Other No No g in at that	F 7.5Y K2.5/ Coly, measure from the cell of the cell	r (in.) 0.5	Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograph FAC Neutral To (# OBL+FACW	prs (at least Leaves (Bt ems (B10) pheres on L educed fror coil color ch C5) essed Plant osition (D2) ard (D3) perch H2O hic Relief (I est (D5) dominants	Jiving Roots (C3) (within 1: n (C4) lange w/in 12") s (D1) w/in 12") D4) (caused by water) > # FACU+UPL dominants)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface Yes Yes Seepin Yes	es that appsufficient) Surfaction Inund Spars H Marl I Y Hydro N Dry-S Other	Poly, measure from the Soil Cracks (Belation Visible on Action Visible on Action Visible Odor Deposits (B15) Ogen Sulfide Odor Deposits (Explain) Depth of water Depth to water Depth to water Depth to sat.	r (in.) 0.5 or (in.) 0.5 or (in.) 1 filled?: N (in.) 0	Year Se Y Y Y Y Y Y Y Y Y	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. q, q or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral Te (# OBL+FACW	prs (at least Leaves (Bt ems (B10) pheres on L educed fror coil color ch C5) essed Plant osition (D2) ard (D3) perch H2O hic Relief (I est (D5) dominants	Jiving Roots (C3) (within 1: n (C4) lange w/in 12") s (D1) w/in 12") D4) (caused by water) > # FACU+UPL dominants)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface (Yes Y Seepin Yes Y (B9)	es that appsufficient) Surfa Inund Spars Hydro Hydro Other No g in at that No	Pepth to wate depth but not yet Depth to sat.	r (in.) 0.5 or (in.) 0.5 Unknown	We We	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograph FAC Neutral To (# OBL+FACW	prs (at least Leaves (Bt ems (B10) pheres on L educed fror coil color ch C5) essed Plant osition (D2) ard (D3) perch H2O hic Relief (I est (D5) dominants	Jiving Roots (C3) (within 1: n (C4) lange w/in 12") s (D1) w/in 12") D4) (caused by water) > # FACU+UPL dominants)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface Yes Yes Seepin Yes	es that appsufficient) Surfa Inund Spars Hydro Hydro Other No g in at that No	Pepth to wate depth but not yet Depth to sat.	r (in.) 0.5 or (in.) 0.5 Unknown	We We	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograph FAC Neutral To (# OBL+FACW	prs (at least Leaves (Bt ems (B10) pheres on L educed fror coil color ch C5) essed Plant osition (D2) ard (D3) perch H2O hic Relief (I est (D5) dominants	Jiving Roots (C3) (within 1: n (C4) lange w/in 12") s (D1) w/in 12") D4) (caused by water) > # FACU+UPL dominants)
Depth (inches) Depth	ndicators (check on any one indicator is s (A2) (w/in 12") (A2) (w/in 12") (B4) from ground surface Yes Yes Seepin Yes Ge) Ita (stream gauge, m	es that appsufficient) Surfa Inund Spars Hydro Hydro Other No g in at that No	Pepth to wate depth but not yet Depth to sat.	r (in.) 0.5 or (in.) 0.5 Unknown	We We	condary Indicate Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograph FAC Neutral To (# OBL+FACW	prs (at least Leaves (Bt ems (B10) pheres on L educed fror coil color ch C5) essed Plant osition (D2) ard (D3) perch H2O hic Relief (I est (D5) dominants	Jiving Roots (C3) (within 1: n (C4) lange w/in 12") s (D1) w/in 12") D4) (caused by water) > # FACU+UPL dominants)

WETLAND DETERMINATION DATA FORM - Alaska Region

Project: West Sn Azuss	Borough/City: MGB	Date: 9 15 2020
Applicant/Owner: MOGA	y a	Sampling Point #: 50 2
Investigator(s): LELIN GUNNINGHAM, NOKA HOTCH	Firm: HDR Alaska, Inc.	
Lat. (dec.°) 61.978795 Long. 152.546450		ked on map? ✓ Field Map #: 1/2
Subregion (circle one): SE Southcentral Western Aleutia		
Local relief: Shape across slope: linear / convex / concave		
Photo nos./descriptions: 50165 × 2, NF5W	The state of the s	
Are climatic / hydrologic conditions on the site typical for this t		Will the second
Are Vegetation N, Soil N, or Hydrology N significantly	No. of the Control of	
Are Vegetation N, Soil N, or Hydrology N naturally pr		146
SUMMARY OF FINDINGS		
		, Grand
Hydric Soil Present? Yes No	Is the sampled area within a wetland? Yes	No V
Wetland Hydrology Present? Yes No		
VEGETATION (Use scientific names.) Estimate absolute %		
PEGETATION (038 SCISIMIC Names.) Lauriate absolute 76	Dominance Test	worksheet:
Tree Stratum (dbh≥ 3")	0.00 0.00 1.00 1.00 1.00 1.00 1.00 1.00	10
Species Cov.% Dom? Ind. Species 1. Press alaura 10 Y FRM 5.	Cov.% Dom? Ind. Number of Domin	CW, or FAC:3(A)
26		
3 7.	Total Number of I Species Across A	
4 8		(b)
Total Tree Cover: (7	Percent of Domin That are OBL, FA	1 /=
50% of total cover: 5	Provolence Inde	
50% of total cover: 20% o Saplino/Shrub Stratum (woody plants < 3" dbh)	f total cover: Total % C	Cover of: Multiply by:
Abs.Cov.% Dom? Ind.	Abe Cov % Dom? Ind	
1. Vib edule 5 - FACM 7.	OBL species _	X1=
2. Libes triste 15 - PM 8.	FACW species	X2=
3. Sorbus tit 5 - PMM9.	FAC species	1224 X3= 372
4. Lyc ann 5 - FROMIO.	FACU species _	41 X4= 164
5. Alons sin 50 Y FM 11.	UPL + NL species	
6. Salis bar 7 - Bach12.	Column Totals:	.165 (A) 536 (B)
Total Sapling/Shrub Cover:		
50% of total cover: 45.5 20% o	f total cover: 17.4 Prevalence In	ndex = B/A = 3.24
Herb Stratum	2	* ***
Abs.Cov.% Dom? Ind.	Abs. Cov.% Dom? Ind.	
1. Emi arv 25 Y FAC 12. 2. Athy fel fem 10 Y FAC 13.	Hydrophytic Veg	getation Indicators:
3. (A) (A) 7 - MV 14.		e Test is>50%
4. Vrt Aio 5 - PRIMIS.		e Index is ≤3.0
5. Cham and 2 . MW 16.	The Manhalan	ical Adaptational (Devide account)
6. Galina to 2 - PAV 17.	Wiorpholog	lical Adaptations ¹ (Provide supporting Remarks or on a separate sheet)
7. Dry dil 8 - FAMAS.	- Problemat	ic Hydrophytic Vegetation¹ (Explain)
8. Acon ddgh 3 - PAV19.		ic Hydrophyuc vegetation (Explain)
9. Tri. eur - MM20.		
10. Com sylv 5 - VAV 21.	1 Indicators of hyd	dric soil and wettand hydrology must state soil and wettand hydrology must
11 22	Do present unless	. Goldings of problematic.
Total Herb Cover: 6	2	
	f total cover: 3.6 Hydrophytic Vegetation	Yes No
	% of bare ground: Present?	199
% Cover of Wetland Bryophytes% Total Co- (where applicable)	ver of Bryophytes5%	The second second
	101 1- 1004-11-1	
General dend spruce hees	5% bure ground - Leaves I need	W.S

SOIL Brofile F) a a sila dia a	(Describe to the de-	nib pandad	ta da um ant the l	11200	et a	Ale - L	- 4 1 3 -		Sampling F	Point #: 503
1		: (Describe to the de	oun needed			1	the absence of	of Indicato	ors)	ales El	4
Depth	Horizon	Soil Matrix		487	dox Fea	atures			α,α dip.		Tamada.
(in.)	(opt.)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc2- T	exture	(pos/ neg)		Remarks_ comment number
0-3	Oi_	2.5 YA 2.5 3	100	- A	_	1	_111		197		
3-6	Oa.	IOYR2/1	100	V 13	7:					Sandl	CAL G 44
6-9	A	10YR 3/2	100		_	200	-	-		141	- make -
9-16	<u>B</u>	IDYR33	100	And	_	1000	-			3.	
		201	9 9		_		3			* N. T.	
	1			V		-		-	1 = 3		
				4			The same of	70	1	100	300
			PL.			FE	1		- 44	-	and the second
¹Type: 0	C = Concent	ration, D = Depletion,	RM = Red	uced Matrix, CS=	Coated	Sand Grain	s ² Location: F	L = Pore	Lining, RC	= Root Cha	annel, M = Mat
		ors (check ones that		The second secon							
	d Indicators			Indicators fo		100 A 178 T C Common Co	Order of			- 57	
His	tosol or His	tel (A1)		Alaska		11 7 3 3 3 3 3					ytic vegetation
- His	tic Epipedo	n (A2) (8-16" organics	sat'd	V4 14 15 15 15 15 15 15 15 15 15 15 15 15 15	and a				primary inc		
		mineral soil with chroma		Alaska	Athine a	Swales (TAS	9)				riate landscape unless disturbe
Bla	ck Histic (A	3)		Alaska	Redox	with 2.5Y H	ue	orp	problematic.		
		de (A4) (within 12"of r	nineral	Alaska	Gleyed	without Hue	5Y or Redde	r ⁴ Gi	ve details of	color char	nge in Remarks
		In this pit	201		orlying L		-				
Thi	ck Dark Sur	face (A12)		Supple	3.g., see ement: e:	p.91 of 2007 xplain in Rem	arks)				
Ala	ska Gleyed	(A13)				Pol					1
Ala	ska Redox	(A14)					ne.				
Ala	ska Gleyed	Pores (A15)									
Restrictiv	/e Layer (if p	present)	-	Drainage Cla	ss: M	WD					1
Type:	NONE	4-		Soil Map Unit	Name:		Hydric	Soil Pres	ent?	Yes	No V
Depth	(inches) _	ካ <u>አ</u>									
Primary Surface Surface Saturation Water Sedi	Hydrology Indicators ace Water (A	e (A2) (w/in 12") (w/in 12") 1) sits (B2)	Sufficient) Surfa Inunc Span Marl Hydra Dry-S	ply, measure from ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain)	66) - Aerial Im oncave S	nagery (B7) Surface (B8	— Wate Drain Oxid NAPres (poi Salt Stun Shall	er-Stained nage Pattical Rhizospence of Ris. α,α or: Deposits ted or Stanorphic Play Aquitz	educed Iror soil color ch (C5) essed Plant osition (D2)	iving Roots n (C4) nange w/in s (D1)	3 (C3) (within 12
	Deposits (B				1144	- 2	FAC	Neutral T			by water) UPL dominants)
		n. from ground surfac		Daniel of the state of	/1- >	_					
The Carlot	Nater Prese		No_V	Depth of wat							1 44
vvater i a	ble Present	and the state of t	No 🗸	Depth to wat							
	WIZ TO		. /	t depth but not yet							
	n Present?	Yes	No V		(in.)		Wetland	Hydrolog	gy Present's	? Yes_	No
•	capillary fri				Unkno		5				23
Describe	Recorded [Data (stream gauge, n	nonitoring 1	well, aerial photos	, previo	us inspectio	ons), if availab	e:			*
		1		6.7			-				
Remarks	satis	n a bench, s of wetland by	drology	Loncove	at	bae of	slope, l	out 1	ne o ben	cms"	<u>P</u>

Project: West Svn Borough/City: MSB	Date: 9/15/2020
Applicant/Owner: MDEA	Sampling Point #: 564
Investigator(s): Esia Cunnighan & Nova Hotch Firm	HDR Alaska Inc
Lat. (dec.º) 61. 977931 Long. 152.551974 ± NAD 83 Recorded of	on GPS #: 10 A Marked on man? V Field Man #: 1/2
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfe	orm: bestope Slope (%): 3 Aspect
Local relief: Shape across slope linear / convex / concave Shape up/downslope: linear /	convex concave NWI classification: PSSI/EMI B
	Veg Type (Viereck Level 4 or other): II C 2 d
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No:	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circ	umstances present? Yes VNo
Are Vegetation V, Soit N, or Hydrology N naturally problematic? If needed, explain	answers here.
SUMMARY OF FINDINGS	10.0
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes No Is the sampled an within a wetland	
Wetland Hydrology Present? Yes V No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % ca	
Tree Stratum (dbh≥ 3")	Dominance Test worksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
1. Picca glanca 10 Y FACM 5.	That are OBL, FACW, or FAC:
2	Total Number of Dominant
3 7	Species Across All Strata: (B)
*	Percent of Dominant Species
Total Tree Cover: 10	That are OBL, FACW, or FAC: (A/B)
50% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. 1. licin glanca 10 Y FOLM 7. Emp nig 3 - FOL	OBL species 7
2. Salie barday 25 Y FACT 8. Lin bor 7 - FACT	FACW species
3. Bet gland 3 - FAC 9. Vib edule 5 - FACU	FAC species 77 X3= 23 P
4. Ros oci 3 - PACHIO. Solie pulchon 5 - FAC	
5. Vac uli 3 - FAL 11.	UPL + NL species X5=
6. Saliv ret 1 - Kow 12.	Column Totals: 162 (A) 474 (B)
Total Sapling/Shrub Cover: 65	
50% of total cover: 32.5 20% of total cover: 13	Prevalence Index = B/A = 2.925
Herb Stratum	
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Cham ang 5 - FRW 12. 2. Col can 12 Y TAKU 13.	Hydrophytic Vegetation Indicators:
	Y Dominance Test is>50%
1 Famil Ary 12 Y CM 15	Y Prevalence Index is ≤3.0
5. Sang Can B - PROW16.	Atambalarias Adentational (Davids and st
6. Rubins arc 10 Y PM 17.	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7. Aron delph 3 - FAL 18. 8. Carex medic 7 - FAL W19. 9. Swertha per B - FAL W20. 10. Carex agai 5 - OBL 21.	Problematic Hydrophytic Vegetation¹ (Explain)
8. Caren medica 7 - TNEW19.	(CAPIGNIA)
9. Sweethin per B - FALWEO.	
10. Crex agr 5 - 001 21. 11. Carex lia 12 Y OBL 22.	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
Total Herb Cover: 87	, promining
13-	Hudanahuda
,	Hydrophytic Vegetation Yes No No
Circular 1/10-ac plot ✓ or other plot dimension: — % of bare ground: 10 % Cover of Wetland Bryophytes 50 % Total Cover of Bryophytes 15 %	Present?
(where applicable)	0
Remarks: low oreas = bere, love the creas of flooding.	¥
site located on edge of PEM1B (which is actually PEM1 SSIB + PEM1C)	

9-46 11-4		to document the i	4.7		ause	HICE OF HIGH		
Depth Horizon Soil Ma			dox Featu	res			a,a dip.	Demode
in.) (opt.) Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type¹	Loc2	Texture	(pos/ neg)	Remarks (or use comment number
0i 107R21			_			ones	NT _	
9 0e "			_			one		
16 Oa "			_			one	NT	E 52
		-10						
			_			- 4		
	7		12.7			-		
		- 100 L			_			
	1	1		100	-	110		41
/pe: C = Concentration, D = Deple	tion, RM = Red	uced Matrix, CS=0	Coated Sa	and Grains	2Locatio	on: PL = P	ore Lining, RC = F	loot Channel, M = Ma
dric Soil Indicators (check ones								
andard Indicators:	V	Indicators fo						
_ Histosol or Histel (A1)		Alaska					³ One indicator of h	ydrophytic vegetation
_ Histic Epipedon (A2) (8-16" orga	mice entid						one primary indica	
underlain by mineral soil with chi		Alaska	Alpine Sw	ales (TA5)			appropriate landscap resent unless disturb
Black Histic (A3)		Alaska	Redox wit	th 2.5Y Hu	ie .		or problematic.	
Hydrogen Sulfide (A4) (within 12	2"of mineral	Alaska	Gleved wi	ithout Hue	5Y or R		⁴ Give details of co	lor change in Remark
surface; @ in this pit		Unde	erlying Lay	/er				1000
_ Thick Dark Surface (A12)			g., see p.9	91 of 2007 lain in Rema	arke)			
Alaska Gleyed (A13)		300010	ernanı, expi	iani ili nelli	alv21			
_ Alaska Redox (A14)								
_ Alaska Gleyed Pores (A15)	1							
strictive Layer (if present)	2	Drainage Cla	ss: PD				00	/
Type: None		Soil Map Unit			Ш		resent? Ye	s V No
						aric Soli P		
mments: mulch / delons / organics es	ч.	1.0			l ny	dric Soil P	et i	
mments: mulch delons organics est DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicator) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ck ones that apprise sufficient) Surfa Inund Spars Mari I Hydro	oly, measure from ce Soil Cracks (B lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab	n soil sur 6) terial Imaç oncave Su	gery (B7)	Seco	ondary Indi Water-Stal -Drainage F Oxid'd Rhi Presence α (pos. α,α Salt Depos Stunted or Geomorph Shallow Aα (w/in 24",	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chan- sits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/	ng Roots (C3) (within 12/4) ge w/in 12")
mments: mulch delons organics estand Hydrology Indicators (check many Indicators (any one Indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ck ones that apper is sufficient) Surfa Inund Spars Mari I Hydro Other	ce Soil Cracks (B ation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab	n soil sur 6) terial Imaç oncave Su	gery (B7)	Seco	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence of (pos. a,a Salt Depos Stunted or Geomorph Shailow Ao (w/in 24", Microtopoo FAC Neutr	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	ng Roots (C3) (within 13/4) ge w/in 12")
DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ck ones that apprises sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (B lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	n soil sur 6) Aerial Imag oncave Su r (C1) ole (C2)	gery (B7)	Seco	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence of (pos. a,a Salt Depos Stunted or Geomorph Shailow Ao (w/in 24", Microtopoo FAC Neutr	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	nre required) ng Roots (C3) (within 1:24) ng w/in 12") O1) in 12") (caused by water)
DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ck ones that apper is sufficient) Surfa Inund Spars Mari I Hydro Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	n soil sur 6) verial Imag oncave Su r (C1) ole (C2)	gery (B7)	Seco	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence of (pos. a,a Salt Depos Stunted or Geomorph Shailow Ao (w/in 24", Microtopoo FAC Neutr	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	nre required) ng Roots (C3) (within 1:24) ng w/in 12") O1) in 12") (caused by water)
DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	ck ones that apprises sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (B lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	n soil sur 6) verial Imag oncave Su r (C1) ole (C2)	gery (B7)	Seco	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence of (pos. a,a Salt Depos Stunted or Geomorph Shailow Ao (w/in 24", Microtopoo FAC Neutr	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	nre required) ng Roots (C3) (within 1324) nge w/in 12") O1) in 12") (caused by water)
DROLOGY etland Hydrology Indicators (checking Indicators (any one indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) eld Observations (in. from ground surface Water Present? Yes	ck ones that appriss sufficient) Surfa Inund Spars Mart Hydro Dry-S Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	n soil sur 6) verial Imag oncave Su r (C1) ole (C2) er (in.)	gery (B7) Inface (B8)	Seco	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence of (pos. a,a Salt Depos Stunted or Geomorph Shailow Ao (w/in 24", Microtopoo FAC Neutr	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	nre required) ng Roots (C3) (within 1:24) ng w/in 12") O1) in 12") (caused by water)
DROLOGY etland Hydrology Indicators (check mary Indicators (any one Indicators Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Id Observations (in. from ground surface Water Present? Yes	ck ones that appris sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor eason Water Tab (explain)	n soil sur 6) terial Imag procave Sur (C1) ple (C2) er (in.) er (in.) tilled?:	gery (B7) inface (B8)	Second	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence α (pos. α,α Salt Depos Stunted or Geomorph Shailow Aα (w/in 24", Microtopog FAC Neutr (# OBL+F	icators (at least 2 a ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (C or soil color chancisits (C5) Stressed Plants (I ic Position (D2) quitard (D3) can perch H2O w/ographic Relief (D4) ral Test (D5)	nre required) ng Roots (C3) (within 1 24) ng e w/in 12") O1) in 12") (caused by water)
PROLOGY Interest Actions Programes Community Proposition Actions Programes Community Proposition Actions Programes Community Proposition Actions Action Proposition Proposit	ck ones that appris sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor eason Water Tab (explain) Depth of water Depth to water	n soil sur 6) terial Imag procave Sur (C1) ple (C2) er (in.) er (in.) tilled?:	gery (B7) Inface (B8) 4 5'' There 0'	Second	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence α (pos. α,α Salt Depos Stunted or Geomorph Shailow Aα (w/in 24", Microtopog FAC Neutr (# OBL+F	icators (at least 2 at ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (Corsoil color chancists (C5) Stressed Plants (Inic Position (D2) quitard (D3) can perch H2O wingraphic Relief (D4) at Test (D5) ACW dominants > #	nre required) ng Roots (C3) (within 124) ng w/in 12") O1) in 12") (caused by water)
PROLOGY Itland Hydrology Indicators (check mary Indicators (any one indicators Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Id Observations (in. from ground surface Water Present? Yes Yes Yes Yes Yes Yes	ck ones that apprise sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain) Depth of water Depth to water Depth to sate Depth to sa	er (in.)	gery (B7) Inface (B8) 4 5'' Three 0'	Second Line Wet	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence α (pos. α,α Salt Depos Stunted or Geomorph Shailow Ac (w/in 24", Microtopoc FAC Neutr (# OBL+F	icators (at least 2 at ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (Corsoil color chancists (C5) Stressed Plants (Inic Position (D2) quitard (D3) can perch H2O wingraphic Relief (D4) at Test (D5) ACW dominants > #	nre required) ng Roots (C3) (within 124) ng w/in 12") O1) in 12") (caused by water)
PROLOGY Itland Hydrology Indicators (check mary Indicators (any one indicators Surface Water (A1) High Water Table (A2) (win 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Id Observations (in. from ground surface Water Present? Yes Yes Yes Yes Water Table Present? Yes Yes Water Table Present? Yes Yes Water Scapillary fringe)	ck ones that apper is sufficient) Surfa Inund Spars Hydro Dry-S Other	ce Soil Cracks (Blation Visible on Asely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain) Depth of water Depth to water Depth to sate Depth to sa	er (in.)	gery (B7) Inface (B8) 4 5'' Three 0'	Second Line Wet	ondary Indi Water-Stai Drainage F Oxid'd Rhi Presence α (pos. α,α Salt Depos Stunted or Geomorph Shailow Ac (w/in 24", Microtopoc FAC Neutr (# OBL+F	icators (at least 2 at ined Leaves (B9) Patterns (B10) zospheres on Livir of Reduced Iron (Corsoil color chancists (C5) Stressed Plants (Inic Position (D2) quitard (D3) can perch H2O wingraphic Relief (D4) at Test (D5) ACW dominants > #	nre required) ng Roots (C3) (within 124) ng w/in 12") O1) in 12") (caused by water)

Project: What Su Access Borough/City:	MSB Date: 9/15/202
Applicant/Owner: NDEA	Sampling Point #: 506
Investigator(s): ERIN CUNNINGMAM, NURA HOTCH	Firm: HDR Alaska Inc.
Lat. (dec.") 61.978839 Long. 152.552916 + NAD 83	Recorded on GPS #: Marked on map? Field Map #: 1/2
Subregion (circle one): SE Southcentral Western Aleutian Interior North	m Landform: Bench Slope (%): 5 Aspect: W
Local relief: Shape across slope: linear / convex / concave Shape up/downslo	e: (linear) convex / concave NWI classification:
Photo nos./descriptions: 50165 > 2 NESW 4 Ca	nera #: Veg Type (Viereck Level 4 or other): \ C 7.4
Are climatic / hydrologic conditions of the site typical for this time of year? Yes:	No: If no, explain. HGM type: NA
Are Vegetation M., Soil M., or Hydrology M. significantly distorted? Are	Normal Circumstances" present? Yes V No
Are Vegetation	led, explain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Présent? Yes No. V	The state of the s
	ampied area a wetland? Yes No
Wetland Hydrology Present? Yes No V	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative	
	over): % can total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dor 1. Pice glauce 20 Y FACM 5.	7 Ind. Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)
2. Pop halsan 15 Y PAM 6.	
3. Bet ken 20 Y FACM 7.	Total Number of Dominant Species Across All Strata:
4 8	(B)
Total Tree Cover: 55	Percent of Dominant Species That are OBL, FACW, or FAC: 25
20 - 20	(A/D
50% of total cover: 21,5 20% of total cover: 11,5 Sapling/Shrub Stratum (woody plants < 3" dbh)	
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom	Total % Cover of: Multiply by:
1. Pices glance 5 - Facel 7. Pop balson 10 Y	1? Ind. OBL species X1=
2. Vib paule 10 Y FACH 8. Pursta Secon 2	FACW species X2=
3. Rubus ides 5 - FREM 9.	FAC species 66 X3= 195
4. Lyco ann 5 - Facul 10.	FACU species X4=_ 472
5. Lian boreali 7 - Paralli.	UPL + NL species X5=
6. Salik bar 15 Y. FAIGHZ	Column Totals: 183 (A) 647 (B)
Total Sapling/Shrub Cover: 57	
50% of total cover: 28.5 20% of total cover: 11.	Prevalence Index = B/A = 3.64
Herb Stratum	Trodiction illust - Dit 2
Abs.Cov.% Dom? Ind. Abs. Cov.% Dor	? Ind.
1. Cornus can 12 Y FACU12. 2. Cal can 35 Y FACU12.	Hydrophytic Vegetation Indicators:
3. Dyg of dil 2 - pach4.	Dominance Test is>50% Prevalence Index is ≤3.0
4. Egni arv 10 - PAL 15. 5. Chan ang 5 - PALM 16. 6. Myr flyka 5 - PAC 17.	1 Tovalence index is \$3.0
5. Chan ang 5 - FACM 16. 6. Myr filely 5 - FACC 17.	Morphological Adaptations¹ (Provide supporting
7. Ryrola Sec 2 - Fram 18.	data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation¹ (Explain)
9	
10 21	Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 7)	
50% of total cover: 35.5 20% of total cover: 14	Z Hydrophytic /
Circular 1/10-ac plot or other plot dimension: % of bare groun	
% Cover of Wetland Bryophytes	Present?
(where applicable)	-70
Remarks: Locf it /	

OIL		,					Age -	Sampling Point #	506
Profile Descripti	on: (Describe to the d	lepth needed	to document the i	ndicator or confirm	the abse	nce of indicate	ors)	for .	
Depth Horizon	n Soil Matri	x	Rec	dox Features			a,a dip.		
(in.) (opt.)	Color (moist)	%	Color (moist)	% Type¹	Loc2	_Texture_	(pos/	_Remar	
2-4 A	10 YR 2 2	100	3			Lann	neg)	(or use commer	it numbe
-5 B.	10YR 2/1	100			-	Sil	-		-
5-6 F	2543/1	100				Loan	_		- 1
-12 Ba	7.58R3/3	100		-	-	LSw	_	-	
16 62	IOYR314	100				LSay		-	
- 03	1016711	100		_	_		7.0	-	
7.70					-	100		- M	1-3
		100	10-4	-	-		-	,	
Evne: C = Cond	entration, D = Depletio	n RM = Red	tuced Matrix CS=0	Coated Sand Grain	es ² Locatio	nr. Pl = Pore	Lining BC	= Root Channel	M - Ma
	ators (check ones the							- Hoot Granner,	141 1416
tandard indicat		uppiy,		r Problematic Hy			. 9	學	4
Histosol or I	-GA	1	7.0%	Color Change ⁴ (TA			ne indicator	of hydrophytic ve	getation
	don (A2) (8-15" organi	ne entid				one	primary inc	dicator of wetland	75
	by mineral soil with chror			Alpine Swales (TA				l an appropriate la pe present unless	
Black Histic	(A3)		Alaska	Redox with 2.5Y H	lue	orı	problematic.		
Hydrogen S	ulfide (A4) (within 12°o	f mineral	Alaska	Gleyed without Hu	e 5Y or Re	edder ⁴ Gi	ve details o	f color change in	Remark
surface; O _	in this pit			rlying Layer					
Thick Dark	Surface (A12)			g., see p.91 of 2007 ment: explain in Ren			1		2.50
Alaska Gley	red (A13)		-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-	1	The second	
Alaska Redo	ox (A14)			-		- (70)			
Alaska Ala	and Darson (AdE)								
Alaska Gley	ed Fores (A15)								
lestrictive Layer	(if present)		Drainage Cla	ss: WD					/
Restrictive Layer			Drainage Cla		Hye	dric Soil Pres	sent?	Yes N	0 /
Restrictive Layer Type: No Depth (inches	(if present)				Нус	dric Soil Pres	sent?	Yes N	10 /
Depth (inchestomments:	(if present)	clphe-	Soil Map Unit		Нус	dric Soil Pres	sent?	YesN	lo 🗸
Restrictive Layer Type: No Depth (inchest) Comments: No Depth (inchest)	(if present) NE s) P day for alpha		Soil Map Unit	Name:		in the state of th	Y I		lo V
Restrictive Layer Type: No Depth (inchestorments: Comments: COMMENTAL COMMEN	(if present) NE s) P dey for alpha egy Indicators (check	ones that ap	Soil Map Unit	Name:	Seco	ondary Indicat	ors (at least	2 are required)	lo 🗸
Depth (inchest) Comments: /DROLOGY Vetland Hydrological August 1988 /mary Indicators	(if present) NE s) P day for alpha gy Indicators (check s (any one indicator i	ones that ap	Soil Map Unit	Name:	Secr	ondary Indicat Water-Stained	ors (at least d Leaves (B	(2 are required)	lo 🗸
Pestrictive Layer Type: No. 1 Depth (inchest) Comments: No. 2 DROLOGY Vetland Hydrology Vetland Hydrology Surface Water	day for deha	ones that ap	Soil Map Unit	n soil surface):	Seco	ondary Indicat Water-Stained Drainage Patt	ors (at least d Leaves (B ems (B10)	2 are required) 9)	
Pestrictive Layer Type: No. 1 Depth (inchest) Comments: No. 2 Comments: N	(if present) NE s) P day for alpha gy Indicators (check s (any one indicator i	ones that ap	Soil Map Unit	n soil surface):	Seco	ondary Indicat Water-Stained Drainage Patt Oxid'd Rhizos	ors (at least d Leaves (B ems (B10) pheres on L	2 are required) 9) Living Roots (C3)	
Depth (inchest) Comments: DROLOGY Vetland Hydrology Surface Water	dey for depha ogy Indicators (check (any one indicator in the control of the cont	ones that aps sufficient) Surfa	Soil Map Unit	n soil surface): 6) erial Imagery (B7)	Seco	ondary Indicat Water-Stained Drainage Patt Oxid'd Rhizos Presence of F	ors (at least d Leaves (B erns (B10) pheres on L Reduced Iron	2 are required) 9) Living Roots (C3)	
Restrictive Layer Type: No Depth (inches Comments: COMME	dey for alpha regy Indicators (check s (any one indicator i er (A1) table (A2) (w/in 12") 3) (w/in 12")	ones that aps sufficient) Surfa	Soil Map Unit	n soil surface): 6) erial Imagery (B7)	Secondary Second	ondary Indicat Water-Stained Drainage Patt Oxid'd Rhizos Presence of F	ors (at least d Leaves (B erns (B10) pheres on L Reduced Iron soil color ch	2 are required) 9) Living Roots (C3)	
Pestrictive Layer Type: No. Depth (inchest) Comments: PDROLOGY Vetland Hydrology Vetland Hydrology Surface Wate High Water T Saturation (A	day for delay fo	ones that aps sufficient) Surfa Inun Spar	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary Second	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F	ors (at least d Leaves (B erns (B10) pheres on L Reduced Iron soil color ch (C5)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12")	
Pestrictive Layer Type: No. Depth (inchest) Comments: VDROLOGY Vetland Hydrology Vetland Hydrology — Surface Wate — High Water T — Saturation (A — Water Marks	dey for delay fo	ones that aps sufficient) Surfa Inun Spai Marl	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or Str	ors (at least d Leaves (B ems (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plant	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12")	
Pestrictive Layer Type: No Depth (inchest Comments: POROLOGY Vetland Hydrolog Primary Indicators — Surface Wate — High Water T — Saturation (A — Water Marks — Sediment De — Drift Deposits	dey for alpha regy Indicators (check (any one indicator i er (A1) (able (A2) (w/in 12") (B1) (B1) (B3)	ones that aps sufficient) Surfa Inun Spai Mari	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Second Se	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit	ors (at least d Leaves (B erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2 ard (D3)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)	
Pestrictive Layer Type: No Depth (inches Comments: YDROLOGY Vetland Hydrolo Primary Indicators Surface Water High Water T Saturation (A Water Marks Sediment Deposits Algal Mat or (A)	dey for alpha gy Indicators (check (any one indicator i (A1) (able (A2) (w/in 12") (B1) (posits (B2) (6 (B3) Crust (B4)	ones that aps sufficient) Surfa Inun Spai Mari	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24°, car	ors (at least d Leaves (B10) erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plani Position (D2 ard (D3) n perch H2C	(2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) w/in 12")	(within 1
Depth (inchestorments: /DROLOGY Vetland Hydrology Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits	dey for alpha gy Indicators (check (any one indicator i (A1) (able (A2) (w/in 12") (B1) (posits (B2) (6 (B3) Crust (B4)	ones that aps sufficient) Surfa Inun Spai Mari	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Satt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograf	ors (at least d Leaves (B erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2 ard (D3) n perch H2C ohic Relief (2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)	(within 1
Depth (inchestomments: //DROLOGY //Vetland Hydrology //Imary Indicators Surface Water High Water T Saturation (A Water Marks Sediment Deposits Algal Mat or (A)	dey for alpha gy Indicators (check (any one indicator i (A1) (able (A2) (w/in 12") (B1) (posits (B2) (6 (B3) Crust (B4)	ones that aps sufficient) Surfa Inun Spai Mari	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least deves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plan Position (D2) and (D3) perch H2C chic Relief (Fest (D5)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat	(within 1
Pestrictive Layer Type: No. Depth (inchest comments: No.	dey for alpha gy Indicators (check (any one indicator i (A1) (able (A2) (w/in 12") (B1) (posits (B2) (6 (B3) Crust (B4)	ones that aps sufficient) Surficient Inun Spar Mari Hydr Dry-	Soil Map Unit	n soil surface): 6) erial Imagery (B7) encave Surface (Bi	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least deves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plan Position (D2) and (D3) perch H2C chic Relief (Fest (D5)	(2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) w/in 12")	(within 1
Restrictive Layer Type: No Depth (inchest Comments: Comment Indicators Comments: Comment	if present) NE Sylvalors (check of any one indicator in the indicator in	ones that aps sufficient) Surficient Inun Spar Mari Hydr Dry- Othe	Soil Map Unit	n soil surface): 6) erial Imagery (B7) ericave Surface (Bit	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least deves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plan Position (D2) and (D3) perch H2C chic Relief (Fest (D5)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat	(within 1
Pestrictive Layer Type: No. Depth (inchest Comments: No. 2) Port of the Comments: No. 2 Port of the Comments: No. 2 Port of the Comments: No. 2 Port of the Comment Indicators: No. 2 Port of the Comment Indica	(if present) NE S) Aug for Apha regy Indicators (check s (any one indicator i er (A1) (able (A2) (w/in 12") (B1) posits (B2) (B3) Crust (B4) (B5) s (in. from ground surf esent? Yes	ones that aps sufficient) Surfa Inun Spai Mari Hydr Dry- Othe	Soil Map Unit	n soil surface): 6) erial Imagery (B7) ericave Surface (Bit	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least deves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plan Position (D2) and (D3) perch H2C chic Relief (Fest (D5)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat	(within 1
Pestrictive Layer Type: No. Depth (inchest comments: YDROLOGY Wetland Hydrology Primary Indicators — Surface Water — High Water T — Saturation (A — Water Marks — Sediment Deposits — Algal Mat or (Incomplete Service Servic	gy Indicators (check (any one indicator is (ones that aps sufficient) Surfice Inun Spar Hydr Dry- Other	Soil Map Unit oply, measure from ace Soil Cracks (Bridation Visible on Arsely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab or (explain) Depth of water Depth to water	n soil surface): 6) erial Imagery (B7) encave Surface (B6) (C1) ele (C2) er (in.)	Secondary MA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least deves (B10) pheres on Leaduced Iron soil color ch (C5) ressed Plan Position (D2) and (D3) perch H2C chic Relief (Fest (D5)	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat	(within 1
Pestrictive Layer Type: No. Depth (inchest Comments: No. Depth (inchest Comments: No. Depth (inchest Comments: No. Depth (inchest Comments: No. Depth (inchest Comment Indicators	if present) Sey Indicators (check is (any one indicator is er (A1) (able (A2) (w/in 12") (B1) posits (B2) (B3) Crust (B4) (B5) s (in. from ground surfesent? Yes	ones that aps sufficient) Surficient Inun Spar Hydr Othe	Soil Map Unit pply, measure from ace Soil Cracks (Bedation Visible on A reely Vegetated Co Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain) Depth of water Depth to water	n soil surface): 6) erial Imagery (B7) encave Surface (Bi (C1) le (C2) er (in.) er (in.)	Second	Ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. q,q or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral (# OBL+FAC)	ors (at least d Leaves (Bit) erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plani Position (D2 ard (D3) n perch H2C ohic Relief (Fest (D5) W dominants	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat > # FACU+UPL do	(within 1
Pestrictive Layer Type: No. Depth (inchest comments: No. Depth (inchest comments: No. Depth (inchest comments: No. Depth (inchest comments: No. Depth (inchest comment) No	(if present) NE s) day for alpha regy Indicators (check is (any one indicator is er (A1) able (A2) (w/in 12") (B1) posits (B2) (B3) Crust (B4) (B5) s (in. from ground surfesent? Yes ent? Yes Seep	ones that aps sufficient) Surfice Inun Spar Hydr Dry- Other	Soil Map Unit Poply, measure from ace Soil Cracks (Bidation Visible on A rely Vegetated Co Deposits (B15) regen Sulfide Odor Season Water Tab er (explain) Depth of water Depth to water Depth to sat.	n soil surface): 6) erial Imagery (B7) encave Surface (Bi (C1) ele (C2) er (in.) er (in.) fitted?: (in.)	Second	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	ors (at least d Leaves (Bit) erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plani Position (D2 ard (D3) n perch H2C ohic Relief (Fest (D5) W dominants	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat > # FACU+UPL do	(within 1
Restrictive Layer Type: No. Depth (inchest inchest) Primary Indicators Surface Water High Water T Saturation (A Water Marks Sediment Deposits Algal Mat or (Iron Deposits Field Observation Surface Water Presentation Presentatio	(if present) NE s) day for alpha regy Indicators (check is (any one indicator is er (A1) able (A2) (w/in 12") (B1) posits (B2) (B3) Crust (B4) (B5) s (in. from ground surfesent? Yes ent? Yes Seep	ones that aps sufficient) Surficient Inun Spar Hydr Dry- Othe	Soil Map Unit pply, measure from ace Soil Cracks (Bidation Visible on A sely Vegetated Co Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain) Depth of water Depth to water Depth to sat. Epi Endo	n soil surface): 6) erial Imagery (B7) encave Surface (Bi (C1) er (in.) er (in.) fille(7: (in.) Unknown	Second NA	ondary Indicate Water-Stained Drainage Patt Oxid'd Rhizose Presence of F (pos. q,q or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral (# OBL+FAC)	ors (at least d Leaves (Bit) erns (B10) pheres on L Reduced Iron soil color ch (C5) ressed Plani Position (D2 ard (D3) n perch H2C ohic Relief (Fest (D5) W dominants	2 are required) 9) Living Roots (C3) n (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by wat > # FACU+UPL do	(within 1

Project: West Su Acuss	Borough/City:	: MSB	Date: 9/15/2020
Applicant/Owner: At DEA			Sampling Point #: 508
Investigator(s): Chi Cunning	nam, Nova Hotel	Firm: HDR Afaska, Inc.	
	Long. 152, 398833 ± ' NAD		ked on map? Field Map #: 4
_	rthcentral Western Aleutian Interior No		
	linear convex / concave Shape up/dowr		
	KZ, NESW		
	s on the site typical for this time of year? Ye		
	Hydrology N significantly disturbed? A		
	Hydrology N naturally problematic? If		
SUMMARY OF FINDINGS			
Hydrophytic Vegetation Presen	? Yes No	,	
Hydric Soil Present?	Ist	the sampled area	io
Wetland Hydrology Present?	Yes V No	Remarks (e.g.,	
	ames.) Estimate absolute % cover (not relat		, , and , ,
VEGETATION (USB SCIENTIFIC I	arres.) Estimate absolute % cover (not relati	Dominance Test	worksheet:
Tree Stratum (dbh≥ 3")			
	m? Ind. Species Cov.% Y FAM 5.	Dom? Ind. Number of Domin That are OBL, FA	
	<u> </u>		
	Y FACU 7.	Total Number of I	70/ 6
4.	8		<u> </u>
	Total Tree Cover: 45	Percent of Domin	
50% of total cover: 22		That are OBL, FA	
Sapling/Shrub Stratum (woody Abs.Cov.% Do		Dom? Ind.	
1 Klibes tri 5 -	PXZ 7. Linn box 2	OBL species	T $X1=T$
2 Ahnustan 15 Y	FAL B. Fricar	FACW species	5 X2= 10
3 Picca glan B -	FACU 9.	FAC species	18 x3= 234
4. Vib edule 10 Y		FACU species	78 X4= 352
5. Spiraca ble 2	_ PAM 11	UPL + NL species	3 X5=
6. Bet ken 12 Y	FWZW12.	Column Totals:	168 (A) 56B (B)
Total Sa	pling/Shrub Cover: 54		
50% of total cover:	27	10.8 Prevalence Ir	idex = B/A = 3.35
Herb Stratum			
Abs.Cov.% Don	? Ind. Abs. Cov.%	Dom? Ind.	
1. Pm du 3 -	FACU12.	Hydrophytic Veg	etation Indicators:
2. Eggn av. 10 Y	PM 13.		e Test is>50%
4. Col can 25 Y	9NC 14.	Prevalence	
5. Ather Gilfen B -	16		Seel Adversaria and 400 and 400 and
5. Athyr Glan B - 6. Song can 5 - 7. Com pal 7 -	FAZW17.		ical Adaptations ¹ (Provide supporting lemarks or on a separate sheet)
7. Com pal 7 -	0BL 18.	V	
8. Vivia 31 2 -	19	Problemat	ic Hydrophytic Vegetation¹ (Explain)
9. Trew 1 -		<u> </u>	
10	21		Iric soil and wetland hydrology must
11	22	De present uniess	disturbed or problematic.
	Total Herb Cover: 7		,
50% of total cover:	35.5 20% of total cover:	14.2 Hydrophytic	
Circular 1/10-ac plot or oth	er plot dimension: % of bare g	ground: 12 Vegetation Present?	Yes No
% Cover of Wetland Bryophytes	% Total Cover of Bryophyte	es%	100
(where applicable) Remarks:			
5th occupies (and scape position but co	ellecte water	
Level to conc	are termin : meets he	1 dri soil hydrology	(primar indication)

SOIL		(Dana ilia ta tha da	-1			and a				Sampling Point #: 509
1 200		(Describe to the de	om needed t	o document the II	ndicator	or contim	the abse	nce of indicato	rs)	
Depth	Horizon	Soil Matrix		Rec	lox Feat	tures_			a,a dip.	
<u>(in.)</u>	<u>(opt.)</u>	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	(pos/ neg)	_Remarks_ (or use comment number)
02	0-10	104R2/1	100		_		_	ora	14.17	
MB	10-18	2.57 2.5/1	100		_	_		Sal	NE	
	- 1									
				71 15				230		
		X .			_					
				= = = =						
					_			l. K		
¹Type: C	= Concentr	ation, D = Depletion,	RM = Redu	ced Matrix, CS=0	Coated S	Sand Grain	s ² Locatio	on: PL = Pore	Lining, RC	= Root Channel, M = Matrix
		rs (check ones that								
	d Indicators			indicators fo						
	tosol or Hist			Alaska (e indicator	of hydrophytic vegetation,
		(A2) (8-16* organics	eat'd							licator of wetland
	underfain by i	mineral soil with chroma	≤2)	Alaska /						an appropriate landscape e present unless disturbed
Bla	ck Histic (A3	3)		Alaska I	Redox w	vith 2.5Y H	ue	or p	roblematic.	
Hyd	trogen Sulfic	de (A4) (within 12"of r	nineral	Alaska (3leyed v	without Hu	e 5Y or Re	edder ⁴ Giv	e details of	color change in Remarks.
	lace; @				rlying La					440
Thic	ck Dark Surl	ace (A12)				o.91 of 2007 plain in Ren				
	ska Gleyed									L. DOWN DELLA STATE
Ala	ska Redox (A14)				4				
Ala	ska Gleyed	Pores (A15)					112			
Restrictiv	e Layer (if p	resent)		Drainage Clas	ss: P	P				
Type:	NONE			Soil Map Unit	Name:		Hy	dric Soil Pres	ent?	Yes No
Depth	(inches) _	NA								
Commen	ts:							200		C CHANGE
1.								1		
3.	.1	Car. Ki								3 100
HYDROL	OGY							1,045		
Wetland	Hydrology	Indicators (check or	nes that app	y, measure from	soil sı	urface):	Seco	ondary Indicato	rs (at least	2 are required)
Primary I	ndicators	алу one indicator is:	sufficient)				= 1	Water-Stained	Leaves (B9	9)
	ace Water (A		Surfac	e Soil Cracks (Be	6)		Y	Drainage Patte	erns (B10) _	
Y High	Water Table	e (A2) (w/in 12")	Inunda	tion Visible on A	erial Ima	agery (B7)		Oxid'd Rhizosp	heres on L	iving Roots (C3) (within 12")
Y Satur	ration (A3) (w/in 12")	Sparse	ely Vegetated Co	ncave S	Surface (B8	B) NT	Presence of R		
- Wate	er Marks (B1)	- Marl D	eposits (B15)			-	(pos. a,a or s Salt Deposits (ange w/in 12")
	ment Depos			gen Sulfide Odor	(C1)			Stunted or Stre		s (D1)
	Deposits (B			eason Water Tab				Geomorphic P		
	Mat or Crus							Shallow Aquita		
			Other	(explain)				(w/in 24", can		w/in 12")
Iron I	Deposits (B	5)								D4) (caused by water)
							=	FAC Neutral T		> # FACU+UPL dominants)
Field Obs	ervations (in	n. from ground surfac	:e):					(# COLTENOV	CHIMINE	= # 1 AOOTOFE GOIMINANTS)
	Vater Prese		No 🗸	Depth of water	er (in.)					
	ble Present		No	Depth to water		15				
				depth but not yet						/
Saturation	n Present?	Yes V	No	Depth to sat.	_		Wet	land Hydrolog	v Present	Yes V
	capillary frin			Epi Endo	Unkno		Well	ana myarolog	y rieselit	169 110
		ata (stream gauge, r	nonitorina w				ons), if av	ailable:		
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						Notice that the second
Remarks:	Seapon	IN @9"							39 0	
	' '									

WETLAND DETERMINATION DATA FORM - Alaska Region Project: West Su Arcess ____Borough/City:___ Sampling Point #: Applicant/Owner:__ investigator(s): exin anningham, hom hotal Firm: HDR Alaska, Inc. Lat. (dec.º) UI. 982979 Long. 152.397363 ± NAD 83 Recorded on GPS #: V Marked on map? V Field Map #: 4 Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landform: Reach Slope (%): 2 Aspect: Local relief: Shape across slope: linear / convex / concave Shape up/downslope: linear / convex / concave NWI classification: Photo nos/descriptions: Sells #2, NESW Are climatic / hydrologic conditions on the site typical for this time of year? Yes:

No: ____ If no, explain. HGM type: NA Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes V No ____ Are Vegetation <u>N</u>, Soil <u>N</u>, or Hydrology <u>N</u> naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes ___ Is the sampled area Hydric Soil Present? Yes within a wetland? Wetland Hydrology Present? Yes No. V Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. **Dominance Test worksheet:** Tree Stratum (dbh≥ 3") Cov.% Dom? Ind. Species Dom? Number of Dominant Species Species Ind. That are OBL, FACW, or FAC: FROM FMM Total Number of Dominant Species Across All Strata: Percent of Dominant Species Total Tree Cover: 50 That are OBL, FACW, or FAC: Prevalence Index worksheet: 25 20% of total cover: _ 50% of total cover: _ Total % Cover of: Sapling/Shrub Stratum (woody plants < 3" dbh) Multiply by: Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? **OBL** species Kee alan 10 **FACW** species FARM 8. Vib edule 5 FICH 50 20 FACU species 4. LINN bor FROM 10. 5. LYGO ANN AW11. UPL + NL species 6. Sarbus fill Column Totals: Total Sapling/Shrub Cover: 50% of total cover: _____42.5 Prevalence Index = B/A = 20% of total cover: _ Herb Stratum Abs.Cov.% Dom? Ind Abs. Cov.% Dom? Ind. 1 Cornus seuc 25 PM 12. **Hydrophytic Vegetation Indicators:** 20 FAL 13. 2 Rub arc Dominance Test is>50% 3. Cham any PMM 14. -- Prevalence Index is ≤3.0 4. Gymno dy YAM 15. CAN TAL 16._ Morphological Adaptations¹ (Provide supporting 6. Purpla Sec FAM 17. data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation1 (Explain) 1 Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Total Herb Cover: 44 50% of total cover: ____ Hydrophytic 20% of total cover: 17.6 Vegetation Circular 1/10-ac plot Vor other plot dimension: _____ % of bare ground: 8 Present? % Cover of Wetland Bryophytes 40 % Total Cover of Bryophytes 5% (where applicable) Remarks:

OIL Profile Description: (Describe to the de	oth needed to	document the i	ndicato	or confirm	the abser	nce of indic	cators)	Sampling Point #: 599
Depth Horizon	Soil Matrix	Jan Hooded to		dox Fea		(110 0000)	nee of mak	a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture	(pos/	Remarks
	7.5 YR 2.5/1				1750			neg)	(or use comment number)
2-5 A	10YR4/3		104		_	7	Sal		
	2.545/2	11-2					Si I		Ash layer who a
	2.645/4						91		TIS AL TRUMPOLE OF CHILL
	10 12/4		1.00		_				
			-br					-	
	1		4	_					HIZ IT
	- 1					_			F1.41
Type: C = Concentrat	ion D = Depletion	BM = Redu	and Matrix CS=0	Coated :	Sand Grain	======================================	n. Pl – P	ore Liping BC	= Root Channel, M = Matrix
lydric Soil Indicators				_					= : 100t Chame, W = Math
itandard Indicators:	(CITOCK OTTOS BILLE	арріу, пісаз	Indicators fo						
Histosol or Histel	(A1)			ph.	hange ⁴ (TA			³ One indicator	of hydrophytic vegetation.
		a a tial						one primary in	dicator of wetland
	A2) (8-16" organics neral soil with chroma		Alaska	Alpine S	Swales (TA	5)			l an appropriate landscape pe present unless disturbed
Black Histic (A3)			Alaska	Redox v	vith 2.5Y H	ue		or problematic	
Hydrogen Sulfide	(A4) (within 12"of r	mineral	Alaska	Gleyed	without Hu	e 5Y or Re	edder	⁴ Give details o	f color change in Remarks.
surface; @	in this pit	h-		riying L				-	
Thick Dark Surface	ce (A12)				p.91 of 2007 colain in Ren				
Alaska Gleyed (A	13)	1							
Alaska Redox (A	14)			114					
Alaska Gleyed Po	ores (A15)								- Comp
Restrictive Layer (if pre	sent)		Drainage Cla	ss: V	VD	- 12		34	- 499
Type: NINE			Soil Map Unit	Name:	10	Hyd	dric Soil P	resent?	Yes No
Depth (inches) N	n/A		15			-			The later of
Comments: 2. 3.			P. 6				1 100		10°
YDROLOGY				-			+1111		Th. 77
Wetland Hydrology In	dicators (check o	nes that appl	y, measure fron	n soil s	urface):	Seco	ondary Indi	icators (at least	2 are required)
rimary Indicators (a	ny one indicator is	17.						ined Leaves (B	
Surface Water (A1			e Soil Cracks (B				-	Patterns (B10)	
High Water Table	(A2) (w/in 12")	Inunda	ition Visible on A	erial Im	agery (B7)				Living Roots (C3) (within 12")
Saturation (A3) (w/	în 12")	Sparse	ely Vegetated Co	oncave (Surface (Bi	B) NA		of Reduced Iron	n (C4) nange w/in 12")
Water Marks (B1)		Marl D	eposits (B15)	, /			Salt Depos		,
Sediment Deposits	(B2)	Hydrog	gen Sulfide Odor	(C1)		_	Stunted or	Stressed Plan	ts (D1)
Drift Deposits (B3)		Dry-Se	ason Water Tab	le (C2)		_	Geomorph	ic Position (D2)
Algal Mat or Crust	(B4)	Other	(explain)			-		quitard (D3)	No. of the state o
	()	0	(4		_		can perch H2C	
Iron Deposits (B5)								grapnic Heller (ral Test (D5)	D4) (caused by water)
-4									> # FACU+UPL dominants)
ield Observations (in.	from ground surface	:e):	1.31					77.10	
Surface Water Present	? Yes	No_	Depth of water	er (in.) _	-				
Vater Table Present?	Yes	No_	Depth to water	er (in.) _	-				
	Seepi	ng in at that	depth but not yet	filled?:	_				/
Saturation Present?	Yes	No V	Depth to sat.	(in.)		Wet	land Hydr	ology Present	? Yes No
includes capillary fring	e)		Epi Endo	Unkno	own		+		
Describe Recorded Da	ta (stream gauge,	nonitoring w	ell, aerial photos	, previo	us inspecti	ons), if av	ailable:		
Remarks:			35.1	- 11		-	- To		
IGHGING.							10		
		197		13					
			2.0	A	16				

Project: Wat Su Awass Borough/City: W	ASB Date: 9/14/2020
Applicant/Owner: Attl) EA	Sampling Point #: 80 513
Investigator(s): Eking cunningham, Nova Hotch	
Lat. (dec.") 41. 552459 Long. 150-699408 ± 'NAD 83	Recorded on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northe	ern Landform: Hat Potsbye Slope (%): 3 Aspect:
Local relief: Shape across slope: linear convex / concave Shape up/downsto	pe: Inear / convex / concave NWI classification: PF04/SSIB
Photo nos/descriptions: 501L5 x 2, NESW Car	mera #: Veg Type (Viereck Level 4 or other): TA2 f
Are climatic / hydrologic conditions on the site typical for this time of year? Yes:	No: If no, explain. HGM type: Stope
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If need	ded, explain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes Vo	
	sampled area
Wetland Hydrology Present? Yes V No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative	
The Cover (1036 Scientific Figures.) Estimate absolute 78 Cover (110) felative i	Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom 1. Pices war 30 Y FreW 5.	n? Ind. Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Pet pap 5 T FALL 6.	
3. 7.	Total Number of Dominant Species Across All Strata:
4	(B)
Total Tree Cover: 36	Percent of Dominant Species
	That are OBL, FACW, or FAC: 283 (A/B) Prevalence Index worksheet:
50% of total cover: 17-15 20% of total cover: 7	
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Do	Total % Cover of: Multiply by:
1. Alnusten 25 Y FAC 7.	OBL species X1=
2 MCN2 for 12 Y FACM 8.	FACW species
3. Vac alask 10 - FARD 9.	FAC species K3=
4. Bet her/por 8 - FACU 10.	FACU species 32 X4=_128
5. Picca mar 8 - FACW 11.	UPL + NL species X5=
6	— Column Totals: 170 (A) 454 (B)
Total Sapling/Shrub Cover: 45	
50% of total cover:31.5 20% of total cover:12.	6 Prevalence Index = B/A = 2.67
Herb Stratum	
Abs.Cov.% Dom? Ind. , Abs. Cov.% Dom	m? Ind.
1. Rub chan 8 - MW12.	Hydrophytic Vegetation Indicators:
2. Comandra liv 2 - PAW 13.	
3. Crcx disporma 12 Y MW14.	Dominance Test is>50% Y Prevalence Index is ≤3.0
4. Egni arv 10 - FAC 15. 5. Cal Can 15 Y FAC 16. 6. Egni frev 5 - OBL 17. 7. Comarum pal 10 Y OBL 18.	
6. Egni fruv 5 - OBL 17.	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7. Comarum par 10 Y OBL 18.	
18.10 cm 2 - 100M 19	Problematic Hydrophytic Vegetation¹ (Explain)
9. May Alka 5 - VM 20.	
	¹ Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 72	/
50% of total cover: 36 20% of total cover: 14.	4 Hydrophytic
Circular 1/10-ac plot or other plot dimension: % of bare ground	Vegetation Yes V No
% Cover of Wetland Bryophytes 25 % Total Cover of Bryophytes (where applicable)	16: 16 Present?
Remarks:	•
lots of dead spruce trees around/in glt.	

SOIL		Sampling Point #: 513
Profile Description: (Describe to the depth needed	to document the indicator or confim	the absence of indicators)
Depth Horizon Soil Matrix	Redox Features	α,α dip.
(in.) (opt.) Color (moist) %	Color (moist) % Type¹	Loc ² Texture (pos/ Remarks neg) (or use comment number)
0-4 0i 104R2/1 190%		- vrg N.T.
4-16 Ou WYLZII		
		1
¹ Type: C = Concentration, D = Depletion, RM = Red	uced Matrix, CS=Coated Sand Grain	ns ² Location: PL = Pore Lining, RC = Root Channel, M = Matrix
Hydric Soil Indicators (check ones that apply, mes	sure from top of mineral layers u	nless otherwise noted):
Standard Indicators:	Indicators for Problematic Hy	dric Soils ³ :
Y Histosol or Histel (A1)	Alaska Color Change ⁴ (T/	³ One indicator of hydrophytic vegetation,
Histic Epipedon (A2) (8-16" organics, sat'd,	Alaska Alpine Swales (TA	one primary indicator of wetland hydrology, and an appropriate landscape
underlain by mineral soil with chroma ≤2)	Alaska Redox with 2.5Y h	position must be present unless disturbed
Black Histic (A3)		4Give details of color change in Remarks
Hydrogen Sulfide (A4) (within 12"of mineral surface; @" In this pit	Alaska Gleyed without Hu	e 5Y or Redder
	Underlying Layer Other (e.g., see p.91 of 2007	
Thick Dark Surface (A12)	Supplement: explain in Rei	
Alaska Gleyed (A13)		
Alaska Redox (A14)		
Alaska Gleyed Pores (A15)		
Restrictive Layer (if present)	Drainage Class: PD	
Type: NoNE	Soil Map Unit Name:	Hydric Soil Present? Yes V No
Depth (inches) NA		
Comments:		- 4/5
2.		1000
3.		The state of the s
HYDROLOGY		
Wetland Hydrology Indicators (check ones that ap	ply, measure from soil surface):	Secondary Indicators (at least 2 are required)
Primary Indicators (any one indicator is sufficient)		Water-Stained Leaves (B9)
	ace Soil Cracks (B6)	✓ Drainage Patterns (B10)
	dation Visible on Aerial Imagery (B7)	
Y Saturation (A3) (w/in 12")	sely Vegetated Concave Surface (B	8) NT Presence of Reduced Iron (C4) (pos. a,a or soil color change w/in 12")
Water Marks (B1) Marl	Deposits (B15)	Salt Deposits (C5)
Sediment Deposits (B2) Hydr	ogen Sulfide Odor (C1)	Stunted or Stressed Plants (D1)
Drift Deposits (B3) Dry-	Season Water Table (C2)	Ceomorphic Position (D2)
Algal Mat or Crust (B4) Othe	r (explain)	Shallow Aquitard (D3)
Tron Deposits (B5)		(w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water)
non pehosis (pp)		FAC Neutral Test (D5)
	3	(# OBL+FACW dominants > # FACU+UPL dominants)
Field Observations (in. from ground surface):		
Surface Water Present? Yes No	Depth of water (in.)	A CONTRACTOR OF THE CONTRACTOR
Water Table Present? Yes No	Depth to water (in.)	
Seeping in at tha	t depth but not yet filled?:	
Saturation Present? Yes No	Depth to sat. (in.) 2	Wetland Hydrology Present? Yes No
(includes capillary fringe)	Epi Endo Unknown	
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspect	ions), if available:
Remarks:	4.	
water table @ 14"/ seeping @12	" when instally ofene	d pt sup to 4" within 15 minutes.
Standing water in low Smalls	bhon here 112	

Project: West Sn Awess Boroug	h/City:_MSB	Date: 9/10/2020
Applicant/Owner: At DEA		Sampling Point #:_514
Investigator(s): ERIN CANNUMAM, NORA HOTZU	Firm: HDR Alaska, Inc.	
Lat. (dec.°) 61.552917 Long. 150.698132 ±	NAD 83 Recorded on GPS #: V Mark	ed on map? Field Map #:
Subregion (circle one): SE Southcentre Western Aleutian Interi		
Local relief: Shape across slope linear/convex / concave Shape u		
Photo nos./descriptions: SULLX2, NESW		
Are climatic / hydrologic conditions on the site typical for this time of ye		
Are Vegetation N, Soil N, or Hydrology N significantly disturbe		
Are Vegetation N, Soil N, or Hydrology N naturally problematic		100
SUMMARY OF FINDINGS	7. Il rioddd, dynair arbweid flote.	
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No	Is the sampled area	
		2 <u>/</u>
Wetland Hydrology Present? Yes No	Remarks (e.g., n	marginai?):
VEGETATION (Use scientific names.) Estimate absolute % cover (no	ot relative cover). % can total >100%. Dominance Test w	usultata att
Tree Stratum (dbh≥ 3")	Dominance rest v	worksneet:
Species Cov.% Dom? Ind. Species Co		
1. Picca glanca 8 - FACU 5.	A STATE OF THE STA	CW, or FAC: (A)
2. Bet pap 60 Y FACM 6.		
3 7	Species Across All	Strata:(B)
4 8	Percent of Domina	nt Species
Total Tree Cover: 68	That are OBL, FAC	CW, or FAC: 60 (A/B)
50% of total cover: 34 20% of total cov	ver: 13.6 Prevalence Index	worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Co	over of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.C	ov.% Dom? Ind. OBL species	- X1= -
1. Vib edule 20 Y FACH 7. Ribes Musson	10 1147	X2= -
2. Marz far 5 - PMM 8.	FACW species	
3. Vac alal 12 Y FAC 9.	FAC species	
4. 4. 60 ann 10 - 10010.		124 X4= \$68
5. Sarbus int 3 - TAM 11.	UPL + NL species	
6. Spiren bea 3 - Part 12.	Column Totals: _	193 (A) 306 (B)
Total Sapling/Shrub Cover:		- A
50% of total cover: 31.5 20% of total cov	ver: 12.6 Prevalence Inc	lex = B/A = 3.658
Herb Stratum		
	ov.% Dom? Ind.	
1. Cornuc can 25 Y FXL 12.	- Hydrophytic Vege	etation Indicators:
2. Gymsody 8 - FMM13.	— Y Deminance	Test is>50%
3. Onlast del 8 - FACMA.		Index is ≤3.0
4. Cal can 7 - TAU 15.		
5. Changag 2 - FAM 16. 6. Pulous red 12 Y FM 17.	Morphologic	cal Adaptations¹ (Provide supporting emarks or on a separate sheet)
7	1 ~	
8	I Froblematic	Hydrophytic Vegetation¹ (Explain)
9		
10 21		ic soil and wetland hydrology must
11 22		disturbed or problematic.
Total Herb Cover: 62	V 10	
50% of total cover:	ver: 12.4 Hydrophytic	
	,	Yes No
Circular 1/10-ac plot or other plot dimension: % of % Cover of Wetland Bryophytes % Total Cover of Bry	bare ground: Present?	
(where applicable)	opii, 100	
Remarks:		

Histic Epipedon (A2) (8-16" organics, sat'd, underfain by mineral soil with chroma ≤2) — Black Histic (A3) — Hydrogen Sulfide (A4) (within 12" of mineral surface; ② "in this pit — Thick Dark Surface (A12) — Alaska Gleyed without Hue 5Y or Redder Underlying Layer — Other (e.g., see p.91 of 2007 — Supplement: explain in Remarks) — Alaska Gleyed (A13) — Alaska Gleyed (A13) — Alaska Gleyed Pores (A15) Restrictive Layer (if present) — Type: Nee — Depth (inches) Nee — Depth (inches) Nee — Depth (inches) Nee — Soil Map Unit Name: Hydric Soil Prese 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): — Water-Stained — Water-Stained — Water Table (A2) (w/in 12") — Surface Soil Cracks (B6) — Drainage Patte — High Water Table (A2) (w/in 12") — Sparsely Vegetated Concave Surface (B8) — Presence of Re — (pos. q.a or or sell proposits (B15) — Salt Deposits (B2) — Hydrogen Sulfide Odor (C1) — Stunted or Street — Drift Deposits (B3) — Dry-Season Water Table (C2) — Geomorphic Pos. Shallow Aquita (win 24", can Microtopograph — FAC Neutral Text (Neutral Text (Neutra	Sampling Point #: 514
Color (moist) 2	rs)
Comments:	α,α dip.
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore I	(pos/ Remarks
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore II Pydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators for Problematic Hydric Soila*: Histosol or Histel (A1)	(or use comment number)
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore II	- Wh? no burn rema
Call B. Lorr H. Loc Sil	- but feels found
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore I Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted):	
Type: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore I Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Histosol or Histel (A1)	
Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Standard Indicators: Histosol or Histel (A1)	
Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Standard Indicators: Histosol or Histel (A1)	
Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Standard Indicators: Histosol or Histel (A1)	
Hydric Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Standard Indicators: Histosol or Histel (A1)	11/2 PO P 19/2
Standard Indicators: Histosci or Histol (A1)	
Histosol or Histel (A1) Histic Epipedon (A2) (8-16" organics, sat'd, undertain by mineral soil with chroma s2) Black Histic (A3) Histic (A3) Histic (A4) (within 12" of mineral surface; High Maska Redox with 2.5Y Hue or p displayed without Hue 5Y or Redder Underlying Layer Thick Dark Surface (A12) Alaska Gleyed without Hue 5Y or Redder Underlying Layer Other (e.g., sep p.91 of 2007 Supplement: explain in Remarks) Drainage Class: Drainage Pattle Dra	
Histic Epipedon (A2) (8-16° organics, sai'd, undertain by mineral soil with chroma \$2') Black Histic (A3) — Alaska Redox with 2.5Y Hue or 'Giv Hydrogen Sulfide (A4) (within 12° of mineral surface; ●' in this pit Underlying Layer Other (e.g., see p.91 of 2007 Thick Dark Surface (A12) — Alaska Gleyed without Hue 5Y or Redder Underlying Layer Other (e.g., see p.91 of 2007 Alaska Gleyed (A13) — Alaska Redox (A14) — Alaska Gleyed Pores (A15) Hestrictive Layer (if present) — Soil Map Unit Name: Hydric Soil Prese Depth (inches) NAM — Soil Map Unit Name: Hydric Soil Prese Depth (inches) NAM — Soil Map Unit Name: Hydric Soil Prese Depth (inches) NAM — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nam — Secondary Indicator Water-Stained Drainage Patite Depth Water Table (A2) (win 12") — Sparsely Vegetated Concave Surface (B8) — Drainage Patite Drai	- to-Produce of the death of the
Pisto Epipedion (A2) (exit organics, sard, underdain by mineral soil with chroma s2)	e indicator of hydrophytic vegetation, primary indicator of wetland
Black Histic (A3) — Alaska Redox with 2.5Y Hue or properties of the first of this pit and the pit and	rology, and an appropriate landscape
Hydrogen Sulfide (A4) (within 12'of mineral surface): — I'in this pit — Thick Dark Surface (A12) — Alaska Gleyed (A13) — Alaska Gleyed (A14) — Alaska Gleyed (A13) — Alaska Gleyed (A14) — Alaska Gleyed (A14) — Alaska Gleyed (A14) — Alaska Gleyed (A15) — Solf map Unit Name: — Hydric Solf Prese — Water Stained — Water Stained — Water Stained — Water Stained — Drainage Patte — Orid'd Rhizosp — Presence of Re — (pos. q.a or s — Saturation (A3) (w/in 12") — Sparsely Vegetated Concave Surface (B8) — Presence of Re — (pos. q.a or s — Salt Deposits (B15) — Salt Deposits (B15) — Salt Deposits (B15) — Salt Deposits (B15) — Shallow Aquita — (w/in 24", can — Shallow Aquita — (w/in 24", can — Field Observations (in. from ground surface): — Surface Water Present? — Yes — No — Depth of water (in.) — Seeping in at that depth but not yet filled?: — Saturation Present? — Yes — No — Depth to sat. (in.) — Wetland Hydrologe — Wetland Hydrologe — Wetland Hydrologe — Staineral — Saturation Present? — Yes — No — Depth to sat. (in.) — Wetland Hydrologe — Water Table (Pos. — Presence — Other (explain) — Saturation Present? — Yes — No — Depth to sat. (in.) — Wetland Hydrologe — Water Table (Pos. — Presence — Pres	ition must be present unless disturbed
Surface: In this pit	roblematic. re details of color change in Remarks.
Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Restrictive Layer (if present) Type: Depth (inches) NA Comments: 1. **Two dry fir apple alpha port fields of the Street (A15) Primary Indicators (any one indicator is sufficient) Hydric Soil Prese Secondary Indicator Water Table (A2) (win 12") Surface Soil Cracks (B6) Hydrogen Sulfide Odor (C1) Sufface Mater (A1) Surface Mater Table (B3) Presence of Re (pos. q.a or s Salt Deposits (B3) Dry-Season Water Table (C2) Geomorphic Pc Shallow Aquita (win 24", can Microtopograph FAC Neutral Teled Observations (In. from ground surface): Surface Water (In.) Surface Water (In.) Surface Water Present? Water Table Present? Yes No Depth to water (In.) Seeping in at that depth but not yet filled?: Saturation Present? Other (Explain) Wetland Hydrolog Wetland Hydrolog Water Alaska (In.) Wetland Hydrolog Water (In.) Seeping in at that depth but not yet filled?: Saturation Present? Wetland Hydrolog Wetland Hydrolog	The state of the s
Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Restrictive Layer (if present) Type: Nee Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nee Soil Map Unit Name: Hydric Soil Prese Comments: 1. two dry fire Apha Republic, not the Sele R. 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): ————————————————————————————————————	
Alaska Redox (A14) Alaska Gleyed Pores (A15) Restrictive Layer (if present) Type: Nee Soil Map Unit Name: Hydric Soil Prese Depth (inches) Nee Soil Map Unit Name: Hydric Soil Prese Comments: 1. two day for application, not to sile &. 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): — Water-Stained — Surface Water (A1) — Surface Soil Cracks (B6) — Drainage Patte — High Water Table (A2) (win 12") — Inundation Visible on Aerial Imagery (B7) — Oxid'd Rhizosp — Saturation (A3) (win 12") — Sparsely Vegetated Concave Surface (B8) — Presence of Re (pos. a., or or self-benefit (B15) — Sail Deposits (B15) — Sail Deposits (B15) — Sail Deposits (B15) — Stunted or Streen Stre	
Alaska Gleyed Pores (A15) Restrictive Layer (if present) Type: None Depth (inches) NA Comments: 1. too day for Apha Alpha, not tesk L. 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): Water-Stained Surface Water (A1) Surface Soil Cracks (B6) High Water Table (A2) (w/in 12") Inundation Visible on Aerial Imagery (B7) Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Marl Deposits (B15) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Surface Water (B4) Other (explain) Algal Mat or Crust (B4) Other (explain) FAC Neutral Test (# OBL+FACW Field Observations (In. from ground surface): Surface Water Present? Yes No Depth to water (in.) Seeping In at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Restrictive Layer (if present) Type: NONE Depth (inches) NA Comments: 1. too day for Apha Apha, not teste 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): — Water Stained — Surface Water (A1) — Surface Soil Cracks (B6) — High Water Table (A2) (win 12") — Saturation (A3) (win 12") — Sapraely Vegetated Concave Surface (B8) — Water Marks (B1) — Marl Deposits (B15) — Sediment Deposits (B2) — Hydrogen Sulfide Odor (C1) — Algal Mat or Crust (B4) — Other (explain) — Water Table Present? Field Observations (in. from ground surface): Seeping in at that depth but not yet filled?: — Seeping in at that depth but not yet filled?: — Selment Hydrology Wetland Hydrology Wetland Hydrology Hydric Soil Prese	
Type: None Soil Map Unit Name: Hydric Soil Press Depth (inches) NA Soil Map Unit Name: Hydric Soil Press Depth (inches) NA Soil Map Unit Name: Hydric Soil Press Comments: 1.	
Depth (inches) NA Comments: 1.	
Comments: 1. two dry fire Aphe Alphe, not tested. 2. 3. HYDROLOGY Wetland Hydrology Indicators (check ones that apply, measure from soil surface): Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cracks (B6) Trainage Patte Surface Water (A2) (w/in 12") Inundation Visible on Aerial Imagery (B7) Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Marl Deposits (B15) Salt Deposits (B2) Trift Deposits (B2) Hydrogen Sulfide Odor (C1) Torift Deposits (B3) Dry-Season Water Table (C2) Geomorphic Postal (w/in 24", can Microtopograph FAC Neutral Te (# OBL+FACW) Field Observations (in. from ground surface): Surface Water Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	ent? Yes No
### Wetland Hydrology Indicators (check ones that apply, measure from soil surface): ### Primary Indicators (any one indicator is sufficient) ### Surface Water (A1)	
Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cracks (B6) Trainage Patte High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Stunted or Stree Drift Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Tron Deposits (B5) Field Observations (in. from ground surface): Surface Water Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Surface Soil Cracks (B6) Drainage Patte Drainage Patte Drainage Patte Drainage Patte Drainage Patte Drainage Patte Doxid'd Rhizosp Presence of Re (pos. q.q or s Salt Deposits (B Stunted or Stree Geomorphic Pc Geomorphic Pc Shallow Aquita (w/in 24", can Microtopograph FAC Neutral Te (# OBL+FACW Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cracks (B6) Trainage Patte Aligh Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Sediment Deposits (B2) Aligal Mat or Crust (B4) Tron Deposits (B5) Field Observations (in. from ground surface): Surface Water Present? Surface Soil Cracks (B6) Drainage Patte Oxid'd Rhizosp Presence of Re (pos. q. q or s Salt Deposits (B8) Presence of Re (pos. q. q or s Salt Deposits (C1) Stunted or Stree Geomorphic Pc Shallow Aquita (w/in 24", can Microtopograph FAC Neutral Te (# OBL+FACW Saturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Surface Water Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cracks (B6) Drainage Patter Oxid'd Rhizosp Presence of Re (pos. q.q or see Soil Drainage Soil Cracks (B8)) Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Stunted or Street Drift Deposits (B3) Dry-Season Water Table (C2) Shallow Aquita (w/in 24", can Microtopograph FAC Neutral Te (# OBL+FACW) Field Observations (in. from ground surface): Surface Water Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Surface Water Present? Yes No Depth to sat. (in.) Wetland Hydrology	ers (at least 2 are required)
High Water Table (A2) (w/in 12")	
High Water Table (A2) (w/in 12")	
Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Sediment Deposits (B2) Presence of Re (pos. q,q or s Salt Deposits (B15) Sediment Deposits (B2) Presence of Re (pos. q,q or s Salt Deposits (B15) Salt Deposits (C1) Stunted or Stree Geomorphic Poses (C2) Geomorphic Poses (Win 24", can William (Win 24", can Microtopograph FAC Neutral Text (# OBL+FACW) Field Observations (in. from ground surface): Surface Water Present? Water Table Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	theres on Living Roots (C3) (within 12")
Water Marks (B1) Marl Deposits (B15) Salt Deposits (B2) Hydrogen Sulfide Odor (C1) Stunted or Stre Drift Deposits (B3) Dry-Season Water Table (C2) Geomorphic Poly Shallow Aquita	educed Iron (C4)
Sediment Deposits (B2)	soil color change w/in 12"}
Drift Deposits (B3) Dry-Season Water Table (C2) Geomorphic Pound Aquita	
Algal Mat or Crust (B4)Other (explain)Shallow Aquita (w/in 24*, can Microtopograph FAC Neutral Te (# OBL+FACW) Field Observations (in. from ground surface): Surface Water Present? Yes No Depth of water (in.) Water Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Field Observations (in. from ground surface): Surface Water Present? Water Table Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Seeping in At that depth but not yet filled?: Wetland Hydrolog	
Field Observations (in. from ground surface): Surface Water Present? Water Table Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Seeping in at that depth but not yet filled?: Wetland Hydrolog	perch H2O w/in 12")
Field Observations (in. from ground surface): Surface Water Present? Yes No Depth of water (in.) Water Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	hic Relief (D4) (caused by water)
Field Observations (in. from ground surface): Surface Water Present? Yes No Depth of water (in.) Water Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	est (D5)
Surface Water Present? Yes No Depth of water (in.) Water Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	dominants > # FACU+UPL dominants)
Water Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Seeping in at that depth but not yet filled?: Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
Saturation Present? Yes No Depth to sat. (in.) Wetland Hydrolog	
(includes capillary fringe) Epi Endo Unknown	y Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

	Boroug	h/City: MSB		Date: 9/14/2020
Applicant/Owner: A1014				_ Sampling Point #: 516
Investigator(s): ELLN CUNNINAL	HAM, NORA HOTCH	Firm: H0	OR Alaska, Inc.	urfr97
				d on map? Field Map #:
Subregion (circle one): SE South	central Western Aleutian Interio	or Northern Landforn	n: Swale	_Slope (%): 3 Aspect:
Local relief: Shape across slopezal	convex (concave) Shape up	/downslope: linear / co	nvex / concave NV	VI classification:
Photo nos./descriptions: Soils #	2, NESW	Carnera #:	Veg Type (Viereck L	evel 4 or other): III A2a
	on the site typical for this time of yea			
Are Vegetation N, Soil N, or H	ydrology M significantly disturbed	d? Are "Normal Circum	nstances" present?	res No
Are Vegetation N, Soil N, or H	ydrology N naturally problematic	? If needed, explain a	nswers here.	-
SUMMARY OF FINDINGS				
Hydrophytic Vegetation Present?	Yes No			
Hydric Soil Present?	Yes No	is the sampled area within a wetland?	Yes No	V
Wetland Hydrology Present?	Yes V No		Remarks (e.g., m.	
	nes.) Estimate absolute % cover (no	t rotative cover) % can		
PEGETATION (USE SCIENTIFIC NAI)	nes.) Estimate absolute /s cover (no	t telative cover). /a carr	Dominance Test w	orksheet:
<u>Tree Straturn</u> (dbh≥ 3")				
Species Cov. Dom 1. Bet paper 8 Y	? Ind. Species Co		Number of Dominan That are OBL, FAC	
2	6		Total Number of Do	
3	7		Species Across All S	Strata: (B)
4	8		Percent of Dominan	t Species
4	otal Tree Cover:		That are OBL, FAC	W, or FAC: 25 (A/B)
	20% of total cov	er:	Prevalence Index v	vorksneet:
Sapling/Shrub Stratum (woody pla			Total % Cov	ver of: Multiply by:
1. Kubys ida 5 Y			OBL species	X1=
1. Rus 45 ida 5 Y	FACUS.		FACW species	X2=_ ·—_
3. Vib odule 10 Y	FACU 9.		FAC species	85 x3= 240
4.	10		FACU species	
5	11		UPL + NL species	
6			Column Totals:	
Total Sanli	ng/Shrub Cover: 18			(1)
50% of total cover:		3.6	Decidence lade	ax = B/A = 3.32
Herb Stratum	20% of total cov	el	Prevalence inde	IX = B/A =
Abs.Cov.% Dom?	Ind. Abs. Co	v.% Dom? Ind.		
1. Cal cun 80 Y	FAC 12.		Hydrophytic Veget	-Al 1
2. Her les 10 -	**************************************		nyaropnytic veget	ation indicators:
3. Chain ay 3 -	<u>tacu</u> 14		Dominance T	
4	15			
5	16		Morphologica	al Adaptations¹ (Provide supporting
6	17		data in Hen	narks or on a separate sheet)
8	19		Problematic	Hydrophytic Vegetation¹ (Explain)
9	20			
10	21		1 Indicators of hydric	soil and wetland hydrology must
11	22		be present unless d	isturbed or problematic.
T	otal Herb Cover: 93		4.	,
50% of total cover:	46.5 20% of total cov	er: 18.6	Hydrophytic	
	plot dimension: % of I		Vegetation	Yes No
% Cover of Wetland Bryophytes (where applicable)	plot dimension: % or l	ophytes%	Present?	
Remarks:				
- 2				

Profile I	Description:	(Describe to the de	pth neede	d to document the	indicato	r or confirm	the abse	nce of indicate	ors)	
Depth	Horizon	Soil Matrix			dox Fea				a,a dip.	
(in.)	(opt.)	Color (moist)	%	Color (moist)	%	Type¹	Loc2	Texture	(pos/	Remarks
0-2	0i_	10YR3/2	100	3000		11,50	400	ORLA	<u>neg)</u>	(or use comment number)
2-4	A	104R2/2	100		_		_		neg	124
4-5	E	2.5Y4/Z	100					SiL		
5-9	B.	104R3/4	500					416	neg	
9-15	B2	2.5Y4/3		7.54R3/4	5	C	RC	SiL	neg	7
15-16	C	10484/10	100	1135			10		neg NT	in the same
		1 2					_		141	
		1						1	- 3	
¹Type: C	C = Concents	ration, D = Depletion	. RM = Re	duced Matrix, CS=	Coated:	Sand Grain	ns ² Locatio	on: PL = Pore	Lining BC	Root Channel, M = Matrix
		rs (check ones that								Froot Shattifel, M = Matrix
	d Indicators			Indicators fo						
His	tosol or Hist	el (A1)		Alaska					ne indicator o	of hydrophytic vegetation,
His		n (A2) (8-16" organics mineral soil with chrom		Alaska						licator of wetland an appropriate landscape
Bla	ck Histic (A3		B 32)	Alaska	Redox v	with 2.5Y H	ue	org	problematic.	
Hyd	drogen Sulfic	de (A4) (within 12"of	mineral	Alaska			e 5Y or R	edder ⁴ Gi	ve details of	color change in Remarks.
	ck Dark Surl				erlying L	ayer p.91 of 2007				A March
	ska Gleyed	- 400				colain in Ren				
	ska Redox (-						
	ska Gleyed									
	e Layer (if p			Drainage Cla	cc: 14	/D				
Type:	אטא			Soil Map Uni			Hv	dric Soil Pres	ent?	Yes No
Depth	(inches) _		1	Oon wap on	i i vaii i di.		1119	and Son Fies	GIILI	765 140V
									-	
3.	isteno	of for deh	- clps	u , nut sal	rak	من لد	zh.	A. H.	Y	
1. m.s 2. 3. HYDROL	osteno ogy	-						n in		
1. me 2. 3. HYDROL Wetland	OGY Hydrology	Indicators (check o	nes that a				Seco			2 are required)
1. me 2. 3. HYDROL Wetland Primary I	OGY Hydrology	Indicators (check o	nes that a	pply, measure from	n soil s		Seco	Water-Stained	Leaves (B9))
1. me 2. 3. HYDROL Wetland Primary I	OGY Hydrology ndicators (ace Water (A	Indicators (check o (any one indicator is	nes that a sufficient)	pply, measure fror face Soil Cracks (B	n soil s	urface):	Seco	Water-Stained Drainage Patte	Leaves (B9 erns (B10) _))
1. M. 2. 3. HYDROL Wetland Primary I Surfa High	OGY Hydrology ndicators (ace Water Table	Indicators (check o (any one indicator is (1) a (A2) (w/in 12")	nes that a sufficient) Suri Inur	pply, measure fron face Soil Cracks (B ndation Visible on A	n soil s 6) terial Im	urface): agery (B7)	Section =	Water-Stained Drainage Patte Oxid'd Rhizos	Leaves (B9 erns (B10) _ pheres on Li	iving Roots (C3) (within 12")
1. M. 2. 3. HYDROL Wetland Primary I Surfa High Satu	OGY Hydrology ndicators (ace Water Table ration (A3) (v	Indicators (check o (any one indicator is (1) a (A2) (w/in 12") w/in 12")	nes that a sufficient) Suri Inur Spa	pply, measure from face Soil Cracks (B adation Visible on A trsely Vegetated Co	n soil s 6) terial Im	urface): agery (B7)	Section =	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R	Leaves (B9 erns (B10) _ pheres on Li educed Iron	iving Roots (C3) (within 12")
1. Med 2. 3. HYDROL Wetland Primary I Surfa High Satu Water Water Water Water Primary I Surfa Satu Satu Satu Satu Satu Satu Satu Sat	OGY Hydrology ndicators (ace Water Table ration (A3) (or Marks (B1)	Indicators (check o (any one indicator is (1) e (A2) (w/in 12") w/in 12")	nes that a sufficient) Surf Inur Spa Mar	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15)	n soil si 6) aerial Im- ancave S	urface): agery (B7)	Secondary Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a,a or: Salt Deposits	Leaves (B9 erns (B10) _ pheres on Li educed Iron soil color cha (C5)	iving Roots (C3) (within 12") (C4) ange w/in 12")
1. Met 2. 3. HYDROL Wetland Primary I Surfa High Satu Wate Sedice	OGY Hydrology ndicators (ace Water (A Water Table ration (A3) (er Marks (B1 ment Deposi	Indicators (check of (any one indicator is 1) at (A2) (w/in 12") w/in 12")) its (B2)	nes that a sufficient) Surf Inur Spa Mar Hyd	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) frogen Sulfide Odor	n soil so 6) cerial Im concave S	urface): agery (B7)	Section Sectio	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Str	Leaves (B9 erns (B10) _ pheres on Li educed Iron soil color cha (C5) essed Plants	iving Roots (C3) (within 12") (C4) ange w/in 12")
1. Met 2. 3. HYDROL Wetland Primary I Surfa High Satu Wate Sedice	OGY Hydrology ndicators (ace Water Table ration (A3) (or Marks (B1)	Indicators (check of (any one indicator is 1) at (A2) (w/in 12") w/in 12")) its (B2)	nes that a sufficient) Surf Inur Spa Mar Hyd	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15)	n soil so 6) cerial Im concave S	urface): agery (B7)	Secondary Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Str Geomorphic P	Leaves (B9 erns (B10) _ pheres on Li educed Iron soil color cha (C5) essed Plants osition (D2)	iving Roots (C3) (within 12") (C4) ange w/in 12")
1. Med 2. 3. HYDROL Wetland Primary I — Surfa — High — Satu — Wate — Sedin — Drift	OGY Hydrology ndicators (ace Water (A Water Table ration (A3) (er Marks (B1 ment Deposi	Indicators (check o (any one indicator is (1) e (A2) (w/in 12") w/in 12")) its (B2)	nes that a sufficient) Surf Inur Spa Mar Hyd	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) frogen Sulfide Odor	n soil so 6) cerial Im concave S	urface): agery (B7)	Secondary Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Str Geomorphic P Shallow Aquita	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3)	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1)
1. Metand 2. 3. HYDROL Wetland Primary I Surfa High Satu Wate Sedin Drift Algal	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (cer Marks (B1 ment Deposits (B3	Indicators (check o (any one indicator is (a1) e (A2) (w/in 12") w/in 12")) its (B2) 3)	nes that a sufficient) Surf Inur Spa Mar Hyd	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab	n soil so 6) cerial Im concave S	urface): agery (B7)	Secondary Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a,a or: Salt Deposits Stunted or Stru Geomorphic P Shallow Aquita (win 24", can	Leaves (B9 erns (B10) _ pheres on Li educed Iron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1)
1. Metand 2. 3. HYDROL Wetland Primary I Surfa High Satu Wate Sedin Drift Algal	OGY Hydrology ndicators (ace Water Table ration (A3) (for Marks (B1 ment Deposit Deposits (B3) Mat or Crus	Indicators (check o (any one indicator is (a1) e (A2) (w/in 12") w/in 12")) its (B2) 3)	nes that a sufficient) Surf Inur Spa Mar Hyd	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab	n soil so 6) cerial Im concave S	urface): agery (B7)	Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Stre Geomorphic P Shallow Aquitz (w/in 24", can Microtopograp FAC Neutral T	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D fest (D5)	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water)
1. Metand 2. 3. HYDROL Wetland Primary I Surfa High Satu Sedia Drift Algal	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r or Marks (B1 ment Deposit Deposits (B3 I Mat or Crus	Indicators (check o (any one indicator is (a1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4)	nes that a sufficient) Surficient Inur Spa Mar Hyd Dry Othe	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab	n soil so 6) cerial Im concave S	urface): agery (B7)	Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Stre Geomorphic P Shallow Aquitz (w/in 24", can Microtopograp FAC Neutral T	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D fest (D5)	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12")
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1. Primary II Surface V	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r or Marks (B1 ment Deposits (B3 Deposits (B3 Deposits (B5 Deposits (B5 Deposits (B5 Deposits (B5	Indicators (check of fany one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) at (B4) from ground surface of Yes	nes that a sufficient) Surficient) Surficient) Spa North	pply, measure from face Soil Cracks (B adation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain)	n soil si 6) verial Im oncave S (C1) ole (C2)	urface): agery (B7) Surface (B8	Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Stre Geomorphic P Shallow Aquitz (w/in 24", can Microtopograp FAC Neutral T	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D fest (D5)	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water)
1. Primary II Surface V	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r or Marks (B1 ment Deposits (B3 Deposits (B3 Deposits (B3 Deposits (B3 Deposits (B3 Deposits (B3	Indicators (check of fany one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) at (B4) form ground surfaction of the control of the	nes that a sufficient) Surficient) Surficient) No V	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) frogen Sulfide Odor Season Water Tab er (explain)	n soil si 6) verial Im oncave S (C1) ole (C2) er (in.) _ er (in.) _	urface): agery (B7) Surface (B8	Second	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Stre Geomorphic P Shallow Aquitz (w/in 24", can Microtopograp FAC Neutral T	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D fest (D5)	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water)
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1. Primary I Surface V Water Tal	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r er Marks (B1 ment Deposits (B3 Deposits (B3 Deposits (B5 Deposits (B5 Deposits (B7 Vater Present?	Indicators (check of any one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) its (B4) it (B4) reference ground surfactor yes Seepi Yes	nes that a sufficient) Surficient) Surficient) No V	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate Depth to sat.	on soil state of	urface): agery (B7) Surface (B8	Section Sectin Section Section Section Section Section Section Section Section	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. a.a or: Salt Deposits Stunted or Stre Geomorphic P Shallow Aquitz (w/in 24", can Microtopograp FAC Neutral T	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D est (D5) dominants	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water) > # FACU+UPL dominants)
1. Property of the control of the co	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r er Marks (B1 ment Deposits Deposits (B3 Mat or Crus Deposits (B5 servations (ir Vater Present? capillary frin	Indicators (check of any one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) its (B4) it (B4) yes yes ge)	nes that a sufficient) Surficient) Surficient) Spa North Ce): No V No V ng in at the	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	er (in.) _ er (in.) _ unknown	urface): agery (B7) Surface (B8	Secondary West	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Str Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D est (D5) dominants	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water) > # FACU+UPL dominants)
1. Property of the control of the co	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (r er Marks (B1 ment Deposits Deposits (B3 Mat or Crus Deposits (B5 servations (ir Vater Present? capillary frin Recorded D	Indicators (check of any one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) its (B4) it (B4) reference ground surfactor yes Seepi Yes	nes that a sufficient) Surficient) Surficient) Spa North Ce): No V No V ng in at the	pply, measure from face Soil Cracks (B ndation Visible on A resely Vegetated Co I Deposits (B15) rogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	er (in.) _ er (in.) _ unknown	urface): agery (B7) Surface (B8	Secondary West	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Str Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D est (D5) dominants	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water) > # FACU+UPL dominants)
1. Property of the control of the co	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (v or Marks (B1 ment Deposits (B3 Deposits (B3 Deposits (B5 D	Indicators (check of fany one indicator is [A1]) a (A2) (w/in 12") w/in 12") its (B2) its (B4) its (B4) its (P4) Yes Seepi Yes ge) ata (stream gauge, in the stream gauge, in th	nes that a sufficient) Surficient) Surficient) Surficient) Mar Hyd Dry Other Ce): No V No V monitoring	pply, measure from face Soil Cracks (B ndation Visible on A reely Vegetated Co I Deposits (B15) frogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo well, aerial photos	er (in.) _ er (in.) _ Unkno	urface): agery (B7) Surface (B8	Secondary West	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Str Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D est (D5) dominants	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water) > # FACU+UPL dominants)
1. Property of the control of the co	OGY Hydrology ndicators ace Water (A Water Table ration (A3) (v or Marks (B1 ment Deposits (B3 Deposits (B3 Deposits (B5 D	Indicators (check of any one indicator is 1) a (A2) (w/in 12") w/in 12") its (B2) its (B4) it (B4) yes yes ge)	nes that a sufficient) Surficient) Surficient) Surficient) Mar Hyd Dry Other Ce): No V No V monitoring	pply, measure from face Soil Cracks (B ndation Visible on A reely Vegetated Co I Deposits (B15) frogen Sulfide Odor Season Water Tab er (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo well, aerial photos	er (in.) _ er (in.) _ Unkno	urface): agery (B7) Surface (B8	Secondary West	Water-Stained Drainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Str Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	Leaves (B9 erns (B10) _ pheres on Li educed fron soil color cha (C5) essed Plants osition (D2) ard (D3) perch H2O thic Relief (D est (D5) dominants	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") 04) (caused by water) > # FACU+UPL dominants)

Project: West Sn Access	Borough/	city: MSB	Date: 9/16/2020
Applicant/Owner: AVDEX			Sampling Point #: 520
Investigator(s): Enn Cunnic	y her Nova Whoh	Firm: HD	PR Alaska, Inc.
Lat. (dec.º) 61. 607730	O Long. Ko. 872589 ± 1	NAD 83 Recorded on	GPS #: Marked on map? Field Map #:
Subregion (circle one): SE So	outhcentral Western Aleutian Interior	Northern Landform	n: Swale Slope (%): 3 Aspect: W
Local relief: Shape across slope	Linear convex / concave Shape up/	downslope: dinear /cor	nvex / concave NWI classification: PF04/PSS 16
			Veg Type (Viereck Level 4 or other): IA 2f
Are climatic / hydrologic condition	ons on the site typical for this time of year	7 Yes: No:	If no, explain. HGM type: 50000
	or Hydrology N significantly disturbed?		<i>'</i>
Are Vegetation N, Soil N,	or Hydrology N naturally problematic?	If needed, explain ar	nswers here.
SUMMARY OF FINDINGS			
Hydrophytic Vegetation Preser	nt? Yes No	to the country over	1
Hydric Soil Present?	Yes No	Is the sampled area within a wetland?	Yes No
Wetland Hydrology Present?	Yes No		Remarks (e.g., marginal?):
	names.) Estimate absolute % cover (not	relative cover) % can t	
	Transco.) Estimate desorate /5 coron (not		Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	Dom? Ind. Species Cov.	% Dom? Ind.	Number of Descined Consists
Species Cov.% D			Number of Dominant Species That are OBL, FACW, or FAC: (A)
2.	6.		Total Number of Dominant
3	7		Species Across All Strata: (B)
4.	8		
12	Total Tree Cover: 30		Percent of Dominant Species That are OBL, FACW, or FAC: 185:7(A/B)
50% of total cover: 15		/	Prevalence Index worksheet:
50% of total cover: 15 Sapling/Shrub Stratum (woody		r:	Total % Cover of:Multiply by:
Abs.Cov.% Do		v.% Dom? Ind.	25 25
	Y FALW 7. MUZ FEW 7	FARU	OBL species X1= 25
2. Bet gland 12	Y FAZ 8. Alnusten 2	FAC	FACW species 62 X2= 124
3. Vac vit 3	- FAL 9.		FAC species X3= X3= X3= X3=
4. VACuli 5	- FM 10.		FACU species X4= Z8
5. Rhu tom 7	Y PACMI.		UPL + NL species X5=
6. Vac oval 3	<u>- 7RV 12</u>		Column Totals: 139 (A) 312 (B)
Total S	Sapling/Shrub Cover: <u>54</u>	12	
50% of total cover:	Z7 20% of total cover	r: 10,8	Prevalence Index = B/A = 2.24
Herb Stratum			
Abs.Cov.% Do		.% Dom? Ind.	
1. Care agna 25	Y 081 12		Hydrophytic Vegetation Indicators:
3. Egg prat 5	Y- YM 13. - KMW14.		Y_ Dominance Test is>50%
4. Chub chem 5	- KMW15.		Prevalence Index is ≤3.0
5.Calcan 5	- FMU 16.		Afourhological Adoptational (Decide accounting)
6. Lubrare 5	- FM 17.		_ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7	18		Problematic Hydrophytic Vegetation¹ (Explain)
8	19		i robiemano riyuropriyne vagatanori (Explain)
9	20		
10	21		¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
11	22		בים אוויסט נוסינעוניסט טו אויסטופווומנוט.
V	Total Herb Cover: 55		,
50% of total cover:	27,5 20% of total cove		Hydrophytic Vese No.
	ther plot dimension: % of bases % Total Cover of Bryon	are ground;	Vegetation Yes No
(where applicable)	I swatns of Handing water-v		in channel but standing

DIL	- 15 U - 1 U					<u> </u>			Sampling Point #: 520
	(Describe to the de	epth needed	to document the in	ndicator o	or confirm	the abse	nce of indicato	rs)	27 1
Depth Horizon	Soil Matrix		Red	dox Featu	ures			a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/ neg)	Remarks_ (or use comment number)
0-10 oi		100%					organies	N.T.	tor use comment number
0-16° OL	-			30			My ANIES	N.T.	
Vi and the				7 10 1					
			-			_			
		_ ~							
1000									
				_		-			1975
									35 4d V
Type: C = Concent:	ration. D = Depletion	. RM = Red	uced Matrix, CS=0	Coated S	and Grain	s 21 ocatio	on PI - Pore	Lining RC -	= Root Channel, M = Mati
	ors (check ones that								= Hoot Channel, M = Mat
tandard Indicators		cappiy, mea	Indicators fo						
1 Histosol or Hist			Alaska (-			e indicator (of hydrophytic vegetation,
							one	primary ind	icator of wetland
	n (A2) (8-16" organics mineral soil with chrom		Alaska /	Alpine Sw	vales (TA5	5)	hyd	rology, and	an appropriate landscape
Black Histic (A:		,	Alaska I	Redox wi	th 2.5Y Hu	ue et		mon must o roblematic.	e present unless disturbe
	de (A4) (within 12"of	mineral	Alaska (Gleved w	ithout Hue	5Y or B	4Gi		color change in Remarks
surface; @	in this pit			rlying Lay		, 0, 0, , (CGGGI		
Thick Dark Sur	face (A12)				91 of 2007				
Alaska Gleyed	(A13)		Supple	ment: exp	lain in Rem	arksi			
Alaska Redox (
Alaska Gleyed									
estrictive Layer (if p			Drainage Clas	ss. V01	D			127	
					-	_			
I VI IM TV IV	I SOUMED LIDIT	Nama:		Had	dric Soil Brees	ant2	Vac V		
Depth (inches) _ comments:			Soil Map Unit	Name:		Hy	dric Soil Pres	ent?	Yes No No
Depth (inches) Comments: COROLOGY Vetland Hydrology Irimary Indicators Surface Water (A) High Water Table Saturation (A3) (Water Marks (B1 Sediment Deposits (B Algal Mat or Crus	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") (w/in 12") itis (B2) 3) st (B4)	sufficient) Surfa Inunc Spars Marl Hydro		o soil sur 6) erial Imag ncave Su (C1)	gery (B7)	Secondary No. 1	ondary Indicator Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che C5) essed Plants osition (D2) erd (D3) perch H2O hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12")
Depth (inches) comments: DROLOGY /etland Hydrology rimary Indicators Surface Water (/ High Water Table Saturation (A3) (Water Marks (B1 Sediment Deposits (B Algal Mat or Crustellar (B1) Iron Deposits (B1) Iron Deposits (B1) Ield Observations (Inches)	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") l) sits (B2) 3) st (B4)	sufficient) Surfa Inunc Spare Marl Hydra Dry-S	ply, measure from the Soil Cracks (Be dation Visible on Ar sely Vegetated Co Deposits (B15) ogen Sulfide Odor Geason Water Tabi r (explain)	n soil sui 6) erial Imag ncave Su (C1) le (C2)	gery (B7) urface (B8	Secondary No. 1	ondary Indicator Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che C5) essed Plants osition (D2) erd (D3) perch H2O hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1)
Depth (inches) Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comment Indicators Comments: Commen	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") itis (B2) 3) st (B4) 5) n. from ground surfant? Yes	sufficient) Surfa Inunc Spars Marl Hydro Dry-S Other	ply, measure from the Soil Cracks (Be dation Visible on Al sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab (explain)	n soil sur erial Imag ncave Su (C1) le (C2)	gery (B7) urface (B8	Secondary No. 1	ondary Indicator Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che C5) essed Plants osition (D2) erd (D3) perch H2O hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12")
Depth (inches) Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comment Deposits (Bit Algal Mat or Cruster Deposits (Bit Comment Deposits (Bit Comme	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") (w/in 12") (i) iits (B2) 3) st (B4) 5) n. from ground surfaint? Yes Yes	Sufficient) Surfa Inunc Spare Marl Hydro Dry-S Other	ply, measure from the Soil Cracks (Be lation Visible on Ar sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Table (explain)	or soil sur formation of soil sur formation	gery (B7) urface (B8	Secondary No. 1	ondary Indicator Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che C5) essed Plants osition (D2) erd (D3) perch H2O hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12")
Depth (inches) Comments: (DROLOGY Vetland Hydrology Surface Water Table Saturation (A3) (Water Marks (B1 Sediment Deposits (B1 Sediment Deposits (B1 Algal Mat or Crustellar Cruste	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") l) sits (B2) 3) st (B4) 5) n. from ground surfant? Yes Yes Seepi	sufficient) Surfa Inunc Spare Marl Hydra Dry-S Other	ply, measure from the Soil Cracks (Be dation Visible on Ar sely Vegetated Co Deposits (B15) ogen Sulfide Odor Geason Water Table (explain)	or (in.)	gery (B7) urface (B8	Secondary Market	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a.a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (win 24", can Microtopograp FAC Neutral T (# OBL+FACW	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color ch (C5) essed Plants osition (D2) and (D3) perch H2O hic Relief (D est (D5) / dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water) # FACU+UPL dominants)
Depth (inches) Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comment Patent (A) Comment Deposits (B) Comment De	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") itis (B2) 3) st (B4) 5) n. from ground surfaint? Yes Yes Seepi	Sufficient) Surfa Inunc Spare Marl Hydro Dry-S Other	ply, measure from the Soil Cracks (Botation Visible on Alesely Vegetated Con Deposits (B15) ogen Sulfide Odor Season Water Table (explain) Depth of water Depth to water Depth to sat.	r soil sur erial Imag ncave Su (C1) le (C2)	gery (B7) urface (B8)	Secondary Market	ondary Indicator Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a,a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can Microtopograp FAC Neutral T	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color ch (C5) essed Plants osition (D2) and (D3) perch H2O hic Relief (D est (D5) / dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water) # FACU+UPL dominants)
Depth (inches) Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comments: Comment Indicators Comments Comm	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") itis (B2) 3) st (B4) 5) n. from ground surfaint? Yes Yes Seepi Yes	sufficient) Surfa Inunc Spars Marl Hydra Dry-S Other	Depth to wate depth but not yet Depth to sat.	or soil sur erial Imag ncave Su (C1) le (C2) er (in.) er (in.) filled?: Unknow	gery (B7) urface (B8	Second Se	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a.a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (win 24", can Microtopograp FAC Neutral T (# OBL+FACW	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color ch (C5) essed Plants osition (D2) and (D3) perch H2O hic Relief (D est (D5) / dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water) # FACU+UPL dominants)
Depth (inches) _ omments: DROLOGY Petland Hydrology rimary Indicators Surface Water (A) High Water Table Saturation (A3) (Water Marks (B) Sediment Deposits (B) Algal Mat or Crue Iron Deposits (B) eld Observations (incurface Water Present) atturation Present? Includes capillary frie	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12") itis (B2) 3) st (B4) 5) n. from ground surfaint? Yes Yes Seepi	sufficient) Surfa Inunc Spars Marl Hydra Dry-S Other	Depth to wate depth but not yet Depth to sat.	or soil sur erial Imag ncave Su (C1) le (C2) er (in.) er (in.) filled?: Unknow	gery (B7) urface (B8	Second Se	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. a.a or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (win 24", can Microtopograp FAC Neutral T (# OBL+FACW	ers (at least Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color ch (C5) essed Plants osition (D2) and (D3) perch H2O hic Relief (D est (D5) / dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water) # FACU+UPL dominants)

WETLAND DETERMINATION DATA FORM - Alaska Region Project: West Sn Aruss __Borough/City:___ Date: 9/16/2020 Applicant/Owner: AIDEA Sampling Point #: 522 Investigator(s): evin unnighen, Non Hotel Firm: HDR Alaska, Inc. Lat. (dec.°) 61.607311 Long. 150,869170 ± NAD 83 Recorded on GPS #: V Marked on map? Field Map #: Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landform: Tocofs(ave Slope (%): 3 Aspect: Local relief: Shape across slope: Inear convex / concave Shape up/downslope: (Inear convex / concave NWI classification: PSS B Photo nos./descriptions: SOILS, NESW Camera #: Veg Type (Viereck Level 4 or other): 182. Are climatic / hydrologic conditions on the site typical for this time of year? Yes: Vo. 1 no, explain. HGM type: Stope 'Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes V No Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegetation Present? is the sampled area Yes Hydric Soil Present? within a wetland? Wetland Hydrology Present? Yes Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. **Dominance Test worksheet:** Tree Stratum (dbh≥ 3") Cov.% Dom? Ind. Species Number of Dominant Species That are OBL, FACW, or FAC: FALL 5. FACW 6. **Total Number of Dominant** Species Across All Strata: (B)Percent of Dominant Species Total Tree Cover: 32 That are OBL, FACW, or FAC: Prevalence Index worksheet: 50% of total cover: _ 20% of total cover: __ Sapling/Shrub Stratum (woody plants < 3" dbh) Total % Cover of: Multiply by: Abs.Cov.% Dom? Abs.Cov.% Dom? Ind. **OBL** species 1. Alnus sin 60 FALL 7. LYC ann TANU **FACW** species 2. Vac alask FAU 8. Parolasecus 196 FAC species PM 9.000 how M 4. Sorbus Fit FACU species 5. Rosal aca FALLII. UPL + NL species 56A Column Totals: 168 Total Sapling/Shrub Cover: 94 50% of total cover: __ '47 Prevalence Index = B/A = 20% of total cover: _ Herb Stratum Abs.Cov.% Dom? Ind. Dom? Ind. FM 12. **Hydrophytic Vegetation Indicators:** 2. Fami Sulv TAL 13. Dominance Test is>50% 3. Dry dil Prevalence Index is ≤3.0 4. Fami an 5. Gymndy Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Total Herb Cover:

(where applicable)

Remarks:

50% of total cover: _

22

Circular 1/10-ac plot or other plot dimension: % of bare ground: 15%

% Cover of Wetland Bryophytes _______% Total Cover of Bryophytes ______

20% of total cover:

Hydrophytic

Vegetation

Present?

SOIL							11/1			Sampling Point #: 522-
Profile I	Description	: (Describe to the de	pth needed	to document the i	ndicator	or confirm	the abse	ence of indicator	s)	300
Depth	Horizon	Soil Matrix	The state of	Re	dox Fea	tures			a,a dip.	- C
(in.)	(opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/	Remarks
0-1	01	54R2.5/1						ORG	neg)	(or use comment number)
1-5 5-8 8-9	08	4	glass of	THE RESERVE OF THE PARTY OF THE				7		
5-8	Oa	Mark Later	4			7	1		1	The state of the s
8-9	A	51R2.5/1	100		Transier	-	1	SIL	NT	
9-14	Bi	54R2.5/1	50%	<				Sil tagam	1/1	50% organics
14-16	Ba	7.5YR 2.5/2	75%					SIL tornavio		25 % buned organice
	74			3/		-	-	dir Vina	-	43 TO BONG OFFANE
		115-1				-			-	
Tuna: (Concent	ration D - Depletion	PM - Pos	lugged Matrix, CS-/	Contact 6	Pand Crain	21	no. Di Dere I	inian DC	= Root Channel, M = Matrix
	The second second	- characteristic and the control of							ining, HC:	= Hoot Channel, M = Matrix
	d Indicators	ors (check ones that	apply, me							
				Indicators fo					indicator	of hydrophytic vegetation,
1	tosol or His		THE REAL PROPERTY.	Alaska	Color Ci	nanger (IA	4)			ficator of wetland
His	tic Epipedo: undedain by	n (A2) (8-16" organics mineral soil with chroma	, sat'd,	Alaska	Alpine S	wales (TA	5)	hydr	ology, and	an appropriate landscape
* Bla	ck Histic (A		,	Alaska	Redox v	vith 2.5Y H	ue		tion must b oblematic.	e present unless disturbed
		de (A4) (within 12 of	mineral	Alaska				4Cite		color change in Remarks.
Sui	riace; @	in this pit	milerai		rlying L		5 J I OI II	ieddei		
Thi	ick Dark Sur	face (A12)	2 -	Other (e	.g., see p	.91 of 2007				
- Ala	ska Gleyed	(A13)	1	Supple	ement; ex	olain in Ren	narks)			
100	iska Redox				Y				.1 *	
		Pores (A15)		5		7				-
	ve Layer (if p	THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.		Drainage Cla	ss: PT	1			- 31	1
Type:				Soil Map Unit			Hv	dric Soil Prese	nt?	Yes \ No
Depth			- 2017	CON Map Of all	Hairo.		,	dire boil i lese	446.5	163
Commer					_	- 1	-			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1.										
2. 3.	19	20		12.4						1.5
11 2	P4.447			-1	_		-	100-1	-	
HYDROL								1.		
		Indicators (check o		ply, measure from	ı soil sı	urface):		ondary Indicator		
		(any one indicator is			. 1			Water-Stained		
	ace Water (•		ace Soil Cracks (B				Drainage Patte		
5.6		e (A2) (w/in 12")		dation Visible on A			A 1 900	Oxid'd Rhizosp	heres on Li	iving Roots (C3) (within 12")
Satu	ration (A3)	(w/in 12")	Spar	sely Vegetated Co	ncave S	Surface (B8	1)	Presence of Re		(C4) ange w/in 12")
Wat	er Marks (B	1)	Marl	Deposits (B15)			_	Salt Deposits (and will the
Sedi	ment Depos	sits (B2)	Hydr	ogen Sulfide Odor	(C1)		_	Stunted or Stre	ssed Plant	s (D1)
Drift	Deposits (B	3)	Dry-	Season Water Tab	le (C2)		Y	Geomorphic Po	sition (D2)	\$1°
Alga	l Mat or Cru	st (B4)	Othe	r (explain)			_	Shallow Aquitar		
				(4	(w/in 24", can j	perch H2O	w/in 12")
11011	Deposits (B	5)						Microtopograph	iic Helief (L	04) (caused by water)
								FAC Neutral Te (# OBL+FACW		> # FACU+UPL dominants)
Field Ob	servations (i	n. from ground surfac	:e):		L. 1			1 43		
Surface 1	Water Prese	nt? Yes	No_V	Depth of water	er (in.) _	_				
Water Ta	able Present	? Yes _	No	Depth to water	er (in.) _	. 4			- 3	The second
	,	Seepi	ng in at tha	t depth but not yet	filled?:	10"	-			,
Saturation	n Present?	Yes_V	No	Depth to sat.	(in.)	2	Wet	land Hydrolog	v Present?	Yes V No
	capillary fri	nge)			Unkno					
		Data (stream gauge, i	nonitoring				ons), if av	/ailable:	- 373	
12										
Remarks	Super	ted at t	shull ca	ne up to	101	sohre	we	Wift.		
	1000	ted at +	-	C =1 -0	h if		A. 1-	0		4
	A			00/	70	MARKET L		4.01		

Project: Walf Shaws: Applicant/Owner: A1 Deat Sampling Point #: Investigator(s): Etw CMUNINGRAM, NIFA #FITH Firm: HDR Alaska, Ipc. Lat. (dac. ") L1.553 4 93 Long. 150. (da \$3.11 ± NAD 83 Recorded on GPS #: Marked on map? Field Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landform: Leaf Supre Slope (%): 4 Local relief: Shape across slope: linear / convey Concave) Shape up/downslope [linear convey / concave) NWI classification: PFO Photo nos./descriptions: 5 ULS * 2 NED W Camera #: Veg Type (Viereck Level 4 or other): T. I. Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No. If no, explain. HGM type: State Vegetation N. Soil N. or Hydrology N. significantly disturbed? Are "Normal Circumstances" present? Yes No. Are Vegetation N. Soil N. or Hydrology N. naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrology Present? Yes No. Is the sampled area within a wetland? Yes No. Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Dominance Test worksheet: Number of Dominant Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. Species Across All Strata: Spe	
Investigator(s): MAN CANNIMARY NIFA + FOTTH Firm: HDR Alaska, toc. Lat. (dec.*) In 553493 Long. 150. (de 311 ± NAD 83 Recorded on GPS #: Marked on map? Field to the control of the cont	
Lat. (dec. ") 11.553493 Long. 150. 11 ± NAD 83 Recorded on GPS #: Marked on map? Field I Subregion (circle one): SE Southcentral Vestern Aleutian Interior Northern Landform: Tec. 15 10 10 Stope (%): 4	
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landform: Tot of slove Slope (%): 4 Local relief: Shape across slope: linear / convex / concave Shape up/downslope linear convex / concave NWI classification: PFO Not ones / descriptions: SULS < 2 NEW Camera #: Veg Type (Viereck Level 4 or other): It / Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No: If no, explain. HGM type: State No: If no, explain. HGM t	Map #:
Shape across slope: linear / convex / concave NWI classification: PFO Photo nos./descriptions: SULS < 2 NSSW	Aspect:
Photo nos/descriptions: 501L5 × 2 NF5W Camera #: Veg Type (Viereck Level 4 or other): The Camera #: Veg Ty	11/5510
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes No Is the sampled area within a wetland? Yes No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8ct pap 35 Y FAW 5. 2. 10 Y FAW 6. 3. 7.	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegetation Present? Yes No No Within a wetland? Yes No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8ct pap 35 Y FALM 5. 2. 10 Y FALM 6. 3. 7. 4. 8. Total Tree Cover: 45 Total Tree Cover: 45 Total Tree Cover: 45 Total Tree Cover: 45 Sapiling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species 8 ACM over of: M. OBL species 8 ACM over of: M. OBL species 20 Mo OBL species 8 ACM over of: M. OBL species 20 Mo OBL species 9 ACM over of: M. OBL species 20 Mo OBL species 9 ACM over of: M. OBL species 20 Mo OBL species 9 ACM over of: M.	ope
Hydrophytic Vegetation Present? Yes No Is the sampled area within a wetland? Yes No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. Number of Dominant Species That are OBL, FACW, or FAC: 2. Più max 10 Y FAUN 6. 3.	1
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes V No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8+ pap 35 Y FALM 5. 2. 10 Y FALM 6. 3.	
Hydric Soil Present? Wetland Hydrology Present? Yes V No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8et pap 35 Y FALM 5. 2. Più max 10 Y FALM 6. 3. 7.	
Hydric Soil Present? Yes V No	
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. Tree Stratum (dbh≥ 3")	
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8ct pap 35 Y FAUN 5. 2. Piè max 10 Y FAUN 6. 3.	
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8th pap 35 Y FAUN 5. 2. Più mar 10 Y FAUN 6. 3.	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. 8t pap 35 Y FALM 5. 2. Più mar 10 Y FALM 6. 3.	
That are OBL, FACW, or FAC: 1. Bet pap 35 Y FACW 5. 2. Più mar 10 Y FACW 6. 3.	_
2. Più mar 10 Y FAUN 6. 3	5 (A)
4	
That are OBL, FACW, or FAC: Some species of total cover: 9 Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species Stratum (woody plants < 3" dbh)	(B)
That are OBL, FACW, or FAC: Some species of total cover: 9 That are OBL, FACW, or F	
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind.	3 (A/B)
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species X1= 1. Alnus tan 25 Y Fac. 7.	
1. Along ten 25 Y fac 7. OBL species ZO XI=	lultiply by:
1. Along ten 25 y m 7.	8
10 Wild leve 10 = Taril 0	40
	279)
3. DAS KAM 3. THOUSAND	3.24
5. Vac alask 15 Y FMC 11. UPL + NL species X5=_	THE PART OF
	54 (B)
Column Totals	(0)
	222
50% of total cover: 37.5 20% of total cover: 15 Prevalence Index = B/A = 2.182	7,2
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	
1. Arthy fel fen B - SAL 12. Hydrophytic Vegetation Indicators:	-
2. Col can 40 Y FAW 13.	
3. Vm du 7 - 777044 1 Dominance Test is>50%	
4. (87.1 10 10 15.	
Morphological Adaptations' (Providence of the Control of the Contr	
7 Find G/V 5 - EM/19	
8. Gymn dy 2 - FMM19. Problematic Hydrophytic Vegetation	on¹ (Explain)
9	
101 Indicators of hydric soil and wetland hyd	
11 be present unless disturbed or problemat	tic.
Total Herb Cover: 82	
50% of total cover: 41 20% of total cover: 16,4 Hydrophytic	
Circular 1/10-ac plot very or other plot dimension: % of bare ground: Vegetation Present?	
% Cover of Wetland Bryophytes% Total Cover of Bryophytes%	
(where applicable) Remarks:	
nemans.	

							- 0		Sampling Point #: 528
Profile D	escription: (D	escribe to the de	pth needed	to document the i	ndicator or confin	n the absen	of Indicator	s)	
Depth	Horizon .	Soil Matrix		Rec	dox Features			a,a dip.	
(in.)		Color (moist)	%	Color (moist)	% Type ¹	Loc2	Texture	(pos/ neg)	Remarks (or use comment number)
3-2	Di _			-	= =		DAGANKS	N.L.	
-18	<u> 0e</u>					_		NT	
				-					
					_		_	-	211
						_	111	_	
						_		_	
Гуре: С	= Concentration	n, D = Depletion	. RM = Redu	uced Matrix, CS=0	— Coated Sand Grai	ns ² Location	n: PL = Pore I	ining BC	= Root Channel, M = Matr
				sure from top of				Jilling, 110	= 1100t Orlantilet, W = Watt
	Indicators:				r Problematic Hy				
1_ Hist	osol or Histel (/	A1)			Color Change ⁴ (Ta		³ One		of hydrophytic vegetation,
		2) (8-16" organics		Alaska	Alpine Swales (TA	(5)			dicator of wetland an appropriate landscape
	underlain by mine k Histic (A3)	ral soil with chrom	a ≤2)		Redox with 2.5Y H		posit	ion must b	e present unless disturbed
		A4) (within 12"of					4Civ	oblematic. e details o	color change in Remarks.
r tyu	ace; @	in this pit	mineral		Gleyed without Hu rlying Layer	le st orme	ader	1	3
Thic	k Dark Surface	(A12)		Other (e	.g., see p.91 of 2007 ement: explain in Re				- 0
Alas	ka Gleyed (A1	3)		Subble	ment: explain in He	narksi			
Alas	ska Redox (A14)							
4.1	ka Gleyed Por	on (A1E)							
Alas	ika dibyed i Oi	88 (A15)				100			
estrictive	Layer (if pres			Drainage Clas		124		- 1	/
Restrictive Type:	No NE	ent)		Drainage Clas Soil Map Unit		Hyd	ric Soil Prese	nt?	YesNo
Restrictive Type: Depth	Layer (if presented No NE (inches) NO	ent)				Hyd	ric Soil Prese	nt?	Yes No
estrictive Type: Depth omment	Layer (if presented No NE (inches) NO	ent)				Hyd	ric Soil Prese	nt?	Yes No
Type: Depth omment	Layer (if presented No NE (inches) NO	ent)				Hyd	ric Soil Prese	nt?	YesNo
estrictive Type: Depth omment	Layer (if presented No NE (inches) NE	ent)				Hyd	ric Soil Prese	nt?	Yes No No
estrictive Type: Depth omment	Layer (if presented No NE (inches) NE (inches) NE (inches) NE	ent)	nes that ann	Soil Map Unit	Name:	55-	(2.1). 		
estrictive Type: Depth omments DROLC	Layer (if present of the second of the secon	ent)			Name:	Secon	ndary Indicator	s (at least	2 are required)
estrictive Type: Depth omment	Layer (if present of the second of the secon	ent)	sufficient)	Soil Map Unit	Name:	Secon V	ndary Indicator Vater-Stained L	s (at least	2 are required)
estrictive Type: Depth omment: DROLC ettand I	Layer (if presented by the layer (if presented by the layer (inches) with the	cators (check o	sufficient)Surface	Soil Map Unit	Name:	<u>Secon</u> W	ndary Indicator Vater-Stained L Orainage Patter	s (at least Leaves (B:	2 are required) 3)
estrictive Type: Depth Omment DROLC etiand ! rimary In Surface High \	Layer (if present of the layer (if present of the layer (if present of the layer (inches) with the layer (inches) with the layer (inches) layer (inches) with the layer (inches) layer (in	cators (check of one indicator is	sufficient) Surfac	Soil Map Unit	Name: n soil surface): 6) erial Imagery (B7)	Secon — V	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Re	s (at least Leaves (B: rns (B10) Leres on L duced Iror	2 are required) 3) iving Roots (C3) (within 12*
DROLO Type: Depth Depth DROLO Timary In Surfact High V Satura	Layer (if presented by NE (inches) NE (inc	cators (check of one indicator is	sufficient) Surface Inund	Soil Map Unit	Name: n soil surface): 6) erial Imagery (B7)	Secon — V — C — C — C — NT P	ndary Indicator Vater-Stained L Irainage Patter Oxid'd Rhizosph Presence of Re- (pos. a,a or so	s (at least Leaves (B: ms (B10) heres on L duced Iror oil color ch	2 are required) 3) iving Roots (C3) (within 12*
DROLC estrictive Type: Depth DROLC etland I rimary In Surfac High V Satura Water	Layer (if present of the layer (if present of the layer (if present of the layer (inches) with the lay	cators (check of one indicator is 2) (w/in 12")	sufficient) Surface Inund Spars Marl [Soil Map Unit Oly, measure from ce Soil Cracks (Beation Visible on Acely Vegetated Co	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Rec (pos. a,a or so alt Deposits (C	s (at least Leaves (B: rns (B10) _ heres on L duced Iror bil color ch	2 are required) iving Roots (C3) (within 12* 1 (C4) ange w/in 12*)
DROLC Type: Depth DROLC Type: Depth DROLC Type: Depth DROLC Type: Ty	Layer (if presented by NE (inches) NE (inc	cators (check of one indicator is 2) (w/in 12")	sufficient) Surface Inund Spars Marl E	Soil Map Unit	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon — V	ndary Indicator Vater-Stained L Irainage Patter Oxid'd Rhizosph Presence of Re- (pos. a,a or so	s (at least Leaves (B: ms (B10) Leaves on L duced Iron oil color ch (C5) ssed Plant	2 are required) iving Roots (C3) (within 12" (C4) ange w/in 12") s (D1)
Depth De	Copposits (B3)	cators (check of one indicator is 2) (w/in 12")	sufficient) Surface Inund Spars Mari E Hydro	Soil Map Unit Oly, measure from Ce Soil Cracks (Beation Visible on Arely Vegetated Co Deposits (B15) Gen Sulfide Odor eason Water Tabi	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon — V — C — C — C — C — C — C — C — C — C	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Re- (pos. α,α or so eat Deposits (C stunted or Stres Geomorphic Po shallow Aquitar	s (at least Leaves (Bt ms (B10) Leaves on L duced Iron oil color ch (C5) ssed Plant sition (D2)	2 are required) iving Roots (C3) (within 12" (C4) ange w/in 12") s (D1)
PROLCIVE Sedim Drift C Algal	E Layer (if presented to the layer (inches) NE (inches	cators (check of one indicator is 2) (w/in 12")	sufficient) Surface Inund Spars Mari E Hydro	Soil Map Unit Dily, measure from De Soil Cracks (Beation Visible on Accely Vegetated Co Deposits (B15) gen Sulfide Odor	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon — V — V — V — V — V — V — V — V — V —	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Ref (pos. α,α or so lat Deposits (C stunted or Stres Geomorphic Po Shallow Aquitar w/in 24", can p	s (at least Leaves (Bt ms (B10) heres on L duced Iror poil color ch C5) ssed Plant sition (D2) rd (D3) perch H2O	2 are required) 3) iving Roots (C3) (within 12", (C4) ange w/in 12") s (D1)
DROLC Type: Depth DROLC Tetiand Inimary In Satura Water Sedim Drift C Algal	Copposits (B3)	cators (check of one indicator is 2) (w/in 12")	sufficient) Surface Inund Spars Mari E Hydro	Soil Map Unit Oly, measure from Ce Soil Cracks (Beation Visible on Arely Vegetated Co Deposits (B15) Gen Sulfide Odor eason Water Tabi	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Ref (pos. α,α or so lat Deposits (C stunted or Stres Geomorphic Po Shallow Aquitar w/in 24", can p	s (at least Leaves (Bins (B10) Leaves on L duced Iron poil color ch (C5) ssed Plant sition (D2) d (D3) perch H2O ic Relief (I	2 are required) 3) iving Roots (C3) (within 12", 1 (C4) ange w/in 12") s (D1)
DROLC Type: Depth DROLC Tetland I Timary In Satura Water Sedim Drift E Algal Iron D	E Layer (if presented to the layer (inches) NE (inches	icators (check of one indicator is 2) (w/in 12") 12") B2)	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit Oly, measure from Ce Soil Cracks (Beation Visible on Arely Vegetated Co Deposits (B15) Gen Sulfide Odor eason Water Tabi	n soil surface): 6) erial Imagery (B7) ncave Surface (B	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph Presence of Re- (pos. α,α or so calt Deposits (C stunted or Stress Geomorphic Po- challow Aquitar w/in 24", can p	s (at least Leaves (Bt ms (B10) Leaves on L duced Iror oil color ch C5) ssed Plant sition (D2) d (D3) perch H2O ic Relief (I st (D5)	2 are required) iving Roots (C3) (within 12" (C4) ange w/in 12") s (D1)
estrictive Type: Depth Omment: 'DROLC' 'etland I rimary In Satura Water Sedim Drift D Algal Iron D	Cinches) NE (inches) NE (inch	cators (check of one indicator is 2) (w/in 12") 12") B2)	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit oly, measure from ce Soil Cracks (Be ation Visible on Ar ely Vegetated Co Deposits (B15) gen Sulfide Odor eason Water Tabi (explain)	n soil surface): 6) erial Imagery (B7) ncave Surface (B (C1)	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph Presence of Re- (pos. α,α or so calt Deposits (C stunted or Stress Geomorphic Po- challow Aquitar w/in 24", can p	s (at least Leaves (Bt ms (B10) Leaves on L duced Iror oil color ch C5) ssed Plant sition (D2) d (D3) perch H2O ic Relief (I st (D5)	2 are required) iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") O4) (caused by water)
Type: Depth Comments	Cinches) NE (inches) NE (inch	cators (check of one indicator is 2) (w/in 12") 12") B2) 44)	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit Oly, measure from the Soil Cracks (Beation Visible on Arely Vegetated Corposits (B15) Tigen Sulfide Odor Teason Water Table (explain)	n soil surface): 6) erial Imagery (B7) ncave Surface (B (C1) le (C2)	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph Presence of Re- (pos. α,α or so calt Deposits (C stunted or Stress Geomorphic Po- challow Aquitar w/in 24", can p	s (at least Leaves (Bt ms (B10) Leaves on L duced Iror oil color ch C5) ssed Plant sition (D2) d (D3) perch H2O ic Relief (I st (D5)	2 are required) iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") O4) (caused by water)
PROLC Type: Depth Comment: Property Propert	Cinches) NE (inches) NE (inch	icators (check of one indicator is 2) (w/in 12") 12") B2) with a construction of the c	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit Dely, measure from the Soil Cracks (Beation Visible on Allely Vegetated Co Deposits (B15) gen Sulfide Odor eason Water Table (explain) Depth of water Depth to water	n soil surface): S) erial Imagery (B7) ncave Surface (B (C1) le (C2)	Secon	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph Presence of Re- (pos. α,α or so calt Deposits (C stunted or Stress Geomorphic Po- challow Aquitar w/in 24", can p	s (at least Leaves (Bt ms (B10) Leaves on L duced Iror oil color ch C5) ssed Plant sition (D2) d (D3) perch H2O ic Relief (I st (D5)	2 are required) iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) w/in 12") O4) (caused by water)
Restrictive Type: Depth Comment: Vetland I Virinary In Surfac Y High V Algal Iron D Ield Obse urface W /ater Tab	Cinches) NE (inches) NE (inch	icators (check of one indicator is 2) (w/in 12") 12") B2) 44) orn ground surfactor is Yes Yes Seepi	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit oly, measure from the Soil Cracks (Beation Visible on Arely Vegetated Corpoposits (B15) the gen Sulfide Odor the eason Water Table (explain) Depth of water Depth to water Depth but not yet	n soil surface): 6) erial Imagery (B7) ncave Surface (B (C1) le (C2)	Secon — V — V — V — V — V — V — V — V — V —	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph (pos. α,α or so that Deposits (C stunted or Stres Geomorphic Po thallow Aquitar w/in 24", can p ficrotopograph AC Neutral Te (# OBL+FACW	s (at least Leaves (Bins	2 are required) 3) iving Roots (C3) (within 12" 1 (C4) ange w/in 12") s (D1) W/in 12") O4) (caused by water) > # FACU+UPL dominants)
Pestrictive Type: Depth Comment: Vetland I Trimary In Surfac Y High V Sedim Drift D Algal Iron D Ield Obse urface W /ater Tab	Layer (if present? New New	cators (check of one indicator is 2) (w/in 12") 12") 12") 12") 14) om ground surfar Yes Yes Seepi Yes	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit Dely, measure from the Soil Cracks (Beation Visible on Arely Vegetated Corposits (B15) The Soil Cracks (B6) The Soil Cra	n soil surface): 6) erial Imagery (B7) ncave Surface (B (C1) le (C2) er (in.) er (in.)	Secon — V — V — V — V — V — V — V — V — V —	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizosph Presence of Re- (pos. α,α or so calt Deposits (C stunted or Stress Geomorphic Po- challow Aquitar w/in 24", can p	s (at least Leaves (Bins	2 are required) 3) iving Roots (C3) (within 12") 1 (C4) ange w/in 12") 5 (D1) W/in 12") 04) (caused by water) > # FACU+UPL dominants)
DROLO Type: Depth DROLO Tetland I Timary In Satura Water Sedim Drift D Algal Iron D eld Obse urface W ater Tab	Layer (if present? (inches) NE (inches) N	cators (check of one indicator is 2) (w/in 12") 12") 12") 12") 14) 15 Jens of the control of the	sufficient) Surface Inund Spars Marl E Hydro Dry-S Other	Soil Map Unit Dely, measure from the Soil Cracks (Beation Visible on Arely Vegetated Corposits (B15) The Soil Cracks (B6) The Soil Cra	n soil surface): 6) erial Imagery (B7) ncave Surface (B (C1) le (C2) er (in.) er (in.) Unknown	Second Se	ndary Indicator Vater-Stained L Prainage Patter Oxid'd Rhizospi Presence of Ref (pos. α,α or so lat Deposits (C Stunted or Stres Geomorphic Po Italiow Aquitar w/in 24", can p Ricrotopograph AC Neutral Te (# OBL+FACW	s (at least Leaves (Bins	2 are required) 3) iving Roots (C3) (within 12") 1 (C4) ange w/in 12") 5 (D1) W/in 12") 04) (caused by water) > # FACU+UPL dominants)

Project: WEST Su Azzes Borough/City: MSB	Date: 9/16/2020
Applicant/Owner: Av DBA	Sampling Point #: 529
Investigator(s): ERIN CUNNINHTHM INDIA HOTCH Firm: HI	DR Alaska, Inc.
Lat. (dec. °) 61,553186 Long. 150,068786 ± NAD 83 Recorded on	GPS #: Marked on map? Field Map #:
Subregion (circle one): SE sommentral Western Aleutian Interior Northern Landforn	
Local relief: Shape across slope linear/ convex / concave Shape up/downslope linear/ co	
Photo nos./descriptions: Soils × 2, NBW Camera #:	Veg Type (Viereck Level 4 or other): II B 2 b
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: Vo:	If no, explain. HGM type: NY-
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circur	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain a	
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No within a wetland?	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can	total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
1. Ret pap 10 Y FACU 5.	
3	Total Number of Dominant Species Across All Strata: (B)
4 8	(5)
Total Tree Court	Percent of Dominant Species That are OBL, FACW, or FAC: 50 (A/B)
10	That are OBL, FACW, or FAC: O (A/B) Prevalence Index worksheet:
50% of total cover:	
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. 1. Alous sin 10 Y FAC 7. Picea alou 5 - FACU	OBL species X1=
2. Samb YOU 10 Y FROM 8.	FACW species X2=
3. Oplopan hor 20 Y PACH 9.	FAC species <u>52</u> X3= <u>156</u>
4.1	FACU species 30 X4= 260
5. Sorbus Git 5 - FAM 11.	UPL + NL species X5=
6. Vib edule 5 - Freu 12.	Column Totals: 122 (A) 436 (B)
Total Sapling/Shrub Cover: 55	
50% of total cover: 27,5 20% of total cover:	Prevalence Index = B/A = 3,57
Herb Stratum	at-
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Athyrina hlfin 20 Y FAC 12.	Hydrophytic Vegetation Indicators:
2. Bapai 8414 3 - FAC 13	15-
3. Cam arv 3 - tol 14	Dominance Test is>50% Prevalence Index is ≤3.0
4. Galim tr 1 - FAU 15	
	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
6. Cal can 15 4 FAC 17. 7. Dry dill 10 - FAC 18.	
8	Problematic Hydrophytic Vegetation¹ (Explain)
920	
10 21	¹ Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 57	, , ,
50% of total cover: 28.5 20% of total cover: 11.4	Hydrophytic
Circular 1/10-ac plot vor other plot dimension: % of bare ground: 5	Present?
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% (where applicable)	
Remarks: Leef when	
Lug Vigor	

DIL rofile Description	: (Describe to the de	pth need	ed to document the i	FIGICATO	OF CONTIFE	n ule absei	nce of indicato	rs)	
Depth Horizon	Soil Matrix			dox Fea				a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/	Remarks
-2 Oi		7	4 3 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1100		TOALGIO	neg)	for use comment number
	1002 -12	100		=	_	100			3 27 - 1
-3 A -5 B	10R2.5/2	100		_			C 11		****
	7.5423/1	100		_		=	SiL	Heg	
-6 B	7,5YP2.5/1	100					316	weg	
- + B	54R2.5/1	100		_		=	S.T	Nes	
-9 B	54F3 3	100				=	SiL	Nes	
14 B	10YR3/4	85	2.5482.5 3	15	C	PHRC	SiL	NEG	
-17 B	604R413	100	A. 1				10000	16	31
ype: C = Concent	tration, D = Depletion	RM = R	educed Matrix, CS=	Coated S	Sand Grain	ns ² Locatio	n: PL = Pore	 Linina. RC :	= Root Channel, M = Mai
	ors (check ones that								Thorrow Charmon, In - Inch
andard Indicator		appiy; iii	Indicators fo						
Histosol or His								a indicator (of hydrophytic vegetation
			Alaska						licator of wetland
	n (A2) (8-16" organics mineral soll with chroma		Alaska	Alpine S	wales (TA	(5)	hyd	rology, and	an appropriate landscap
Black Histic (A		,	- Alaska	Redox v	vith 2.5Y F	lue			e present unless disturbe
		1 c!			2.1		401	roblematic. /e details of	color change in Remark
surface; @	ide (A4) (within 12°of :	mineral		Gleyed i rlying Li		e 5Y or Re	edder	11	The state of the s
Thick Dark Sur					ayer 5.91 of 2007	7			
					olain in Re				
Alaska Gleyed									
Alaska Redox									
Alaska Gleyed	Pores (A15)					311			
estrictive Layer (if	present)		D-1		4 .				
		Drainage Cla	ss:	1D					
A P A A P E	5		Soil Map Unit		70	Hyd	dric Soil Pres	ent?	Yes No_
Type: None Depth (inches)	<i>-</i>				70	Нус	dric Soil Pres	ent?	Yes No
Type: None Depth (inches) DROLOGY etland Hydrology imary Indicators Surface Water (A) Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru	Indicators (check or (any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ast (B4)	sufficient Su Inu Sp Ma Hy Dry	Soil Map Unit	Name: 1 soil su 6) erial Imancave S (C1)	urface): agery (B7)	Seco	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral Te	Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che costion (D2) ard (D3) perch H2O hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12")
Type: None Depth (inches) omments: DROLOGY retland Hydrology dimary Indicators Surface Water (A) Saturation (A3) Water Marks (B) Sediment Deposits (B) Algal Mat or Cru Iron Deposits (B) alface Water Present aturation Present? Includes capillary frictions (F)	indicators (check of (any one indicator is A1) le (A2) (w/in 12") (w/in 12") (w/in 12") (in. from ground surfacent? Yes Seeplinge)	Sufficient Su Inu Sp Ma Hy Dry Oth No v No v	apply, measure from) riace Soil Cracks (Boundation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odory-Season Water Tabler (explain) Depth of water Depth to water to be a sailed by the sailed by Endo	n soil su soil	urface): agery (B7) Surface (B6)	Second Se	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral To (# OBL+FACW	Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che cosition (D2) ard (D3) perch H2O hic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 14) (caused by water) # FACU+UPL dominants)
Type: NONE Depth (inches) Depth (inc	indicators (check of (any one indicator is A1) le (A2) (w/in 12") (w/in 12") (w/in 12") (in. from ground surfacent? Yes Seeple Yes	Sufficient Su Inu Sp Ma Hy Dry Oth No v No v	apply, measure from) riace Soil Cracks (Boundation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odory-Season Water Tabler (explain) Depth of water Depth to water to be a sailed by the sailed by Endo	n soil su soil	urface): agery (B7) Surface (B6)	Second Se	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral To (# OBL+FACW	Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che cosition (D2) ard (D3) perch H2O hic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 14) (caused by water) # FACU+UPL dominants)
Type: NONE Depth (inches) Depth (inc	indicators (check of (any one indicator is A1) le (A2) (w/in 12") (w/in 12") (w/in 12") (in. from ground surfacent? Yes Seeplinge)	Sufficient Su Inu Sp Ma Hy Dry Oth No v No v	apply, measure from) riace Soil Cracks (Boundation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odory-Season Water Tabler (explain) Depth of water Depth to water to be a sailed by the sailed by Endo	n soil su soil	urface): agery (B7) Surface (B6)	Second Se	ondary Indicato Water-Stained Drainage Patte Oxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograpi FAC Neutral To (# OBL+FACW	Leaves (B9 ems (B10) _ cheres on Li educed Iron coil color che cosition (D2) ard (D3) perch H2O hic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 14) (caused by water) # FACU+UPL dominants)

Project: West Sn Ascess Borough/City: MSB	Date: 9/18/2020
Applicant/Owner: DIDEA	Sampling Point #: 534
Investigator(s): Et, BMowhad Firm: H	IDR Alaska, Inc.
Lat. (dec.°) 61.5566648 Long. 150, 6120 46 ± 'NAD 83 Recorded of	
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfo	
Local relief: Shape across slope: Inear convex / concave Shape up/downslope: Inear convex / concave	The state of the s
	Veg Type (Viereck Level 4 or other): TB Za
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: Vo:	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circu	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain	
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No No Within a wetland?	
Wetland Hydrology Present? Yes ✓ No	? Yes No/ Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % car	Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. Bet pap 20 Y Facul 5.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Picca alay 5 Y Fam 6.	
3. 7.	Total Number of Dominant Species Across All Strata:
4 8	Species Across Air Strata. (B)
Total Tree Cover: 25	Percent of Dominant Species That are OBL, FACW, or FAC: 16.6 (A/B)
12 = -	That are OBL, FACW, or FAC: 1 6.6 (A/B) Prevalence Index worksheet:
50% of total cover: 20% of total cover: 5 Sapling/Shrub Stratum (woody plants < 3" dbh)	
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	Total % Cover of:Multiply by:
1. Vilo edule 10 Y FACU 7. Res aci 5 - FACU	OBL species X1= X1=
2. Oplo hor 15 Y FACU 8.	FACW species X2=
3. Alones ten 5 - FAC 9.	FAC species 98 X3= 294
4. Vac alack 3 - PAU 10.	FACU species X4= X4= X4= X4= X4=
5. Preinglan 5 - PACU 11.	UPL + NL species X5=
6. Betul pop 10 Y FAM12.	Column Totals: 139 (A) 658 (B)
Total Sapling/Shrub Cover: 53	
50% of total cover: 26.5 20% of total cover: 10.6	Prevalence Index = B/A = 3,45
Herb Stratum	
Abs. Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
	Hydrophytic Vegetation Indicators:
2. Pry dip 10 - FAU 13. 3. Egni av 8 - FAZ 14.	Dominance Test is>50%
	Prevalence Index is ≤3.0
5 Gumn die 5 - Facel 16	Morphological Adaptations¹ (Provide supporting
6. Athyr Filian 5 - FAC 17.	data in Remarks or on a separate sheet)
6. Athyr Fel·Fen 5 - FAC 17. 7. Rub ped 5 - FAC 18. 8. Earn sylv 2 - TAX 19.	Problematic Hydrophytic Vegetation¹ (Explain)
9. Carnus can 1 - FARU20.	Light action of building all and watered buildings and
10	Indicators of hydric soil and wetland hydrology must be present unless disturbed or and the control of the
Total Herb Cover:	
	Hadron butto
2000.000.000.000	Hydrophytic Vegetation Yes No
Circular 1/10-ac plot or other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes %	Present?
(where applicable)	
	I deed come trees nome and
Mahre Bet pap true gnarled, saplings Nut.	and shires accounted.
Influence and high to a show of safety and safety	

X

	Sampling Point #: 534
Profile Description: (Describe to the depth needed to document the indicator or confirm to	he absence of indicators)
Depth Horizon Soil Matrix Redox Features	α,α dip.
(in.) (opt.) Color (moist) % Color (moist) % Type ¹	Loc ² Texture (pos/ Remarks
5-3 Oi 10YR2/1 100 - = -	neg) (or use comment number
	0 (11
1-22 Bg 104R5/2 90 7.54R3/4 10 C	Mill Sil neg
Figure C. Connectication D. Bustistian Disk But 1884 D. Connectication D. Bustistian Disk But 1884 D. Connectication D. Bustistian Disk But 1884 D. Connectication D. Bustistian D. Connectication D. Bustistian D. Connectication D	
ype: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains	
ydric Soil Indicators (check ones that apply, measure from top of mineral layers unle	
tandard Indicators: Indicators for Problematic Hydr	
Histosol or Histel (A1) Alaska Color Change ⁴ (TA4)	³ One indicator of hydrophytic vegetation, one primary indicator of wetland
Histic Epipedon (A2) (8-16" organics, sat'd, Alaska Alpine Swales (TA5)	
underlain by mineral soil with chroma ≤2) Black Histic (A3) Alaska Redox with 2.5Y Hue	position must be present unless disturbe
	40 ive details of selections to the
Hydrogen Sulfide (A4) (within 12*of mineral Alaska Gleyed without Hue surface; Underlying Layer	by or Hedder
Thick Dark Surface (A12) Other (e.g., see p.91 of 2007	
Supplement: explain in Remar Alaska Gleyed (A13)	rks)
Alaska Redox (A14)	
Alaska Gleyed Pores (A15)	74
estrictive Layer (if present) Type: NoNE Soil Man Linit Name:	-
Out Map Office trains.	Hydric Soil Present? Yes No
Depth (inches) omments:(jnst booky).	
not net (unless deemd prophologie) adoptations; which a Stope (DROLOGY retland Hydrology Indicators (check ones that apply, measure from soil surface): rimary Indicators (any one indicator is sufficient)	of 3%, but hydrophulic veg even tren would not nect. Secondary Indicators (at least 2 are required)
Surface Water (A1) Surface Soil Cracks (B6)	Water-Stained Leaves (B9)
High Water Table (A2) (w/in 12") Inundation Visible on Aerial Imagery (B7)	Drainage Patterns (B10)
	Oxid'd Rhizospheres on Living Roots (C3) (within 12) Presence of Reduced Iron (C4)
Sparsely Vegetated Concave Surface (B8)	(pos. a,a or soil color change w/in 12")
Water Marks (B1) Marl Deposits (B15)	Salt Deposits (C5)
Sediment Deposits (B2) — Hydrogen Sulfide Odor (C1)	Y Stunted or Stressed Plants (D1)
Drift Deposits (B3) Dry-Season Water Table (C2)	Geomorphic Position (D2)
Algal Mat or Crust (B4) Other (explain)	Shallow Aquitard (D3)
_ Iron Deposits (B5)	(w/in 24", can perch H2O w/in 12")
_ 11011 Debosits (DO)	Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)
	(# OBL+FACW dominants > # FACU+UPL dominants)
	/* COSTITUTE CONTINUENCE > IN TACOTOL E COMMINISTRES
	(# COLON NOTE COMMISSION 1 (MOOTOF E COMMISSION)
urface Water Present? Yes No Depth of water (in.)	(The second sec
urface Water Present? Yes No Depth of water (in.)	(Tricord Editionals)
urface Water Present? Yes No Depth of water (in.)	(SELVICE CONTRACTOR OF THE CO
ater Table Present? Yes V No Depth to water (in.) 12	
urface Water Present? Yes No Depth of water (in.) ater Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?:	Wetland Hydrology Present? Yes No
viriace Water Present? Yes No Depth of water (in.) valuer Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: aturation Present? Yes No Depth to sat. (in.)	Wetland Hydrology Present? Yes No
ster Table Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Depth to sat. (in.) Seeping in at that depth but not yet filled?: Se	Wetland Hydrology Present? Yes No
ster Table Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Depth to sat. (in.) Seeping in at that depth but not yet filled?: Se	Wetland Hydrology Present? Yes No
Atturation Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: No Depth to water (in.) Seeping in at that depth but not yet filled?: No Depth to sat. (in.) Epi Endo Unknown	Wetland Hydrology Present? Yes No

Project: West Sufferes	Borough/City: MSB	Date: 9/18/2020
Applicant/Owner: ADDA		Sampling Point #: 536
Investigator(s): EC.BM		IDR Alaska, Inc.
Lat. (dec.°) 61. 556302		n GPS #: Marked on map? Field Map #:
	uthcentral Western Aleutian Interior Northern Landfor	
	linear/ convex / concave Shape up/downslope linear/ co	
	K 2 NEGW Camera #:	
	ns on the site typical for this time of year? Yes: 🗸 No:	
	r Hydrology 🍂 significantly disturbed? Are "Normal Circu	
	r Hydrology _M_ naturally problematic? If needed, explain a	answers here.
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Presen	/ Is the sampled are	a /
Hydric Soil Present?	Yes No within a wetland?	
Wetland Hydrology Present?	Yes No V	Remarks (e.g., marginal?):
VEGETATION (Use scientific r	names.) Estimate absolute % cover (not relative cover). % car	
Tree Stratum (dbh≥ 3")		Dominance Test worksheet:
Species Cov.% D		Number of Dominant Species
1. Rica glance 15	Y PACU 5	That are OBL, FACW, or FAC:(A)
2. Bet pap 40	Y FACM 6.	Total Number of Dominant
3		Species Across All Strata:
4	Tabel Tree Course	Percent of Dominant Species
	Total Tree Cover: 55	That are OBL, FACW, or FAC: 30 (A/B)
50% of total cover: 27.		Prevalence Index worksheet:
Sapling/Shrub Stratum (woody		Total % Cover of: Multiply by:
Abs.Cov.% Do		OBL species X1=
1. Vice glan 5	FACU 7. Spir bea 3 - FACU FACU 8. Vantum Vicile: 1 - FACU	FACW species X2=
3. Vib edule 20	FACH 9.00 hor 5 - FACH	FAC species 35 X3= 245
4. Ribes and 10 Y	Me 10. Lyco ann 7 Y Freu	FACU species 169 X4= 676
5. VAC OVAL B	FAC 11. Alnus sin 5 - FAC	UPL + NL species X5=
6. Ros aca 5 .	FACU12. Ribes glan 5 - FAC	Column Totals: 245 (A) 901 (B)
Total Sa	pling/Shrub Cover: 80	(,)
50% of total cover:	40.6 20% of total cover: 16.0	Prevalence Index = B/A = 3.67+
Herb Stratum	307001,000,007011	Trotalono moox - pri -
Abs.Cov.% Dor		
1. Rub ped 25	tax 12. Galin to 1 - FAL	Hydrophytic Vegetation Indicators:
2. Commiscan 15'	FACULIS. Ver viride 1 - FAC	Dominance Test Is>50%
3. Athy fel fem 5 =	FAU 14	Prevalence Index is \$3.0
5. Arda asa 30	PALVI6.	
6. Gumno da 7 -	PMLM 17	Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
7. Ger eri 2 -	FAM 18.	-
8. Chun ang 3	PXW 19.	Problematic Hydrophytic Vegetation¹ (Explain)
9. Egni NY 5	FRV 20.	
10. Dry dilota 5	FALVE1.	¹ Indicators of hydric soil and wetland hydrology must
11. Snag can		be present unless disturbed or problematic.
	Total Herb Cover: 106	
50% of total cover:	543 55 20% of total cover: 432 22	Hydrophytic
Circular 1/10-ac plot or oth	er plot dimension: % of bare ground:	Vegetation Yes No
% Cover of Wetland Bryophytes (where applicable)	% Total Cover of Bryophytes%	
Remarks:		

moist but not entirated

Remarks:

Project: WEST SU ALLESS	Borough/	City: MSB		Date: 9/18/2020
Applicant/Owner: MDFA				Sampling Point #: 537
Investigator(s): EGBMarken		Firm: HD	R Alaska, Inc.	
Lat. (deo.") SOILS, NESW	(ser belm) + ' n	NAD 83 Recorded on	GPS #: Marked	on map? Field Map #:
Subregion (circle one): SE Southce				
Local relief: Shape across slope:/line				
Photo nos /descriptions: 41, 5569				
Are climatic / hydrologic conditions or				
Are Vegetation N, Soil N, or Hyd				
Are Vegetation N, Soil N, or Hyd				
SUMMARY OF FINDINGS	4			
Hydrophytic Vegetation Present?	Yes No No	le the consulted over		/
Hydric Soil Present?	Yes No	Is the sampled area within a wetland?	Yes - No	
Wetland Hydrology Present?	Yes V No		Remarks (e.g., mar	ginal?):
VEGETATION (Use scientific name	es.) Estimate absolute % cover (not	relative cover). % can	total >100%.	
	soly Edwindid dissolute 10 dottor (Not	10.00.00.00.00.00.00.00.00.00.00.00.00.0	Dominance Test wor	ksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom?	Ind. Species Cov.	% Dom? Ind.	Number of Dominant	Snories
1. Bet pap 40 Y	Facu 5.		That are OBL, FACW,	
2. Piceaglau 5 -	FACU 6.		Total Number of Domi	inant
3	7		Species Across All St	rata: 4 (B)
4	8		December of Demisses (Canalan
То	tal Tree Cover: 45		Percent of Dominant S That are OBL, FACW	
50% of total cover: 22.5	20% of total cover	. 9	Prevalence index wo	rksheet:
Sapling/Shrub Stratum (woody plan			Total % Cove	r of: Multiply by:
Abs.Cov.% Dom?		/.% Dom? Ind.	OBL species	X1=
1. V.h edule 3 -	FACM 7.		FACW species	X2= 2
2. Ros atri 5 -	PACU B.	1		2-3. x3= 369
3. Alnus ciega 20 Y 4. Lobes hindi 3 -	FAC 9		FACU species	
5. Rober trist 2 -	初か 11		UPL + NL species	X5=
6. Pet pag 8 Y	FACU 12.			16 (A) 657 (B)
	(1)		Column rolais:	(B)
	g/Shrub Cover: 41 20.5 20% of total cove	0.7	D	= B/A = 3.35
	20% of total cover	r: <u>8.2</u>	Prevalence Index	= b/A =
Herb Stratum Abs.Cov.% Dom?	ind. Abs. Cov	.% Dom? Ind.		
1. Cal can 00 Y	FAC 12		Undershite Veneter	lan Indiantoro
2. Dry dil 0 -	FM 13.		Hydrophytic Vegeta	*****
3. Grymno dry 10 -	FRCU 14		Dominance Te	
4 Athy Felfem 7 -	500 V		r reveletice inc	JEX 13 30.0
5. Angelics 1 -	FNCW16			Adaptations ¹ (Provide supporting
7. Trie ew] -	FAC 17		V	arks or on a separate sheet)
8	19		Problematic H	ydrophytic Vegetation ¹ (Explain)
9	20			
10	21			soil and wetland hydrology must
11	22		be present unless dis	turbed or problematic.
1	tal Herb Cover: 110			0
50% of total cover:	20% of total cove	r: 22	Hydrophytic	0 1
Circular 1/10-ac plot or other p	olot dimension: % of ba		Vegetation \\ Present?	'es NoV
% Cover of Wetland Bryophytes	% Total Cover of Bryon			
(where applicable) Remarks: On forman of w	alla I a lasta	0044:		
in my of a	report in law lying a newhet gnorted - class	I LI I	1 .1. 1 1.	done
burch trees Gov	newnet granted - dis	n to matterell	upland bon	nound

US Army Corps of Engineers Note: vez lesset meet afterell, so, .. 4.

Alaska Version 2.0 Modified by HDR 2019

Project: West Sy Azerss Borough/City: MSB	Date: 9/18/2020					
Applicant/Owner:_MDEA	Sampling Point #: 547					
Investigator(s): EU, BM Firm: HDR Alaska, Inc.						
Lat. (dec.°) 61.554528 Long. 150.56419 ± NAD 83 Recorded on GPS #: / Marked on map? Field Map #:						
Subregion (circle one): SE 200thcentra Western Aleutian Interior Northern Landform: Tecchoc						
Local relief: Shape across sloper linear convex / concave Shape up/downstope: linear / convex / concave NWI classification: PSS I / EM I B						
Photo nos./descriptions: SOILS × 2, NESW Camera #: Veg Type (Viere						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No: If no, explain.						
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No						
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here.						
SUMMARY OF FINDINGS						
Hydrophytic Vegetation Present? Yes No Is the sampled area						
Hydric Soil Present? Yes V No within a wetland? Yes V	No					
	J., marginal?):					
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%.						
Tree Stratum (dbh≥ 3")	st worksheet:					
Species , Cov.% Dom? Ind. Species Cov.% Dom? Ind. Number of Dom						
G. F. A. III Y Facility	,					
2. 5 of Pas II I FACM 6 Total Number o Species Across	All Ctrates +					
4 8	All Strata. (B)					
Total Tree Cover: 20 Percent of Dom						
	Cover of: Multiply by:					
Abs Cov % Dom? Ind Abs Cov % Dom? Ind						
1. Alnus tenn 15 Y FAC 7. Cosa aco 2 - FACU OBL species	X1=					
2. Opto her 12 Y FALM 8. Sorbus Got 2 - FRAM FACW species	The second secon					
3. Rub ida 7 - FACUS. Bet pap 10 Y. FACU FAC species	100 X3= 365					
4. Vib edule 9 - PACU species	974 X4= 364					
5. Rubes hads 5 - PRC 17: UPL + NL speci						
Column Totals:	193 (A) 669 (B)					
Total Sapling/Shrub Cover:	2 11-2					
	Index = B/A = 3.46					
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.						
1 (close 50 y Existent 5 - Est						
2. Chan and 5 - TRZY 13. Hydrophytic V	egetation Indicators:					
3 tera () 5 Dominar	nce Test is>50%					
(4.)644 CAN	ce Index is ≤3.0					
5. Cara to Can	ogical Adaptations¹ (Provide supporting					
6. Gymo dy 3 - 18/1/17. data in 7. Dry dil 15 Y 18/18.	Remarks or on a separate sheet)					
8. Eggs MV 3 - File 19. Problem	atic Hydrophytic Vegetation¹ (Explain)					
9. Earn arv 9 - FRV 20.						
10. Golven to 3 - 100 21 Indicators of h	ydric soil and wetland hydrology must					
11. Willia 636 7 - SMM 22 be present unless disturbed or problematic.						
Total Herb Cover: 109						
50% of total cover: 54.5 20% of total cover: 21.8 Hydrophytic						
Circular 1/10-ac plot or other plot dimension: % of bare ground: Vegetation Present?	Yes No					
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% (where applicable)						
Remarks: Dead spruce frees Bare grand 2 lon 5/0/2 have standing	v xtan					

Remarks: Furface water in Small swales up to this point; some creas of standing were in

be of slepe

Project: West 74 Rough Borough/City: MSB	Date: 7/18/2020
Applicant/Owner: At OEA	Sampling Point #: 550
	m: HDR Alaska, Inc.
Lat. (dec.°) 41.553348 Long. 150.533959 ± 'NAD 83 Recorde	ed on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Lar	ndform: footslove Slone (%): 10 Aspert
Local relief: Shape across slope Inear convex / concave Shape up/downslope: inear	Donvex / concave NWI classification:
Photo nos./descriptions: 501-5, NESW (veg) Camera #:	Veg Type (Viereck Level 4 or other): ILB 1.b/
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: Vo:	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal C	
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, expl	
SUMMARY OF FINDINGS	an anomoro rate.
Hydrophytic Vegetation Present? Yes V No V	
Hydric Soil Present? Yes No V Is the sampled within a wetla	
Wetland Hydrology Present? Yes No	nd? Yes No Y Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). %	can total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
1. bet pay 10 1 7x2 5	
3.	Total Number of Dominant Species Across All Strata:
4 8.	(B)
Total Tree Cover:	Percent of Dominant Species 22 2 2
5	That are OBL, FACW, or FAC: 33.3% (A/B) Prevalence Index worksheet:
20% 01 10/21 00/01.	- 1
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	Total % Cover of: Multiply by:
1. Ople how 20 - FAW 7.	OBL species X1=
2. Rub ida 5 - FACUS.	FACW species X2=
3. Alons Gra. BO Y FAL 9.	FAC species 95 x3= 255
4. Clocs thud B - FM 10.	FACU species 83 X4= 382
5. Rus actin 3 - FACUSI.	UPL + NL species X5=
6. likes Misho 3 - MM 12.	— Column Totals: 178 (A) 647 (B)
Total Sapling/Shrub Cover: 113	
50% of total cover: 36.5 20% of total cover: 29.6	Prevalence Index = B/A = 3 46
Herb Stratum	
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	d.
1. Dry dil 30 Y FREM12.	Hydrophytic Vegetation Indicators:
	Dominance Test is>50%
3. tani ar 5 - tal 14	Prevalence Index is ≤3.0
5. Am fel from 3 - MM 16.	A description of the state of t
6. Cal can 5 - PMV 17.	Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
7 Chan ang THUM 18	Problematic Hydrophytic Vegetation ¹ (Explain)
8	Probeniatic Hydrophytic Vegetation (Explain)
9	
10	Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.
11	be present unless distribed of problematic.
Total Herb Cover:55	, ,
50% of total cover: 27,5 20% of total cover: 11	- Hydrophytic
	Vegetation Yes NoV
Circular 1/10-ac plot ✓ or other plot dimension: % of bare ground: 35	- Present?
Circular 1/10-ac plot or other plot dimension: % of bare ground: 35 % Cover of Wetland Bryophytes % Total Cover of Bryophytes (where applicable)	Present?

17,000	Borough/City:_MSB	Date: 9/18/2020
Applicant/Owner: An ITEM		Sampling Point #: 551
nvestigator(s): EG BM		PR Alaska, Inc.
The state of the s		GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Wester		
Local relief: Shape across slope: linear / convex / c	oncave Shape up/downslope: linear / con	nvex / concave NWI classification: PEN1 B
Photo nos./descriptions: SolLS × 2, NESW	/	
		If no, explain. HGM type: Staff NA
Are Vegetation N , Soil N , or Hydrology N s		
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> n	aturally problematic? If needed, explain an	nswers here.
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present? Yes	No Is the sampled area	/ /
Hydric Soil Present? Yes	No within a wetland?	Yes F No V
Wetland Hydrology Present? Yes	No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate a	bsolute % cover (not relative cover). % can to	total >100%.
Tena Chantum (dlaba 27)	•	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Spe	ecies Cov.% Dom? Ind.	Number of Dominant Species
1 5		That are OBL, FACW, or FAC:(A)
2 6		Total Number of Dominant
3 7		Species Across All Strata:
4 8		Percent of Dominant Species
Total Tree Cover		That are OBL, FACW, or FAC: 40 (A/B)
50% of total cover:	20% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)		Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind.	Abs.Cov.% Dom? Ind.	OBL species X1=
1. Samb rub 10 Y FACUT.		FACW species X2=
		FAC species 50 X3= 150
		FACU species <u>70</u>
5		UPL + NL species X5=
6 12		Column Totals: 120 (A) 430 (B)
Total Sapling/Shrub Cover	A 100	Column (class. (A)
50% of total cover:12.5		Prevalence Index = B/A = 3.5
Herb Stratum	20% of total cover:	Prevalence Index = B/A =
Abs.Cov.% Dom? Ind.	Abs. Cov.% Dom? Ind.	
1. Urhia dio 30 Y Fran 12.		Hydrophytic Vegetation Indicators:
2. Col can 40 Y FAL13.		
		Dominance Test is>50% Prevalence Index is ≤3.0
		Travalence index is 3d.0
		Morphological Adaptations¹ (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
		1
		¹ Indicators of hydric soil and wetland hydrology must
11 22		be present unless disturbed or problematic.
Total Herb Cover		-0 /
50% of total cover: 47.5	20% of total cover:19	Hydrophytic
Circular 1/10-ac plot or other plot dimension:	9/ of base assured:	Vegetation Yes No
% Cover of Wetland Bryophytes%		. 1999(1)
(where applicable)		

	depth need	ded to document the	indicator	or confirm	the abser	nce of indicate	ors)	Sampling Point #: 55	
Depth HorizonSoil Ma	trix	Redox Features				a,a dip.			
(in.) (opt.) Color (moist)				Loc2			(pos/ Remarks neg) (or use comment number		
-1 00 101R2 2 -20 AB 5441	98	10YR3/4	2	C	MIPL	SiL	Neg	012"	
				-				200	
			_				=		
			-		_	3	-		
ype: C = Concentration, D = Deplet	tion, RM = F	Reduced Matrix, CS=	Coated S	Sand Grain	s ² Locatio	n: PL = Pore	Lining, RC	= Root Channel, M = Ma	
ydric Soil Indicators (check ones t	hat apply, n	neasure from top of	mineral	layers un	less othe	rwise noted)	:		
tandard Indicators: Histosol or Histel (A1)		Indicators fo					ne indicator	of hydrophytic vegetation	
Histosol or Histel (A1) — Histic Epipedon (A2) (8-16" organics, sat'd, underlain by mineral soil with chroma ≤2) — Alaska Color Change⁴ (TA5				one primary indicator of wetland hydrology, and an appropriate landscap position must be present unless disturb					
Black Histic (A3)		Alaska	Redox w	ith 2.5Y H	ue	or p	problematic		
Hydrogen Sulfide (A4) (within 12 surface; "in this pit	of mineral	Unde	erlying La		5Y or Re	401		f color change in Remark	
Thick Dark Surface (A12)				.91 of 2007 plain in Rem	arke)				
Alaska Gleyed (A13)		30001	ament, ext	DIGITI III AGITI	iaiks)				
Alaska Redox (A14)									
Alaska Gleyed Pores (A15)					-				
strictive Layer (if present)		Drainage Cla	ss: Sì	D)				,	
Type: Nowe		Soil Map Uni					40		
			i nalise.		I HVd	iric Soli Pres	ent?	Yes V No	
Depth (inches) NA			i Name.		Нус	Iric Soil Pres	ent?	Yes No	
			t Name.		Нус	Iric Soil Pres	ent?	Yes _V No	
Depth (inches) NA Depth (inches					Нус	D.A.	ent?	Yes _V No	
Depth (inches) NA Depth (inches				ırface):		10.57	,	Yes _ V No	
Depth (inches) N# mments: med = 3 - ynet barely DROLOGY atland Hydrology Indicators (check mary Indicators (any one indicators)	k ones that	apply, measure from		ırface):	Seco	10.57	ors (at leas)	t 2 are required)	
Depth (inches) N# mments: DROLOGY etland Hydrology Indicators (check many Indicators (any one indicators) Surface Water (A1)	k ones that r is sufficien	apply, measure from	n soil su		Seco	ndary Indicate	ors (at least	t 2 are required) 9)	
Depth (inches) N# mments: DROLOGY atland Hydrology Indicators (check mary Indicators (any one indicators)	k ones that r is sufficien	apply, measure from	n soil su		Seco V	ndary Indicate Water-Stained Oralnage Patto Oxid'd Rhizos	ors (at least Leaves (B ems (B10) pheres on L	t 2 are required) 9) Living Roots (C3) (within 1	
Depth (inches) N# mments: DROLOGY Intraded Hydrology Indicators (check many Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12")	k ones that r is sufficien St In	apply, measure from	n soil su 6) Aerial Ima	agery (B7)	Seco — V	ndary Indicate Water-Stained Orainage Patto Oxid'd Rhizos Presence of R (pos. α,α or	ors (at least Leaves (B ems (B10) pheres on L educed Iron soil color ch	t 2 are required) 9) Living Roots (C3) (within 1	
Depth (inches) N# mments: DROLOGY Intraded Hydrology Indicators (check many Indicators (any one indicators) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12")	k ones that r is sufficien St In Sp	apply, measure from t) urface Soll Cracks (B undation Visible on A parsely Vegetated Co	n soil su 6) perial Ima oncave S	agery (B7)	Seco V C C	ndary Indicate Water-Stained Oralnage Patt Oxid'd Rhizos Presence of R	ors (at least Leaves (B erns (B10) pheres on L educed Iron soil color ch (C5)	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) hange w/in 12")	
Depth (inches) N# mments: DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicator) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2)	k ones that r is sufficien St In St Ma	apply, measure from ti) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) vdrogen Sulfide Odol	n soil su 6) verial Ima oncave S	agery (B7)	Seco V	ndary Indicate Vater-Stained Orainage Patt Oxid'd Rhizos Presence of R (pos. a,a or Salt Deposits Stunted or Str	ors (at least Leaves (B erns (B10) pheres on L educed Iro soil color ch (C5) essed Plan	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)	
Depth (inches) NA DROLOGY etland Hydrology Indicators (checked and Indicators (any one indicators (surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	k ones that r is sufficien St In Sp Man	apply, measure from th urface Soll Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15)	n soil su 6) verial Ima oncave S	agery (B7)	Seco	ndary Indicate Water-Stained Oralnage Patt Oxid'd Rhizos Presence of R (pos. a,a or Salt Deposits	ors (at least Leaves (B learns (B10) pheres on Leduced Iron soil color ch (C5) lessed Plant dosition (D2 and (D3)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)	
Depth (inches) N# DROLOGY Satisfand Hydrology Indicators (checked and Indicators (and one indicators (and one indicators) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1)	k ones that r is sufficien St In Sp Man	apply, measure from the original of the origin	n soil su 6) verial Ima oncave S	agery (B7)	Seco	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	pors (at least Leaves (B leaves (B10)) pheres on Leaduced Iron soil color of (C5) lessed Plan dosition (D2 and (D3) perch H2C shic Relief (lest (D5)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water)	
Depth (inches) NA DROLOGY etland Hydrology Indicators (checked and Indicators (any one indicators (surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	k ones that r is sufficien Si In Si Hy Of	apply, measure from the original of the origin	n soil su 6) verial Ima oncave S	agery (B7)	Seco	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	pors (at least Leaves (B leaves (B10)) pheres on Leaduced Iron soil color of (C5) lessed Plan dosition (D2 and (D3) perch H2C shic Relief (lest (D5)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)) w/in 12")	
Depth (inches) National Depth (inches) National Deposits (B4) DROLOGY Striand Hydrology Indicators (check mary Indicators (any one indicator) Surface Water (A1) High Water Table (A2) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	k ones that r is sufficien SI In SI Hy Of	apply, measure from ti) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) vdrogen Sulfide Odor y-Season Water Tab	n soil su 6) herial Ima oncave S r (C1) ole (C2)	agery (B7) urface (B8	Seco	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	pors (at least Leaves (B leaves (B10)) pheres on Leaduced Iron soil color of (C5) lessed Plan dosition (D2 and (D3) perch H2C shic Relief (lest (D5)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water)	
Depth (inches) N# mments: CROLOGY etland Hydrology Indicators (check mary Indicators (any one indicator) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Id Observations (in. from ground surface Water Present? Yes	k ones that r is sufficien Si In Si Hy Of	apply, measure from ti) urface Soll Cracks (Bundation Visible on Abarsely Vegetated Coarl Deposits (B15) rdrogen Sulfide Odory-Season Water Tablether (explain)	n soil su 6) perial Ima oncave S r (C1) ole (C2)	agery (B7) urface (B8	Seco	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	pors (at least Leaves (B leaves (B10)) pheres on Leaduced Iron soil color of (C5) lessed Plan dosition (D2 and (D3) perch H2C shic Relief (lest (D5)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water)	
Depth (inches) N# mments: Broker Samuel Sa	k ones that r is sufficien SI In Hy Dr Of	apply, measure from ti) urface Soil Cracks (Bundation Visible on Aparsely Vegetated Coarl Deposits (B15) vdrogen Sulfide Odor y-Season Water Takther (explain) Depth of water Depth to water	n soil su 6) verial Ima oncave S 7 (C1) ole (C2) er (in.)	agery (B7) urface (B8	Seco	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	pors (at least Leaves (B leaves (B10)) pheres on Leaduced Iron soil color of (C5) lessed Plan dosition (D2 and (D3) perch H2C shic Relief (lest (D5)	t 2 are required) 9) Living Roots (C3) (within 1 n (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water)	
Depth (inches) N# mments: DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicator) Surface Water (A1) High Water Table (A2) (w/in 12") Saturation (A3) (w/in 12") Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Id Observations (in. from ground surface Water Present? Yes Yes Yes Yes Yes	k ones that r is sufficien Si In Sp Hy Of	apply, measure from ti) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) vdrogen Sulfide Odor y-Season Water Tat ther (explain) Depth of wat Depth to wat hat depth but not yet	n soil su 6) Aerial Ima oncave S r (C1) ble (C2) er (in.) er (in.) tilled?:	agery (B7) urface (B8	Seco — V	ndary Indicate Vater-Stained Oxidid Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T (# OBL+FACV	ors (at least Leaves (B learns (B10) pheres on L educed Iron soil color ch (C5) essed Plan osition (D2 ard (D3) perch H2C hic Relief (lest (D5) V dominants	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water) > # FACU+UPL dominants	
Depth (inches) Note of the content o	k ones that r is sufficien SI In Hy Dr Of	apply, measure from th urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) /drogen Sulfide Odor y-Season Water Tab ther (explain) Depth of wat Depth to wat hat depth but not yet	n soil su 6) verial Ima concave S (C1) ole (C2) er (in.) er (in.) tilled?: (in.)	urface (B8	Seco — V	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic R Geomorphic R Geomorphic R (w/in 24", can dicrotopograp FAC Neutral T	ors (at least Leaves (B learns (B10) pheres on L educed Iron soil color ch (C5) essed Plan osition (D2 ard (D3) perch H2C hic Relief (lest (D5) V dominants	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water) > # FACU+UPL dominants	
Depth (inches) NA Depth (inche	rface): No Pring in at t No	apply, measure from ti) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) vdrogen Sulfide Odor y-Season Water Tab ther (explain) Depth of wat Depth to wat hat depth but not yet Depth to sat. Epi Endo	n soil su 6) Aerial Ima oncave S r (C1) er (in.) er (in.) trilled?: Unknow	agery (B7) urface (B8	Seco — V	ndary Indicate Vater-Stained Dxid'd Rhizos Presence of R (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Geomorphic F Ghallow Aquita (w/in 24", can dicrotopograp FAC Neutral T (# OBL+FACV	ors (at least Leaves (B learns (B10) pheres on L educed Iron soil color ch (C5) essed Plan osition (D2 ard (D3) perch H2C hic Relief (lest (D5) V dominants	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water) > # FACU+UPL dominants	

Project: West Sm	Borough/City:_MSB	Date: 9/23/2020
Applicant/Owner: MOBA		Sampling Point #: 555
Investigator(s): FC, CH		IDR Alaska, Inc.
Lat. (dec.°) 61.619928	Long. 150.902174 ± NAD 83 Recorded or	
	ncentral Western Aleutian Interior Northern Landfor	
Local relief: Shape across slope: I	near / convex /concave Shape up/downslope: linear / co	onvex / soncave NWI classification: PF01/SS10
Photo nos./descriptions: 50115	× NESW, VP Camera #: IIA	Veg Type (Viereck Level 4 or other): IC Telectro-
Are climatic / hydrologic conditions	on the site typical for this time of year? Yes: 🗸 No: 💳	If no, explain. HGM type: SLOFE Vic Men.
Are Vegetation N, Soil N, or I	Hydrology _N_ significantly disturbed? Are "Normal Circu	mstances" present? Yes V No -
Are Vegetation N, Soll N, or I	Hydrology N naturally problematic? If needed, explain a	answers here.
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present?	Yes No	
Hydric Soil Present?	Yes V No ls the sampled are within a wetland?	Yes No
Wetland Hydrology Present?	Yes No	Remarks (e.g., marginal?):
	mes.) Estimate absolute % cover (not relative cover). % car	
VEGETATION (USB SCIENTIFIC III	1165.) Estimate absolute 78 cover (not relative cover). 78 car	Dominance Test worksheet:
<u>Tree Stratum</u> (dbh≥ 3")	and the second s	Number of Paratises Consider
Species Cov.% Don		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Pice mar 10	FALW 6.	Total Number of Dominant
3 Alous ten 5 -	FAC 7.	Species Across All Strata:
4	8	(0)
	Total Tree Cover: 35	Percent of Dominant Species That are OBL, FACW, or FAC: 75 % (A/B)
		That are OBL, FACW, or FAC: To (a/B) Prevalence index worksheet:
50% of total cover: 17.5	20% of total cover:	
Sapling/Shrub Stratum (woody pi Abs.Cov.% Dom		Total % Cover of: Multiply by:
1. Bet 000. 10	FACY 7. Almus ten 10 - EM	OBL species 5 X1= 5
2. Alnus Crysa 30 Y	FAL B.	FACW species 30 X2= 60
3. Mens for 15 Y	FACU 9	FAC species <u>95</u> X3= <u>285</u>
4. Lyce anne 10 -	#AZM 10	FACU species <u>63</u> X4= <u>252</u>
5. Vacoval 160 Y	<u> </u>	UPL + NL species X5=
6. Vac alark 10 -	FKC 12	Column Totals: 193 (A) 602 (B)
Total Sap	ling/Shrub Cover: 100	
50% of total cover:		Prevalence Index = B/A = 3.119
Herb Stratum	20/00/10/00/00/00/00/00/00/00/00/00/00/00	
Abs.Cov.% Dom	? Ind. Abs. Cov.% Dom? Ind.	
1. Eggi sylv 5 -	PAC 12	Hydrophytic Vegetation Indicators:
2. Carex digues 20 Y	FREW 13	
3. Com pal 5 -	<u>88</u> 14	
4. Francisco 10 Y	FAU 15	Trevalence mask is 20.0
5. COVANICAT 18 -	FACULTO.	Morphological Adaptations¹ (Provide supporting
	FAC 17	data in Remarks or on a separate sheet)
7	18	Problematic Hydrophytic Vegetation¹ (Explain)
9		****
10	21	¹ Indicators of hydric soil and wetland hydrology must
11	22	be present unless disturbed or problematic.
	Fotal Herb Cover: 58	
50% of total cover: 2		Hydrophytic
		Vegetation Yes No
Circular 1/10-ac plot or othe % Cover of Wetland Bryophytes (where applicable)	% Total Cover of Bryophytes%	Present?
Remarks:	Undulating terrain - small lons	1 drainge patterns present.

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

Standing water in lows, evidence of water in laws also

Remarks:

Project: West Su	Borough	Voity: MSB		Date: 9/23/2020
Applicant/Owner: ATDEA				Sampling Point #: 556
Investigator(s): EU CH			DR Alaska, Inc.	
Lat. (dec.") 61.619411	Long. 150.908299 ±			
Subregion (circle one): SE Sout	hcentral Western Aleutian Interio	r Northern Landfor	m: footslope	Slope (%): 5 Aspect: N
Local relief: Shape across slope	inear / concave Shape up	/downslope linear co	onvex / concave NW	I classification:
Photo nos./descriptions: Solus x	3, NESW	Camera #:	Veg Type (Viereck Le	vel 4 or other): 1B2a
	on the site typical for this time of year			
Are Vegetation N, Soil N, or	Hydrology N significantly disturbed	? Are "Normal Circui	mstances" present? Y	es No
Are Vegetation , Soil , or	Hydrology 📈 naturally problematic	? If needed, explain a	answers here.	
SUMMARY OF FINDINGS				
Hydrophytic Vegetation Present?	Yes No _	In the complete over		
Hydric Soil Present?	Yes No	Is the sampled area within a wetland?		/
Wetland Hydrology Present?	Yes No		Remarks (e.g., ma	
VEGETATION (Use scientific na	mes.) Estimate absolute % cover (not	t relative cover). % can	-	The state of the s
*			Dominance Test wo	rksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dor	n? Ind. Species Cov	.% Dom? Ind.	Number of Dominant	Species .
1. Bot eas 20 Y			That are OBL, FACW	
2. Alnus tien B -	FKV 6.		Total Number of Dom	pinant
3	7		Species Across All S	
4	8		Description of Description	***
	Total Tree Cover: 28		Percent of Dominant That are OBL, FACW	
50% of total cover:	20% of total cove	er: 5,6	Prevalence Index w	orksheet:
Sapling/Shrub Stratum (woody p			Total % Cove	er of: Multiply by:
Abs.Cov.% Dom		v.% Dom? Ind.	OBL species	X1=
1. Bet 10 -		5 Y FACU	FACW species	X2=
2. Alnussin 30 Y				72= 73= 201
3. Alnus fra 5 -	FAC 9.		FAC species	30 X4= 520
4. Samb race 15 -	FACU 11			
6 febrs Wal 5 -	FKV 12.		UPL + NL species	X5=
	10.4		Column Totals: 1º	17 (A) 721 (B)
	ling/Shrub Cover: 13	10 4		2150
50% of total cover:	20% of total cover	er: 17.4	Prevalence Index	x=B/A= 3.659
Herb Stratum Abs.Cov.% Dom	Ind. Abs. Co.	v.% Dom? Ind.		
1. Dm CKD 50 Y	FALM12.	v. /a Doint 111d.		
2. (mimn dm 10 -	FACM 13.		Hydrophytic Vegeta	tion Indicators:
3. Figur 54/V 12 -	FAU 14.		Dominance Te	
4	15		Prevalence In	dex is ≤3.0
5	16		Morphological	Adaptations¹ (Provide supporting
6	17			arks or on a separate sheet)
7	18		Problematic H	ydrophytic Vegetation¹ (Explain)
8			100	Market Company
10			1 Indicators of hydric	soil and wetland hydrology must
11				sturbed or problematic.
· ·	Total Herb Cover: 72			
50% of total cover: 3		14.4	Hydrophytic	/
/	plot dimension: % of b		Vegetation \	/es No
% Cover of Wetland Bryophytes (where applicable)	% Total Cover of Bryo	phytes%	Present?	
Remarks: Icaf When		+		
CMC Millians				

	: (Describe to the de	epth need	ed to document the	indicato	or confirm	the abse	nce of indicato	rs)	
Depth Horizon	Soil Matrix			dox Fea				a,α dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/	Remarks
		70	Ocioi (moistr	70	1400	LOC	_Texture_	neg)	(or use comment number
	Javaala					-	1		
	OYR2/2	100				_	LSi	neg	
-12 B	7.54R3/2	60		_	_		LSi	nes	
	7.57R3/4	40		_	-		SIL	hen	
-18 B	5Y43	90	54R3/4	10	C	PLM	LSi	res	
******						20			
1370	**	_		_				-	
		_		_			_	_	
								_	
									= Root Channel, M = Ma
dric Soil Indicate	ors (check ones that	apply, m	easure from top of	minera	l layers ur	less othe	rwise noted):		
andard Indicators	3:		Indicators fo	r Proble	ematic Hy	dric Soils	3.		
Histosol or Hist	tel (A1)		Alaska					e indicator	of hydrophytic vegetatio
- Histic Eninado	n (A2) (8-16* organics	e ent'd					one	primary inc	licator of wetland
underlain by	mineral soil with chroma	s, set u, a ≤2)	Alaska	Alpine S	wales (TA	5)			an appropriate landsca
Błack Histic (A:	3)		Alaska	Redox v	ith 2.5Y H	ue		ition must b roblematic.	e present unless disturt
	de (A4) (within 12"of						40%		color change in Remark
surface; @		minerai	Alaska	riying La		B 5Y OF H	ager		The state of the s
Thick Dark Sur					3.91 of 2007		2.5		
					olain in Ren				
Alaska Gleyed									
Alaska Redox ((A14)								
Alaska Gleyed	Pores (A15)								
strictive Layer (if p	resent)		Drainage Cla	ss: W	D			12.0	
Type: NoN	e								
		_	I Soil Map Unit	Name:		Hyr	iric Soil Presi	ent?	Vec No V
Depth (inches) _			Soil Map Unit	Name:	31	Нус	Iric Soil Prese	ent?	Yes No
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A High Water Table _ Saturation (A3) (Water Marks (B1 _ Sediment Depos _ Drift Deposits (B: _ Algal Mat or Crus	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4)	Sufficient Sui Inu Spa Ma Hyo Dry	apply, measure fron	n soil su 5) erial Ima ncave S (C1)	agery (B7)	Second	ndary Indicato Vater-Stained Orainage Patte Oxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Po Shallow Aquita (w/in 24", can	rs (at least Leaves (B9 ms (B10) _ heres on Li duced Iron coil color ch C5) ssed Plant osition (D2) rd (D3) perch H20	2 are required) ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Depos _ Drift Deposits (B3 _ Iron Deposits (B3	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4)	sufficient Sufficient Sufficient Inu Spa Ma Hyo Dry Oth	apply, measure from I rface Soil Cracks (Br ndation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab	n soil su 5) erial Ima ncave S (C1)	agery (B7)	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B5) rms (B10) _ theres on Li duced Iron coil color ch C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (C est (D5)	2 are required) ving Roots (C3) (within 1 (C4) ange w/in 12")
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Deposits (B1 _ Algal Mat or Crus _ Iron Deposits (B3 _ Iron Deposits (Iron Deposits	Indicators (check of (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4) 5)	Sufficient Sufficient Sufficient Inu Spa Ma Hyo Dry Oth	apply, measure from frace Soil Cracks (Bradation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab arr (explain)	n soil su 6) erial Ima ncave S (C1) le (C2)	agery (B7) surface (B8	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B5) rms (B10) _ theres on Li duced Iron coil color ch C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (C est (D5)	2 are required) ving Roots (C3) (within 1 (C4) ande w/in 12") s (D1) w/in 12") 4) (caused by water)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Deposits (B1 _ Algal Mat or Crus _ Iron Deposits (B5 eld Observations (inface Water Present	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4) 6) n. from ground surfacent? Yes	Sufficient Sufficient Sufficient Inu Spa Ma Hyd Dry Oth	apply, measure from face Soil Cracks (Br ndation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab ler (explain)	or soil su soil su erial Ima ncave S (C1) de (C2)	agery (B7) rurface (B8	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B5) rms (B10) _ theres on Li duced Iron coil color ch C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (C est (D5)	2 are required) ving Roots (C3) (within 1 (C4) ande w/in 12") s (D1) w/in 12") 4) (caused by water)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Deposits (B1 _ Algal Mat or Crus _ Iron Deposits (B5 eld Observations (inface Water Preser	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12") its (B2) st (B4) for from ground surfactor is (B4) Yes Yes	Sufficient	apply, measure from Inface Soil Cracks (Brace Soil Cracks (Brace) Inface So	r soil su 6) erial Ima ncave S (C1) le (C2)	agery (B7) surface (B8	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B5) rms (B10) _ theres on Li duced Iron coil color ch C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (C est (D5)	2 are required) ving Roots (C3) (within 1 (C4) ande w/in 12") s (D1) w/in 12") 4) (caused by water)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Deposits (B1 _ Algal Mat or Crus _ Iron Deposits (B5 eld Observations (intrace Water Present	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12") its (B2) st (B4) for from ground surfactor is (B4) Yes Yes	Sufficient	apply, measure from face Soil Cracks (Br ndation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab ler (explain)	r soil su 6) erial Ima ncave S (C1) le (C2)	agery (B7) surface (B8	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B5) rms (B10) _ theres on Li duced Iron coil color ch C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (C est (D5)	2 are required) ving Roots (C3) (within 1 (C4) ande w/in 12") s (D1) w/in 12") 4) (caused by water)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Depos _ Drift Deposits (B3 _ Iron Deposits (B3	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12") its (B2) st (B4) for from ground surfactor is (B4) Yes Yes	Sufficient	apply, measure from Inface Soil Cracks (Brace Soil Cracks (Brace) Indation Visible on A carsely Vegetated Count Deposits (B15) Idrogen Sulfide Odor Season Water Tabler (explain) Depth of water Depth to water at depth but not yet	n soil su iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	agery (B7) surface (B8	Second	ndary Indicato Vater-Stained Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can Microtopograph FAC Neutral Te (# OBL+FACW	rs (at least Leaves (B9 rms (B10) _ theres on Li educed Iron coil color ch (C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 1. (C4) and w/in 12") s (D1) w/in 12") y/in 12") y/in 12") # FACU+UPL dominants)
Depth (inches) _ DROLOGY etland Hydrology imary Indicators _ Surface Water (A _ High Water Table _ Saturation (A3) (_ Water Marks (B1 _ Sediment Deposits (B1 _ Algal Mat or Crus _ Iron Deposits (B5 _ Iron Deposits (B7 _ Iron	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4) 5) n. from ground surfactor is A1) Yes Seepir Yes	Sufficient	apply, measure from Inface Soil Cracks (Brace Soil Cracks (Brace) Inface So	r soil su final Ima ncave S (C1) le (C2) er (in.) er (in.) filled?:_ (in.)	agery (B7) furface (B8	Second	ndary Indicato Vater-Stained Drainage Patte Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te	rs (at least Leaves (B9 rms (B10) _ theres on Li educed Iron coil color ch (C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 1 (C4) and w/in 12") s (D1) w/in 12") y/in 12") y/in 12") # FACU+UPL dominants
Depth (inches) Depth	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4) 5) n. from ground surfactor is A1) Yes Seepin Yes age)	sufficient Sufficient Sufficient Sufficient Inu Spa Hyd Dry Oth No	ppply, measure from face Soil Cracks (Boundation Visible on A parsely Vegetated Court Deposits (B15) drogen Sulfide Odor Season Water Tabler (explain) Depth of water Depth to water at depth but not yet Depth to sat. Epi Endo	erial Imancave S (C1) le (C2) er (in.) er (in.) filled?: Unknow	agery (B7) surface (B8	Secondary Second	ndary Indicato Vater-Stained Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te (# OBL+FACW	rs (at least Leaves (B9 rms (B10) _ theres on Li educed Iron coil color ch (C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 1 (C4) and w/in 12") s (D1) w/in 12") y/in 12") y/in 12") # FACU+UPL dominants
Depth (inches) Depth	Indicators (check or (any one indicator is A1) e (A2) (w/in 12") w/in 12")) its (B2) 3) st (B4) 5) n. from ground surfactor is A1) Yes Seepir Yes	sufficient Sufficient Sufficient Sufficient Inu Spa Hyd Dry Oth No	ppply, measure from face Soil Cracks (Boundation Visible on A parsely Vegetated Court Deposits (B15) drogen Sulfide Odor Season Water Tabler (explain) Depth of water Depth to water at depth but not yet Depth to sat. Epi Endo	erial Imancave S (C1) le (C2) er (in.) er (in.) filled?: Unknow	agery (B7) surface (B8	Secondary Second	ndary Indicato Vater-Stained Dxid'd Rhizosp Presence of Re (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic Pe Shallow Aquita (w/in 24", can dicrotopograph FAC Neutral Te (# OBL+FACW	rs (at least Leaves (B9 rms (B10) _ theres on Li educed Iron coil color ch (C5) rssed Plant position (D2) rd (D3) perch H2O nic Relief (D est (D5) dominants	2 are required) ving Roots (C3) (within 1 (C4) and w/in 12") s (D1) w/in 12") y/in 12") y/in 12") # FACU+UPL dominants

Applicant/Owner_M1222 Sampling Point #: 5/4		Borough/City: MSA	Date: 9 23 2020
Lat. (dae.) Lat.	Applicant/Owner: MODA		Sampling Point #: 561
Subregion (circle one): SE SOURCENTED Vestern Aleutian Interior Northern Landform: 1975 Per Stope (%): Aspect: Vestern Rest Shape scross slope (new Document Concesses): Shape (new Document Concesses): No Land (new Document Concesse			
Local Telef: Shape across slope direal Donnex / Fonceive Shape up/downslope: direal portions: Spill SATE / PESAT			
Proto nos //secriptions			
Are cligated in Jun Soli Jun or Hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes No Are Vagetation Jun Soli Jun or Hydrology Northydrology Present? Yes No Vestern November 1 in the aampled area within a wetland? Hydrology Present? Yes No Vestern Northydrology Northydr			
Are Vegetation M. Seil M. or Hydrology M. significantly disturbed? Are Normal Circumstances' present? Yes No. Are Vegetation M. Seil M. or Hydrology M. naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydror Soil Present? Yes No. Welland Hydrology Present? Yes No. Prevalence Index is 3.0 No. Welland Hydrology Present? Yes No. Prevalence Index is 3.0 No. Welland Hydrology Hydrologo Present? Yes No. Prevalence Index is 3.0 Welland Hydrologo Hydrologo Present? Yes No. Welland Hydrologo Hydrologo Present? Yes No. Prevalence Index is 3.0 No. Welland Hydrologo Present? Yes No. Prevalence Index is	Photo nos./descriptions: SOILSX3, NESW	Camera #:	_ Veg Type (Viereck Level 4 or other): ILB2a
Are Vegetation M, Scil M or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydric Soil Present?	Are climatic / hydrologic conditions on the site typical	al for this time of year? Yes: 🗸 No: 🚞	If no, explain. HGM type: NA
Summary OF FINDINGS	Are Vegetation N, Soil N, or Hydrology N s	ignificantly disturbed? Are "Normal Circ	umstances" present? Yes 🗸 No
Hydrophytic Vegetation Present?	Are Vegetation N, Soil N, or Hydrology N n	aturally problematic? If needed, explain	answers here.
Hydric Soil Present? Yes	SUMMARY OF FINDINGS		
Hydro Soil Prisent? Yes	Hydrophytic Vegetation Present? Yes	No	
Wetland Hydrology Present? Ves	Hydric Soil Present? Yes		
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total > 100%. Dominance Test worksheet: Species	Wetland Hydrology Present? Yes	No 🗸	Remarks (e.g., marginal?):
Dominance Test worksheet: Number of Dominant Species Species Cov.% Dom? Ind. Number of Dominant Species Total Species	VEGETATION (Use scientific names.) Estimate a	bsolute % cover (not relative cover) % ca	
Species		The same of the sa	
Schi beb S		crice Cov % Dom? Ind	Number of Dominant Species 4
2 Satistr	1 Schools 15 Y PAC 5		
Section Sect	- A 1'-		
Solid Total Tree Cover 10 20% of total cover 1 20% of t			Cassian Assass All Charter
Solid Cover D Cover Solid Cover	4		(2)
Saping/Shrub Stratum (woody plants < 3" dbh)	Total Tree Cover	20	Percent of Dominant Species That are OBL FACW or FAC: 730% (A/B)
Sapiling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind. In	50% of total course	2007 of total agency	
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species X1 =		20% or total cover:	Total % Cover of: Multiply by:
15		Abs.Cov.% Dom? Ind.	277
Sch new 30	l - L FAI		
4			
11.	3. Saliheho 30 Y. FAC 9.		
Column Totals: 159 (A) 503 (B)	4 10		FACU species X4= (O 4
Total Sapling/Shrub Cover: 50% of total cover: 27.0 20% of total cover: 1 Prevalence Index = B/A = 3.16 Herb Stratum Abs. Cov. % Dom? Ind. Abs. Cov. % Dom? Ind. 1. Athay felfem 60 Y: FAC 12. 2. Pm end 10 - FAC 13. 3. Why has 10 FAC 14. 4. Thailetum 1 - FAC 15. 5. Fac 17. 7.			
Prevalence Index = B/A = 3.16	6 12		Column Totals: 159 (A) 503 (B)
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	Total Sapling/Shrub Cover	55	
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	50% of total cover: 27.5	20% of total cover:	Prevalence Index = B/A = 3.16
Hydrophytic Vegetation Indicators: Provided September Provided September Provided Supporting data in Remarks or on a separate sheet)			
2. Prover 10 — FACM 14. 3. Iv 1 Ave 10 — FACM 14. 4. The light may 1 — FACM 15. 5. Etwin M 3 — FAC 16. 6. — 17. — 18. 8. — 19. 9. — 20. 10. — 21. 11. — 22. Total Herb Cover: 42 — 20% of total cover: 16.8 — 16. Circular 1/10-ac plot or other plot dimension: % of bare ground: 16. (where applicable)			
3. W A.o O AMM 14. 4. The light and 15. 5. Figure 2. 5. F	1. Athy tel tem GO 1. HAV 12.		Hydrophytic Vegetation Indicators:
Prevalence Index is \(\lequil{3.0} \)	2. VAL EAT 10 - TAVALLA		Y Dominance Test is 50%
Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)	4 The lickway 90 1 " - BACH 15		Prevalence Index is ≤3.0
6	5. Pres av 3 = PAC 16.	2.46	
7	6 17.		data in Remarks or on a separate sheet)
9			
10	8 19		Problematic Hydrophytic Vegetation (Explain)
be present unless disturbed or problematic. Total Herb Cover: 64 50% of total cover: 42 20% of total cover: 16.8 Circular 1/10-ac plot or other plot dimension: 60 for bare ground: 10 present? **Cover of Wetland Bryophytes 60 for Data Cover of Bryophytes 60 for Bryophytes 60 for Data Cover of Bryophytes 60 for Da			
Total Herb Cover: 64 50% of total cover: 42 20% of total cover: 16.8 Circular 1/10-ac plot or other plot dimension: 60 for bare ground: 160 % Cover of Wetland Bryophytes 60 for applicable) Hydrophytic Vegetation Present? Yes No Present?			¹ Indicators of hydric soil and wetland hydrology must
50% of total cover: 42 20% of total cover: 16.8 Cover of Wetland Bryophytes% Total Cover of Bryophytes% Hydrophytic Vegetation Present? YesNo	407	The second secon	be present unless disturbed or problematic.
Circular 1/10-ac plot or other plot dimension: % of bare ground: % **Cover of Wetland Bryophytes % Total Cover of Bryophytes % (where applicable) **Vegetation Present?**			
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% (where applicable) **Present?**	50% of total coyer: 42	20% of total cover: 16.8	
% Cover of Wetland Bryophytes% Total Cover of Bryophytes% (where applicable)	Circular 1/10-ac plot ✓ or other plot dimension:	% of bare ground: 10	
	% Cover of Wetland Bryophytes%	Total Cover of Bryophytes %	

**

WETLAND DETERMINATION DATA FORM - Alaska Region

Project: West Sn Arees	Borough	City: MGB		Date: 9/	23/2020
Applicant/Owner: ATEA					Point #: 570
Investigator(s): ELICH		Firm: HI	OR Alaska, Inc.	pg .	0.11, 11, 0, 0
Lat. (dec.°) 61,619374	Long. 150,904586 ± 1	VAD 83 Recorded on	GPS # Mari	ked on man?	Field Man #:
Subregion (circle one): SE Southo			n: temes	Slope (%):	
Local relief: Shape across slope: lin					
Photo nos./descriptions: 50.05 x 2	and discountry to the second	Camera #:			
	on the site typical for this time of year				: Riverno/
Are Vegetation N., Soil N, or Hy					- (1
Are Vegetation N, Soil N, or Hy				165 4 110	REMIT
SUMMARY OF FINDINGS	areasy <u>Fre</u> naturally projection	ti ricocod, explair a	nowers note.	//	Mala
Hydrophytic Vegetation Present?	Yes No			/	S OFTEN
Hydric Soil Present?	Yes V	Is the sampled area within a wetland?		/	7
Wetland Hydrology Present?	Yes No	Within a wending;	Yes N Remarks (e.g.,	o	
				marginarry.	
COST SCIENTIFIC HAM	es.) Estimate absolute % cover (not	relative cover). % can	Dominance Test	worksheet:	
Tree Stratum (dbh≥ 3")					
Species Cov.% Dom?	Ind. Species Cov.	% Dom? Ind.	Number of Domina That are OBL, FA		(A)
2 balson pop 15	FACUL 6. (EDGE)				(^)
3. Au alan 5	FALM 7. (EDING)		Total Number of D Species Across Al		4
4	8				(B)
To	otal Tree Cover:		Percent of Domina		508 (A/B)
The second second		17	That are OBL, FA		(A/B)
50% of total cover:		u			A 4. 445 A - 1
Abs.Cov.% Dom?		v.% Dom? Ind.	Total % C	over or:	Multiply by:
1. Bet pap 7	PARTY. (FOLE)	v. 76 Doill: IIId.	OBL species _		X1=
2. Samb fro B	FAM O. (BLE)		FACW species _		X2=
3. Satis belo 15 Y	FMV 9 (EDINE)		FAC species _	55	X3= 65
4.000 how 15 J	FACMIO.		FACU species _	38	X4= 152
5. Alnus kn 5 F	11.		UPL + NL species		X5=
6. We edut 5	- FAVA 12. (5748)		Column Totals: _	03 (A)	317 (B)
	g/Shrub Cover: 16				
50% of total cover:	20% of total cover	r: 4	Prevalence In	dex = B/A =	3.41
Herb Stratum			4.		
Abs.Cov.% Dom?		.% Dom? Ind.			
1. Mayo Fel fin 95 Y	FAC 12. (THENGLIOUT) FACU 13. (THYONGHOUT)		Hydrophytic Veg	etation Indicat	ors:
3 Gymn dry 5 -	FAL 14. (THRONGHOUT)		Dominance	Test is>50%	9 9
4 Her (2) 3 =	FACU 15. (THROWNHOUT)		Prevalence		
5. Cal can 5 -	FAU 16. (THROUGHOUT)		Manchalasi		1/Deside
6	17				1 (Provide supporting separate sheet)
7	18		Problemati	c Hudrophutic V	egetation¹ (Explain)
8	19		1100101114	o i iyolopiiyilo v	ogeranom (Expiram)
9	20				
10	21		1 Indicators of hyd be present unless		and hydrology must
11	22		no prosent uness	Ciorained of bit	opposition.
То	tal Herb Cover: 7-3	1.71			/
50% of total cover:	36.5 20% of total cover	r: 14.6	Hydrophytic Vocatation	Voc	No.
% Cover of Wetland Bryophytes (where applicable)	olot dimension: % of ba	ohytes%	Vegetation Present?	Yes	No
Remarks:		have ale of	TREES primari	y on edge	is — sile otherms
looks like hydro atream may	men lang la special ad	one or clope	dominated by	try fel fem/	Dry diletata
The man character was	neve vecety theneed for	YStern			-

US Army Corps of Engineers & Invent bying onen is part of the floodyphin of adjacent channel. need to remap stream channel.

Alaska Version 2.0 Modified by HDR 2019

America Classica	the state of the s		to document the	indicator	or confirm	the abser	nce of indicat	ors)	3.4
epth Horizon	Soil Matrix		Re	dox Fea	tures			α,α dip.	3 1 1963
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/	Remarks
1 0i	7.5 /R25/L	loD					open	neg)	(or use comment numb
-3 A	7.54R2.5/1				_		SIL	Des	
-le A B	2.5742	90					SiL	pos	
- CIV	1071411	ю		_			C'L	205	
-22 8	5Y3/2	AND THE RESERVE OF THE PARTY OF	-V0 4.11.	10	C	d1 1A	101	105	1
	213/2	and the second second	54R416	7		PLM	LSI	DUB	
			5423/4	-00	_	STIN	F 31	-	
				_	-		1	_	
upo: C - Concept	rotion D - Doplotion	PM - Pod	used Metric CC	—					50
	ors (check ones that								= Root Channel, M = Ma
andard Indicators		apply, mea):	
Histosol or His			Indicators fo					ne indicator	of hydrophytic vegetatio
			Alaska	Color Ci	iange" (TA	(4)			dicator of wetland
Histic Epipedoi underlain by	n (A2) (8-16" organic: mineral soil with chrom	s, sat'd, a ≤2\	Alaska	Alpine S	wales (TA	5)	hyd	drology, and	an appropriate landscap
Black Histic (A:		u =2,	Alaska	Redox v	ith 2.5Y H	ue		sition must b problematic.	e present unless disturb
	de (A4) (within 12*of		Alacka	Clayed	uithout Uu	e 5Y or Re	40		color change in Remark
surface; @		пшета		erlying La		e a r ur me	adei		2 1
Thick Dark Sur	face (A12)		Other (e.g., see p	91 of 2007				
Alaska Gleyed			Suppl	ement: ex	plain in Ren	narks)			
Alaska Redox	, ,				-				
Alaska Gleyed									
strictive Layer (if p			Designation Cla						
	ONE		Drainage Cla					1	/
Type:	MA		Soil Map Uni	i Name:		Hyd	iric Soil Pres	sent?	Yes No
DROLOGY		-				-			
mary Indicators Surface Water (A High Water Tabl Saturation (A3) (Water Marks (B1 Sediment Depos Drift Deposits (B	e (A2) (w/in 12") (w/in 12") 1) sits (B2)	sufficient) —Surfa —Inunc — Spara — Marl — Hydra — Dry-S	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab	6) Aerial Ima Oncave S	agery (B7)		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) tard (D3)	living Roots (C3) (within 1 n (C4) nange w/in 12") s (D1)
etland Hydrology mary Indicators Surface Water (A High Water Table Saturation (A3) (Water Marks (B1 Sediment Depose Drift Deposits (B1 Algal Mat or Cru	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ist (B4)	sufficient) Surfa Inunc Spara Mari Hydra Dry-S	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odoi	6) Aerial Ima Oncave S	agery (B7)		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) tard (D3) n perch H2O phic Relief (D5)	living Roots (C3) (within 1 n (C4) lange w/in 12") s (D1)
etland Hydrology imary Indicators Surface Water (A. High Water Table Saturation (A3) (C. Water Marks (B1) Sediment Deposits (B2) Algal Mat or Cruel Iron Deposits (B3)	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ist (B4) 5)	sufficient) Surfa Inunc Spars Mari Hydra Dry-S Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain)	6) Aerial Ima Oncave S r (C1) Ole (C2)	agery (B7) Surface (B8		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) tard (D3) n perch H2O phic Relief (D5)	living Roots (C3) (within 1 n (C4) lange w/in 12") s (D1) w/in 12") O4) (caused by water)
etland Hydrology imary Indicators Surface Water (A. High Water Table Saturation (A3) (C. Water Marks (Br. Sediment Deposits (Br. Algal Mat or Cru Iron Deposits (Br. Ald Observations (Br. Ald Observa	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ist (B4) 5) n. from ground surfactor is	sufficient) Surfa Inunc Spara Mari Hydra Dry-S Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain)	6) Aerial Ima Oncave S r (C1) Ole (C2) er (in.)	agery (B7) Surface (B8		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) tard (D3) n perch H2O phic Relief (D5)	living Roots (C3) (within 1 n (C4) lange w/in 12") s (D1) w/in 12") O4) (caused by water)
etland Hydrology imary Indicators Surface Water (A. High Water Table Saturation (A3) (C. Water Marks (Br. Sediment Deposits (Br. Algal Mat or Cru Iron Deposits (Br. Ald Observations (Br. Ald Observa	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) i3) st (B4) 5) n. from ground surfacent? Yes Y Yes Y	sufficient) Surfa Inunc Spars Marl Hydra Dry-S Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tat r (explain)	er (in.)	agery (B7) Surface (B8		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) tard (D3) n perch H2O phic Relief (D5)	living Roots (C3) (within 1 n (C4) lange w/in 12") s (D1) w/in 12") O4) (caused by water)
etland Hydrology imary Indicators Surface Water (A) High Water Table Saturation (A3) (C) Water Marks (B1) Sediment Deposits (B2) Algal Mat or Cruel Iron Deposits (B3) Ald Observations (Indicate Water Present	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) i3) st (B4) 5) n. from ground surfactor is ent? Yes Yes Seepi	sufficient) Surfa Inunc Spars Marl Hydra Dry-S Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain) Depth of wat Depth to wat	er (in.) _	agery (B7) Surface (B8		Vater-Stainer Orainage Patt Oxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Geomorphic I Shallow Aquil (w/in 24", car Microtopograf FAC Neutral (# OBL+FAC)	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2O phic Relief (D5) W dominants	iving Roots (C3) (within 1 a (C4) trange w/in 12") s (D1) w/in 12") O4) (caused by water) > #FACU+UPL dominants
etland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) (C) Water Marks (B) Sediment Deposits (B) Algal Mat or Crue Iron Deposits (B) Ald Observations (B) Ald Observation	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ist (B4) 5) n. from ground surfa ent? Yes Y Seepi	sufficient) Surfa Inunc Spars Marl Hydra Dry-S Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain) Depth of wat Depth to wat	er (in.) _	agery (B7) Surface (B8		Vater-Stainer Drainage Patt Dxid'd Rhizos Presence of F (pos. a.a or Salt Deposits Stunted or Str Seomorphic I Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2O phic Relief (D5) W dominants	iving Roots (C3) (within 1 a (C4) trange w/in 12") s (D1) w/in 12") O4) (caused by water) > #FACU+UPL dominants
etland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) (A) Water Marks (B) Sediment Deposits (B) Algal Mat or Crue Iron Deposits (B) Indicators (B) Indicator	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) i3) st (B4) 5) n. from ground surfactor is ent? Yes Yes Yes Yes Yes Yes Yes Yes	sufficient) Surfa Inunc Spara No Dry-S No Dry-S No Dry-S No Dry-S No Dry-S No Dry-S	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain) Depth of wat Depth to wat t depth but not yet Depth to sat. Epi Endo	er (in.) t filled?: Unkno	agery (B7) Surface (B8	Y () Y ()	Vater-Stainer Drainage Path Dxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or Sta Geomorphic F Shallow Aquit (w/in 24", car Microtopograf FAC Neutral (# OBL+FAC)	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2O phic Relief (D5) W dominants	iving Roots (C3) (within 1 a (C4) trange w/in 12") s (D1) w/in 12") O4) (caused by water) > #FACU+UPL dominants
etland Hydrology mary Indicators Surface Water (A) High Water Table Saturation (A3) (A) Water Marks (B) Sediment Deposits (B) Algal Mat or Crue Iron Deposits (B) Indicators (B) Indicator	(any one indicator is A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) ist (B4) 5) n. from ground surfa ent? Yes Y Seepi	sufficient) Surfa Inunc Spara No Other	ace Soil Cracks (B dation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Season Water Tab r (explain) Depth of wat Depth to wat t depth but not yet Depth to sat. Epi Endo	er (in.) t filled?: Unkno	agery (B7) Surface (B8	Y () Y ()	Vater-Stainer Drainage Path Dxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or Sta Geomorphic F Shallow Aquit (w/in 24", car Microtopograf FAC Neutral (# OBL+FAC)	d Leaves (BS) terns (B10) _ spheres on L Reduced Iron soil color ch (C5) ressed Plant Position (D2) ard (D3) n perch H2O phic Relief (D5) W dominants	iving Roots (C3) (within 1 a (C4) trange w/in 12") s (D1) w/in 12") O4) (caused by water) > #FACU+UPL dominants

oject: West Sn	Borough/City: MSB	Date: 9/23/2620
oplicant/Owner: MDEA		Sampling Point #: 572
vestigator(s): FC, CM	Firm: HC	DR Alaska, Inc.
it. (dec. °) 61.583618 Long. 150,744	Yu9 ± 'NAD 83 Recorded on	GPS #: Marked on map? Field Map #:
ubregion (circle one): SE Southcentral Western		n: foot (ope wood Slope (%): 3 Aspect:
		nvex / concave NWI classification: PFO+/SSIB
noto nos/descriptions: 501LS -2, NESW		Veg Type (Viereck Level 4 or other):
e climatic / hydrologic conditions on the site typical fo		
re Vegetation <u>N</u> , Soli <u>N</u> , or Hydrology <u>N</u> sign		nstances" present? Yes VNo
re Vegetation N, Soil N, or Hydrology N natu		- 113
UMMARY OF FINDINGS		BIR
Hydrophytic Vegetation Present? Yes	No	,
Hydric Soil Present? Yes	No Is the sampled area within a wetland?	6./
Wetland Hydrology Present? Yes	No Willia Welland?	Yes _ No Remarks (e.g., marginal?):
EGETATION (Use scientific names.) Estimate abso	nute % cover (not relative cover). % can	total >100%. Dominance Test worksheet:
Free Stratum (dbh≥ 3")		
Species Cov.% Dom? Ind. Species		Number of Dominant Species That are OBL, FACW, or FAC: (A)
Ret pap 15 Y PACH 6.		A.
1 (0(V) 0.		Total Number of Dominant Species Across All Strata:
, , , , , , , , , , , , , , , , , , ,		Species Across All Strata: 11 (B)
Total Tree Cover:	20	Percent of Dominant Species
	35	That are OBL, FACW, or FAC: Prevalence Index worksheet:
50% of total cover: 17,5	20% of total cover:	
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind.	Ab- 0	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind.	Abs.Cov.% Dom? Ind.	OBL species <u>25</u> X1= <u>25</u>
Salie Ind 5 - FAINS Vac	2 - FAL	FACW species 50 55 X2= 1 10
		FAC species 80 76 X3=-225
Alous ten 10 Y. PAL 10. Sali		FACU species
Ros acu 5 - FACUITI Vac		UPL + NL species X5=
Spir Wer 3 - FACM12. Vac	oval 5 - FAL	Column Totals: 225 (A) 640 (B)
Total Sapling/Shrub Cover:	75	
27 -	20% of total cover:	Prevalence Index = B/A = 2.846
ferb Stratum	1.5	. Tortal of the one - with - week to the terminal of the original of the origi
Abs.Cov.% Dom? Ind.	Abs. Cov.% Dom? Ind.	
Fami Flor 12 - OBL 12.		Hydrophytic Vegetation Indicators:
Can pal 5 - OBL-14.		Y Dominance Test is>50% Y Prevalence Index is ≤3.0
Corex mayell 8 - OBL 16.		
Equi ast 5 - FAC 17.		Morphological Adaptations¹ (Provide supporting
Equi art 5 - FAC 17.		data in Remarks or on a separate sheet)
Amy tela 5 PAL 19.		Problematic Hydrophytic Vegetation¹ (Explain)
. VIola pal 5 - FACW20.		
		¹ Indicators of hydric soil and wetland hydrology must
1 fub arc 3 - FAC 22.		be present unless disturbed or problematic.
Total Herb Cover:	115	
	20% of total cover: 23	Hydrophytic
Circular 1/10-ac plot or other plot dimension:		Vegetation Yes No
6 Cover of Wetland Bryophytes	tel Cover of Beauthytes 25 of	Present?
Gover of Welland Bryophytes 17 % 10	tal Cover of Bryophytes 🔑 %	

Project: West Su	Borough/City: MSB	Date: 9/23/2020
Applicant/Owner: _ At 0 EA		Sampling Point #: 574
Investigator(s): EL, CH	Firm:	HDB Alaska Inc
Lat. (dec.°) 61.582789 Long. 150.7	85 732 ± NAD 83 Recorded	on GPS #: Marked on man? Field Man #
Subregion (circle one): SE Southcentral Western	Aleutian Interior Northern Landf	orm: fut land , Slone (%): I Aspect
Local relief: Shape across slope: (linear) convex / co	oncave Shape up/downslope linear/	convex / concave NWI classification: 7/-
Photo nos./descriptions: Solls K2, N86W	Camera #:	Veg Type (Viereck Level 4 or other): 182a
Are climatic / hydrologic conditions on the site typical	I for this time of year? Yes: Vo:	If no, explain. HGM type: Na
Are Vegetation <u>N</u> , Soil <u>N</u> , or Hydrology <u>N</u> si	gnificantly disturbed? Are "Normal Circ	cumstances" present? Yes VNo
Are Vegetation , Soil N, or Hydrology N na	aturally problematic? If needed, explain	answers here.
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present? Yes	No V	
Hydric Soil Present? Yes	No Visite sampled ar within a wetland	ea ? Yes No
Wetland Hydrology Present? Yes	No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate ab	solute % cover (not relative cover) % ca	
	The state of the s	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov,% Dom? Ind. Species	cies Cov.% Dom? Ind.	Number of Devices Constant
001		Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Pican glanca 7 - FACEN 6.		Total Number of Dominant
		Species Across All Strata: 7 (B)
4 8		
Total Tree Cover:	40_	Percent of Dominant Species That are OBL, FACW, or FAC: 42.8 (A/B)
50% of total cover:20	20% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)		Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind.	Abs.Cov.% Dom? Ind.	
1. Samb race 12 Y Facu 7.		OBL species X1=
		FACW species X2=
		FAC species 57 X3= 171
		FACU species 93 X4= 372
6		UPL + NL species X5=
		Column Totals: 150 (A) 543 (B)
Total Sapling/Shrub Cover:		212
50% of total cover: 17,5	20% of total cover:	Prevalence Index = B/A = 3, 62
. Abs.Cov.% Dom? Ind	Abs. Cov.% Dom? Ind.	
1. Athy folfem 20 Y FM 12.	3	
2. esminan th 111/13.		Hydrophytic Vegetation Indicators:
3. DAVO AVV 3 - PAV 14.	***	Dominance Test is>50%
4. Lham And D _ YAVU15.		Prevalence Index is ≤3.0
5. Cal can 20 Y PAN 16.		Morphological Adaptations¹ (Provide supporting
		data in Remarks or on a separate sheet)
		Problematic Hydrophytic Vegetation¹ (Explain)
		100
10 21		¹ Indicators of hydric soil and wetland hydrology must
11		be present unless disturbed or problematic.
Total Herb Cover:	75	
50% of total cover: 37.5	20% of total cover: 15	Hydrophytic
Circular 1/10-ac plot or other plot dimension:		Vegetation Yes No V
% Cover of Wetland Bryophytes % T	otal Cover of Bryophytes — %	Present?
(where applicable)		
Hemarks: lent letter		

## Spith Horizon	politic Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators) Politic Description: Soil Matrix Redox Features	iL							
Color (moist) Color (moist) Sa	Coli Color (molst) Scotor (molst)		be to the depth no	eded to document the in	idicator or confirm	n the abse	ence of indicate	ors)	
Color (moist) % Colo	Color (moist) Scotor (moist) Scoto	epth Horizon	Soil Matrix	Red	lox Features				
## ## ## ## ## ## ## ## ## ## ## ## ##	## ## ## ## ## ## ## ## ## ## ## ## ##	The second secon				Loc2	_Texture		
### ### ##############################	### ### ##############################							uedi	tor use comment numb
Proceedings Process	Commentation Depletion RM = Reduced Matrix, CS=Costed Sand Grains *Location: PL = Proc Lining, RC = Root Channel, M = Matrix Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers unless otherwise noted): Indicators (check ones from top of mineral layers): Indicato	2 1 300	0712 00			-		200	
### April 1995 Present? Prese	### April 1900 ### Apply Case Proceedings of the Color Channel, M. M. Models Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): ### Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): ### Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): #### Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): ##### Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): ##### Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): ##### Indicators (check ones that apply, measure from top of mineral layers (flore): ##### Indicators (check ones flat apply indicators (check ones flat apply): ###### Indicators (check ones flat apply ind				2 -		- 11	The second second	Time Gura
### Acts Cleyed Pores (A15) ### Alaska Cleyed (A19) ### Alaska Cleyed	### April 1995 Present	11 B 10Y	24/2 75		2 —	National Street	(1)		
yps: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore Lining, RC = Root Channel, M = Midric Soil Indicators (check ones that apply), measure from top of mineral layers unless otherwise noted): Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*	yps: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore Lining, RC = Root Channel, M = Midric Soil Indicators (check ones that apply), measure from top of mineral layers unless otherwise noted): Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Hydric Soils*: Indicators for Problematic Hydric Hydric Soils*: Indicators for Problematic Hydric Hydric Hydric Soils*: Indicators for Problematic Hydric Hydric Hydric Hydric Soils*: Indicators for Problematic Hydric Hydri	20 0				-	6.11	MA	
Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): andard indicators: Indicators for Problematic Hydric Soils*: — Alaska Color Change* (TAA) — Histic Epipedon (A2) (8-16* organics, sard, underlain by mineral soil with chroma s2) — Black Histic (A3) — Hydrogen Sulfide (A4) (within 12*of mineral surface): — Thick Dark Surface (A12) — Alaska Redox with 2.5Y Hue — Alaska Gleyed without Hue SY or Redder — Underlying Layer — Other (e.g., see p.81 of 2007 — Succiement: exclain in Remarks) — Soil Map Unit Name: — Underlying Layer — Other (e.g., see p.81 of 2007 — Succiement: exclain in Remarks) — Soil Map Unit Name: — Hydric Soil Present? Yes	Alaska Gleyed (A13) Alaska Gleyed without Hue S or Redder Underlying Layer Other (a): see p.31 of 2007 Succience: explain in Remarks Alaska Calcy Changes Hydric Solls: —Alaska Color Change' (TA4) Histic Epipedon (A2): (8-16' organics, sard, underlain by mineral soll with chroma 22) Black Histic (A3) —Alaska Redox with 2.5Y Hue Histic Epipedon (A2): (8-16' organics, sard, underlain by mineral soll with chroma 22) Black Histic (A3) —Alaska Redox with 2.5Y Hue Alaska Redox with 2.5Y Hue Alaska Gleyed without Hue SY or Redder Underlying Layer Other (a): see p.31 of 2007 Succiement: exclain in Remarks Thick Dark Surface (A12) —Alaska Gleyed (A13) Alaska Redox (A14) Alaska Gleyed Pores (A15) Selficitive Layer (if present) Type: No/E Depth (inches) No mments: **Truct trabelobe: C 3-1 **Tru	-CL B 1041	-4/2 100)		_	21.5	MA	
Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): andard indicators: Indicators for Problematic Hydric Soils*: —Alaska Color Change* (TA4) Histic Epipedon (A2) (8-18* organics, sard, underlain by mineral soil with chroma s2) Black Histic (A3) Histic Epipedon (A2) (8-18* organics, sard, underlain by mineral soil with chroma s2) Black Histic (A3) Hydrogen Sulfide (A4) (winin 12* of mineral surface, 8 in this pit or present unless disture of problematic. Thick Dark Surface (A12) Alaska Gleyed without Hue 5' or Redder Underlying Layer Other (a.g., see p.81 of 2007 Sucolement: explain in Remarks) Alaska Gleyed Pores (A15) Sulfide (A4) Alaska Gleyed Pores (A15) Subtrictive Layer (if present) Type: No/E Daph (inches) No/E Sulface Water (A1) Surface (A2) (win 12*) Fligh Water Table (A2) (win 12*) Inundation Visible on Aerial Imagery (B7) Alaska Maple Surface (B8) Drainage Patterns (B10) Presence of Reduced iron (C4) (Doc 2, or osol color change in Remarks) Secondary Indicators (at least 2 are required) "Thick Deposits (B3) Drainage Patterns (B10) Presence of Reduced iron (C4) (Doc 2, or osol color change win 12*) Selficiant Deposits (B3) Drainage Patterns (B10) Presence of Reduced iron (C4) (Doc 2, or osol color change win 12*) Mari Deposits (B3) Drainage Patterns (B10) Surface Water Table (A2) (win 12*) Iron Deposits (B3) Dry Season Water Table (C2) Sealph of water (In) Seeping in at that depth but not yet filled?: [L/L) Seeping in at that depth but not yet filled?: [L/L) Seaturation Present? Yes No Depth to water (In) [L/L) Seaturation Present? Yes No Depth to water (In) [L/L) Seeping in at that depth but not yet filled?: [L/L) Seaturation Present? Yes No Depth to water (In) [L/L) Seeping in	Alaska Gleyed (A13) Alaska Gleyed without Hue S or Redder Underlying Layer Other (a): see p.31 of 2007 Succience: explain in Remarks Alaska Calcy Changes Hydric Solls: —Alaska Color Change' (TA4) Histic Epipedon (A2): (8-16' organics, sard, underlain by mineral soll with chroma 22) Black Histic (A3) —Alaska Redox with 2.5Y Hue Histic Epipedon (A2): (8-16' organics, sard, underlain by mineral soll with chroma 22) Black Histic (A3) —Alaska Redox with 2.5Y Hue Alaska Redox with 2.5Y Hue Alaska Gleyed without Hue SY or Redder Underlying Layer Other (a): see p.31 of 2007 Succiement: exclain in Remarks Thick Dark Surface (A12) —Alaska Gleyed (A13) Alaska Redox (A14) Alaska Gleyed Pores (A15) Selficitive Layer (if present) Type: No/E Depth (inches) No mments: **Truct trabelobe: C 3-1 **Tru				_	_		-	
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Indicators for Problematic Hydric Soila*: Histoscol or Histel (A1) Histoscol or Histel (A1) Alaska Alpine Swales (TA5) Undersing Layer Histoscol or Histel (A1) Histoscol or Histel (A1) Alaska Alpine Swales (TA5) Undersing Swales (TA5) Histoscol or Histel (A1) Alaska Alpine Swales (TA5) Histoscol or Histel (A1) Alaska Alpine Swales (TA5) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Alaska Redox With 2.5Y Hue Alaska Gleyed without Hue SY or Redder Underlying Layer Other (a.g. see p. p.1 of 2007 Sucolement: existain in Remarks) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Satifictive Layer (if present) Type: Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A15) Soil Map Unit Name: Hydric Soil Present? Yes No PROLOGY Water Value (Fax) Water Stained Leaves (B9) Drainage Class: Multiplicators (A15) Surface Soil Cracks (B6) The Hydrology Indicators (check ones that apply, measure from soil surface): Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Drainage Alaska Redox (A14) Alaska Redox (A14) Alaska Redox (A14) Alaska Redox (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Water Stained Leaves (B9) Drainage Class: MyD Hydric Soil Present? Yes Sarraev Indicators (at least 2 are required) Water Stained Leaves (B9) Drainage Patterns (B10) Draid Photosophers on Living Roots (C3) (within 12) Soil Table (A2) (wiin 12) Soil Table (A3) Water Stained Leaves (B9) Drainage Class: Water	Indicators for Problematic Hydric Solla*: Histis Epipedin (A2) (8-16* organics, sard, underlain by mineral soil with chroma \$2') Black Histic (A3) Hydrogen Sulfide (A4) (within 12' of mineral surface) Alaska Alpine Swales (TA5) Alaska Redox With 2.5Y Hue Alaska Redox With 2.5Y Hue Alaska Redox (A14) Alaska Redox (A15) Succiement: extrain in Remarks) Drainage Class: VD Soil Map Unit Name: Hydric Soil Present? Yes No Present of Reduced Inno (C4) (Cos. a. a. or soil color change win 12') Sediment Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Throp Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Throp Deposits (B5) End Observations (in. Irom ground surface): urface Water Present? Yes No Depit of water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth of water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Maturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Mortogographic Relief (C9) Seaturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Mortogographic Relief (C9) Seaturation Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 12 Mortogographic Relief (C9) Maturation Present? Yes No Depth to water	·· <u> </u>							
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Histic Epipedon (A2) (8-16" organics, safd, underlain by mineral soil with chroma s2) Black Histic (A3) Hydrogen Sulfide (A4) (within 12"of mineral sufficient of this pit underlain by mineral soil with chroma s2) Hydrogen Sulfide (A4) (within 12"of mineral sufficient of this pit underlain Layer Other (e.g., see p.81 of 2007 Succlement: exclain in Remarks) Drainage Class: WD Alaska Gleyed Pores (A15) Scritctive Layer (if present) Type: NoNE Soil Map Unit Name: Hydric Soil Present? Yes No Mondation (inches) Ne Soil Map Unit Name: Hydric Soil Present? Yes No Mondation (inches) Ne Soil Map Unit Name: Secondary Indicators (at least 2 are required) Thick Dark Table (A2) (wiln 12") Inundation Visible on Aerial Imagery (B7) Saturation (A3) (wiln 12") Sparsely Vegetated Concave Surface (B8) Thick Dark (B1) Saturation (A3) (wiln 12") Sparsely Vegetated Concave Surface (B8) Saturation (A3) (wiln 12") Sparsely Vegetated Concave Surface (B8) Saturated Marks (B1) Mart Deposits (B15) Sediment Deposits (B3) Dry-Season Water Table (C2) Thich Deposits (B3) Dry-Season Water Table (C2) Sediment Deposits (B3) Dry-Season Water Table (C2) Thich Deposits (B3) Depth of water (in.) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in at that depth but not yet filled?: 12 Mart Advance (B8) Seeping in a that depth but not yet filled?: 12 Mart Advance (B8) Seeping in a that depth but not yet	Histic Epipedon (A2) (8-16" organics, safd, underlain by mineral soil with chroma s2) Black Histic (A3) Hydrogen Sulfids (A4) (within 12"of mineral sufficient) Hydrogen Sulfids (A12) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Sintictive Layer (if present) Type: None Drainage Class: MD Soil Map Unit Name: Hydric Soil Present? Yes No Drainage Class: Hydrology Indicators (check ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from soil surface): Hydrology Indicators (scheck ones that apply, measure from s						3O		, , ,
Underfain by mineral soil with chroma s2) Black Histic (A3) Hydrogen Sulfide (A4) (within 12'of mineral surface; e in this pit Thick Dark Surface (A12) Alaska Gleyed without Hue 5Y or Redder Underfying Layer Other (e.g. see p. 91 of 2007 Sucolement: exclain in Remarks) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Satirctive Layer (if present) Type: NoNE Depth (inches) NN DRIVE DROLOGY ettand Hydrology Indicators (check ones that appty, measure from soil surface): many indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A1) Surface Water (A1) Saturation (A3) (win 12") Saturation (A3) (win 12") Secondary Indicators (Check (B1) Mart Deposits (B15) Alaska Gleyed without Hue 5Y or Redder Underfying Layer Other (e.g. see) p.1 of 2007 Sucolement: exclain in Remarks) Hydric Soil Present? Yes No	Black Histic (A3)		n des amanias anti-	-					
Alaska Redox with 2.57 Hue	Alaska Redox with 2.5Y Hue Alaska Gleyed without Hue 5Y or Redder Underlying Layer Other (e.g., see p.81 of 2007 Succlement: exclain in Remarks) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A14) Alaska Gleyed (A15) Alaska Gleyed (A15) Alaska Gleyed (A15) Alaska Gleyed (A15) Brainage Class: Proper None Depth (Inches) Drainage Class: Proper None Depth (Inches) Drainage Class: Proper (Inches) Drainage Class: Drainage Class: Drainage Class: Proper (Inches) Drainage Class: Proper (Inches) Drainage Class: Drainage Patterns (B10) Drainage Class: Drainage Patterns (B10) Drainage Pattern			Alaska A	Alpine Swales (T/	A5)			
Alaska Gleyed without Hue 5Y or Redder surface; e in his pil	Alaska Gleyed without Hue 5Y or Redder Surface; (a in his pit Underlying Layer Other (a.g., see p. 91 of 2007 Succiencent: exclain in Remarks) Alaska Gleyed (A12) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Alaska Gleyed Pores (A15) Alaska Gleyed Pores (A15) Solit Map Unit Name: Depth (inches) No Dep			Alaska F	Redox with 2.5Y I	lue			
Surface (A12) Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Substitution Layer (if present) Type: None Depth (inches) Ner Comments: Type: None Depth (inches) Ner Type: None Depth (in	Secondary Indicators (at least 2 are required) Thick Dark Surface (A12) Alaska Redox (A14) Alaska Redox (A14) Alaska Redox (A15) Satinctive Layer (if present) Type: None Doubth (inches) Nor Doubth (inches) Nor Doubth (inches) Nor Dominants: Thick Park Surface (A12) Drainage Class: No Hydric Soil Present? Yes No Doubth (inches) Nor Dominants: Type: None Doubth (inches) Nor Dominants: Type: None Dominants: Type: Non		(within 12°of miner	al Alaska (Gleved without H	ue 5Y or F	Redder 4G	ive details of	color change in Rema
Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Soli Mag Unit Name: Drainage Class: WD Hydric Soli Present? Yes No Magnetic Interest of the state of the s	Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed (A14) Alaska Gleyed Pores (A15) Sirrictive Layer (if present) Type: Note Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) Note The Use of Surface (A15) BROLOGY Substrictive Layer (if present) The Use of Surface (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) Note The Use of Surface (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) Note The Use of Surface (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) Note The Use of Surface (A15) The Use of Surface (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Depth (Inches) Note The Use of Surface (A15) Soil Map Unit Name: Hydric Soil Present? Yes No Depth of water (Inches) Water Marks (A15) Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Things Patterns (B10) Things Patterns (B10) Soil Map Unit Name: Hydric Soil Present? No Depth of water (Inches) Water Marks (B1) Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Things Patterns (B10) Things Patterns (B10)	surface; • in thi	s pit			3. 0. 1	+1		
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Alaska Redox (A14) Alaska Gleyed Pores (A15) Soli Map Unit Name: Drainage Class: VD Soli Map Unit Name: Hydric Soli Present? Yes No DROLLOGY ettand Hydrology Indicators (check ones that apply, measure from soil surface): Surface Water (A1) Surface Water (A2) (w/in 12") Saturation (A3) (w/in 12") Sediment Deposits (B10) Sediment Deposits (B2) Algal Mat or Crust (B4) Tron Deposits (B5) Algal Mat or Crust (B4) Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seturation Present? Yes No Depth to sat. (in.) Seeping in at that depth but not yet filled?: Seturation Present? Yes No Depth to sat. (in.) Wetland Hydrology Present? Yes No Depth to sat. (in.) Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Drainage Patterns (B10) Water Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within C4) (pos. q. q or soil color change wiin 12") Sall Deposits (C5) Sall Deposits (C5) Sall Deposits (C5) Shallow Aquitard (D3) (wind Aquitard (D3) (Alaska Redox (A14) Alaska Gleyed Pores (A15) Soli Map Unit Name: Drainage Class: VD Soli Map Unit Name: Hydric Soli Present? Yes No DROLLOGY ettand Hydrology Indicators (check ones that apply, measure from soil surface): Surface Water (A1) Surface Water (A2) (w/in 12") Saturation (A3) (w/in 12") Sediment Deposits (B10) Sediment Deposits (B2) Algal Mat or Crust (B4) Tron Deposits (B5) Algal Mat or Crust (B4) Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seturation Present? Yes No Depth to sat. (in.) Seeping in at that depth but not yet filled?: Seturation Present? Yes No Depth to sat. (in.) Wetland Hydrology Present? Yes No Depth to sat. (in.) Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Drainage Patterns (B10) Water Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within C4) (pos. q. q or soil color change wiin 12") Sall Deposits (C5) Sall Deposits (C5) Sall Deposits (C5) Shallow Aquitard (D3) (wind Aquitard (D3) (Supple	ment: explain in Ré	marks)			3.
Alaska Gleyed Pores (A15) selfictive Layer (if present) Type: NonE Soll Map Unit Name: Hydric Soil Present? Yes No Depth (inches) NN sometiments: The proof of the present industry P3; however, looks hydrotyptic Vcg settland Hydrology Indicators (check ones that apply, measure from soil surface): tetland Hydrology Indicators (check ones that apply, measure from soil surface): surface Water (A1) Surface Soil Cracks (B6) Drainage Patterns (B10) High Water Table (A2) (w/in 12") Inundation Visible on Aerial Imagery (B7) Saturation (A3) (w/in 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Presence of Reduced Iron (C4) (pos. q. a or soil color change w/in 12") Saturation (A2) (w/in 12") Saturation (A2) (w/in 12") Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Other (explain) FAC Neutral Test (D5) (alter Table Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: 15 aturation Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Baturation Present? Yes No Depth to sat. (in.) 12 Baturation Present? Yes No Depth to sat. (in.) 12 Baturation Present? Yes No Depth to sat. (in.) 13 Brack Adam Present? Yes No Depth to sat. (in.) 14 Brack Adam Present? Yes No Depth to sat. (in.) 14 Brack Adam Present? Yes No Depth to sat. (in.) 14 Brack Adam Present? Yes No Depth to sat. (in.) 14 Brack Adam Present? Yes No Depth to sat. (in.) 14	Alaska Gleyed Pores (A15) selfictive Layer (if present) Type: None Soll Map Unit Name: Hydric Soil Present? Yes No Depth (inches) No Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) No Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) No Soil Map Unit Name: Hydric Soil Present? Yes No Depth (inches) No Soil Map Unit Name: Hydric Soil Present? Yes No Depth of water (in.) Hydric Soil Present? Yes No Depth to water (in.) Least Number (in								
Drainage Class: WD Soil Map Unit Name: Property None Soil Map Unit Name: Hydric Soil Present? Yes No	Drainage Class: WD Soil Map Unit Name: Proper None Soil Map Unit Name: Hydric Soil Present? Yes No		A 4 5 \						
Soil Map Unit Name: Hydric Soil Present? Yes No No No No No No No N	Soil Map Unit Name: Hydric Soil Present? Yes No No No No No No No N		415)	D-1					
Depth (inches) NW Depth (inches	Depth (inches) New comments: Provide Carbon State Carbon				A . 17%				
DROLOGY Petland Hydrology Indicators (check ones that apply, measure from soil surface):	DROLOGY etland Hydrology Indicators (check ones that apply, measure from soil surface): Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Surface Water (A1) Surface Water (A1) Surface Water (A2) (w/In 12") Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Tron Deposits (B5) Iron Deposits (B5) Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Seeping in at that depth but not yet filled?: Secondary Indicators (at least 2 are required) Water Marks (B1) Drainage Patterns (B10) Drainage Patterns (B10) Drainage Patterns (B10) Secondary Indicators (at least 2 are required) Water Marks (B1) Secondary Indicators (at least 2 are required) Water Stained Leaves (B9) Drainage Patterns (B10) Seatterns (B1) Presence of Reduced Iron (C4) (pos. a. a or soil color change w/in 12") Salt Deposits (B3) Sult Deposits (B3) Dry-Season Water Table (C2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5) (w/OBL+FACW dominants > # FACU+UPL dominants) Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Seeping in at that depth but not yet filled?: 12 aturation Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Beach Saturation Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth	113.00							V N- V
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urface Water Present? Yes No Depth of water (in.) Le Seeping in at that depth but not yet filled?: L2 aturation Present? Yes No Depth to sat. (in.) L2 Wetland Hydrology Present? Yes No Depth to sat. (in.) L2 acturation Present? Yes No Depth to sat. (in.) L2 Bell Endo Unknown escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	urface Water Present? Yes No Depth of water (in.) Le Seeping in at that depth but not yet filled?: L2 aturation Present? Yes No Depth to sat. (in.) 12 Wetland Hydrology Present? Yes No Depth to sat. (in.) 12 Includes capillary fringe) Epi Endo Unknown escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Type: None Depth (inches) NW D	ors (check ones to indicator is sufficiently in 12")	hat apply, measure from cient) Surface Soil Cracks (Bull Inundation Visible on A Sparsely Vegetated Community Mari Deposits (B15) Hydrogen Sulfide Odor	n soil surface): alternate (Barrace) (Barrace	Vcg 51	condary Indica Water-Staine Drainage Par Oxid'd Rhizo Presence of (pos. q.q o Salt Deposits Stunted or S Geomorphic Shallow Aqu (w/in 24", ca	tors (at least ed Leaves (B spheres on L Reduced Iron r soil color of s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (Test (D5)	2 are required) 9) Living Roots (C3) (within n (C4) nange w/in 12") ts (D1)) w/in 12") D4) (caused by water)
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	emarks:	Type: None Depth (inches)	ground surface): Yes N Seeping ir Yes N	hat apply, measure from cient) Surface Soil Cracks (Bull Inundation Visible on A Sparsely Vegetated Community Mark Deposits (B15) Hydrogen Sulfide Odor Dry-Season Water Table Other (explain) Depth of water that depth but not yellow Depth to sate Epi Endo	n soil surface): 6) herial Imagery (Broncave Surface (Ed.) ble (C2) er (in.) er (in.) Ile t filled?: 17 Unknown	Vcg St Sec 7)	condary Indica Water-Staine Drainage Pa Oxid'd Rhizo Presence of (pos. a.a o Salt Deposits Stunted or S Geomorphic Shallow Aqu (w/in 24", ca Microtopogra FAC Neutral (# OBL+FAC	tors (at least d Leaves (B tterns (B10)) spheres on L Reduced Iron r soil color of s (C5) tressed Plan Position (D2) itard (D3) in perch H2C aphic Relief (Test (D5) CW dominants	2 are required) 9) Living Roots (C3) (within (C4) nange w/in 12") ts (D1)) 0 w/in 12") D4) (caused by water) > # FACU+UPL dominan

Project: West Sn Access Borough/City: MSB	Date: 9 23 20 20
Applicant/Owner: M 76/4	Sampling Point #: 577
Investigator(s): EG CH Firm	: HDB Alaska Inc
Lat. (dec.") 61-582062 Long 150.784668 # NAD 83 Becomber	Inn GPS #: V Moderation man 2 Field to 1
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Land	form: Cataloge Slope (9/): La Anna M
Local relief: Shape across slope: tinear / convex / concave Shape up/downslope: tinear	Convex / concave NWI classification:
Photo nos./descriptions: Cares *2 , NSSW Camera #:	Veg Type (Viereck Level 4 or other TIT A 7 b
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No:	If no, explain HGM type: ATA
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Cir	Cumstances present? Ves J No
Are Vegetation , Soil , or Hydrology N naturally problematic? If needed, expla	in answers here
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No	
Hydric Soil Present? Yes No Is the sampled a within a wetlan	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % of	can total - 1009/
4-	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	
1. Bot pap 20 Y TACH 5.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
2. Piccon glanca & Y tack 6.	Total Number of Dominant
3	Species Across All Strate:
4 8	(0)
Total Tree Cover: 25	Percent of Dominant Species That are OBL, FACW, or FAC: 20% (A/B)
50% of total cover: 12, 5 20% of total cover: 5	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of:Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	
1. Kubus ide 8 Y FACU 7.	OBL species X1=
	FACW species 273
5	FACU species
6 12	UPL + NL species X5=
Total Sapling/Shrub Cover: 17	Column Totals: 152 (A) 517 (B)
	2.4
50% of total cover: 8.9 20% of total cover: 3.4	Prevalence Index = B/A = 3,4
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	
1. CAI CAN 60 Y FMC 12.	
2. Alloy tel ten 20 - PHU 13.	Hydrophytic Vegetation Indicators:
3. Gal triflor 2 - FAC 14.	Dominance Test is>50%
	Prevalence Index is ≤3.0
5. Yerr VIri FMC 16	Morphological Adaptations¹ (Provide supporting
7. Met gar 2 - Fred 18.	data in Remarks or on a separate sheet)
8. Chan any 5 - FALY 19.	Problematic Hydrophytic Vegetation¹ (Explain)
9. m exp 10 - FALU20.	
10. Egn ar 5 - FAC 21.	¹ Indicators of hydric soil and wetland hydrology must
11 Her lan 2 - FACU 22.	be present unless disturbed or problematic.
Total Herb Cover: 110	
50% of total cover: 55 20% of total cover: 22	Hydrophytic
Circular 1/10-ac plot vor other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes %	Vegetation Yes No
(where applicable)	
Remarks:	

DIL							0.0 40 4		
rofile Description:		pth need				n the abse	nce of indicato		7
Depth Horizon	Soil Matrix		Rec	iox Fea	tures	-		a,a dip.	Demodes
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	_Texture_	(pos/ neg)	<u>Remarks</u> (or use comment number
- Oi							orallow	neg.	
-4 0e		- 11					ongless	,	2
	Pyench			_		_	Si'L		
	5482.5/1	(40)		=		=	5.7	1	
-10 B	7.5 YR 2.5 3	[00]							
-14 B	2,544/2	90	2.5 YR3 6	10		MILL	SIL	neg	
-20 B	25412	85	2.5413/6	5	_C_	MIL	SiL	neg	
			54R 5/8	5	O	Mill	SiL	neg	
							THE ST		4
vne: C = Concentra	ation. D = Depletion	RM = R	educed Matrix, CS=0	Coated S	Sand Grai	ns ² Locatio	on: PL = Pore	Linina. RC	= Root Channel, M = Mai
			easure from top of		-				
		apply, 11						•	
tandard Indicators:			Indicators fo					o indicator	of hydrophytic vegetation
Histosol or Histe	el (A1)		Alaska	Color Ci	nange* (I.	A4)			dicator of wetland
	(A2) (8-16" organics		Alaska	Alpine S	Swales (T/	A5)			an appropriate landscap
	nineral soil with chroma	a ≤2)							pe present unless disturbe
Black Histic (A3)		Alaska	Hedax v	MIII Z.ST I	Tue		problematic	
Hydrogen Sulfid	le (A4) (within 12"of	minerat	Alaska			ue 5Y or R	edder	va narriis 0	f color change in Remark
surface; @	" in this pit			rtying L					
Thick Dark Surfa	ace (A12)				p.91 of 200 colain in Re				
Alaska Gleyed ((A13)		Çubbit	JINOIN. OF					
Alaska Redox (/									
Alaska Gleyed f									
Contrictive Lover (if p		. 1	Drainage Cla	eer :	w/D				
A A AND FORM	resent)	-	Drainage Cla	_	WP	Lie	dain Call Dans	- 1 · 1	Van Na V
Type: NOWE	resent)	-	Drainage Cla Soll Map Unit	_		Ну	dric Soil Pres	ent?	Yes No
Depth (inches) _	resent)	hrate.	Soil Map Unit	Name:			1000	3.0	
Type: None Depth (inches)	indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) st (B4)	nes that sufficient St.	Soll Map Unit 2. Pres not m retication AV No. apply, measure from	Name: Na	My hyd 1 2.5 Y to urface): nagery (87 Surface (8	hi coid eve (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease to be the control of t	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) thange w/in 12") its (D1) b) w/in 12") (D4) (caused by water)
Type: North Depth (inches) Comments: North Comment Deposit Comment Deposits Comments Comm	indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) st (B4)	nes that sufficien Summer In Summer	Soil Map Unit L. Pres net was Notice by AV IL. apply, measure from th) unface Soil Cracks (Bundation Visible on A parsely Vegetated Co arl Deposits (B15) ydrogen Sulfide Odory-Season Water Tak	Name: Na	My hyd 1 2.5 Y to urface): nagery (87 Surface (8	hi coid eve (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease if Leaves (B10) pheres on I deduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) in perch H2C phic Relief (Test (D5)	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) hange w/in 12") observed by the second s
Type: North Depth (inches) Comments: Weist but we would at the control of the co	Indicators (check of any one indicator is (A2) (W/in 12") w/in 12") its (B2) its (B4) its (B4)	nes that sufficien Summer In Summer	Soil Map Unit Pres net was Notice by AV IL apply, measure from it) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) ydrogen Sulfide Odo ry-Season Water Tab ther (explain)	n soil s (C1) (C2)	M hyd 1 2.5 Y to surface): sagery (87 Surface (8	hi coid eve (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease if Leaves (B10) pheres on I deduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) in perch H2C phic Relief (Test (D5)	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) thange w/in 12") its (D1) b) w/in 12") (D4) (caused by water)
Type: North Depth (inches) Comments: World of Comment Deposits Sediment Deposits Comment Deposits Comments	Indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or	A Pres net was refrontial apply, measure from the property Vegetated Coarl Deposits (B15) addressed Water Tablet (explain)	n soil s fr (C1) ole (C2)	my hyd 1 2.5 Y to surface): sagery (87 Surface (8	hi coid eve (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease if Leaves (B10) pheres on I deduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) in perch H2C phic Relief (Test (D5)	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) thange w/in 12") its (D1) b) w/in 12") (D4) (caused by water)
Type: None Depth (inches) Comments: World but we would alt VDROLOGY Vetland Hydrology Inmary Indicators (AB) (Value Water Table Saturation (AB) (Value Water Marks (Bt) Sediment Deposits (BC) Algal Mat or Crus	Indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Or Or	Soll Map Unit Dees not we reduce the Manager from apply, measure from ti) urface Soil Cracks (B undation Visible on A parsely Vegetated Co arl Deposits (B15) ydrogen Sulfide Odo ry-Season Water Tab ther (explain) Depth of wat Depth to wat	n soil s (C1) ole (C2) er (in.)	my hyd I 2.5 Y t urface): nagery (87 Surface (8	hi coid eve (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease if Leaves (B10) pheres on I deduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) in perch H2C phic Relief (Test (D5)	t 2 are required) 9) Living Roots (C3) (within 1 in (C4) thange w/in 12") its (D1) b) w/in 12") (D4) (caused by water)
Type: Norte Depth (inches) Comments: World of Comment Deposits Sediment Deposits Comment Deposits Algal Mat or Crust Iron Deposits (Basical Mater Mater Crust Courface Water Presentations (incourface Water Presentations)	Indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Ce): No In No In	apply, measure from the control of t	n soil s f (C1) cer (in.) er (in.)	my hyd 1 2.5 Y t urface): agery (87 Surface (E	ni coil (VE (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Ste Geomorphic I Shallow Aquit (w/in 24*, car Microtopogra FAC Neutral (# OBL+FAC	ors (at lease d Leaves (B erns (B10) pheres on I deduced fro soil color of (C5) ressed Plan Position (D2 and (D3) operch H2C ohic Relief (Fest (D5) W dominants	t 2 are required) 19) Living Roots (C3) (within 1 in (C4) hange w/in 12") 10 w/in 12")
Type: North Depth (inches) Comments: Verist but we would also the control of the	Indicators (check of any one indicator is (A2) (w/in 12") w/in 12") its (B2) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Or Or	apply, measure from the control of t	n soil s f (C1) cer (in.) er (in.)	my hyd 1 2.5 Y t urface): agery (87 Surface (E	ni coil (VE (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra	ors (at lease d Leaves (B erns (B10) pheres on I deduced fro soil color of (C5) ressed Plan Position (D2 and (D3) operch H2C ohic Relief (Fest (D5) W dominants	t 2 are required) 19) Living Roots (C3) (within 1 in (C4) hange w/in 12") 10 w/in 12")
Type: Norte Depth (inches) Comments: World of Comment Deposits Sediment Deposits Comment Deposits Algal Mat or Crust Iron Deposits (Basical Mater Mater Crust Courface Water Presentations (incourface Water Presentations)	Indicators (check of any one indicator is (A2) (W/in 12") W/in 12") its (B2) its (B4) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Ce): No In No In	apply, measure from the control of t	n soil s f (C1) cer (in.) er (in.)	my hyd 1 2.5 Y to surface): sagery (87 Surface (8	ni coil (VE (pm	ondary Indicate Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Ste Geomorphic I Shallow Aquit (w/in 24*, car Microtopogra FAC Neutral (# OBL+FAC	ors (at lease d Leaves (B erns (B10) pheres on I deduced fro soil color of (C5) ressed Plan Position (D2 and (D3) operch H2C ohic Relief (Fest (D5) W dominants	t 2 are required) 19) Living Roots (C3) (within 1 in (C4) hange w/in 12") 10 w/in 12")
Type: North Depth (inches) Omments: Volution of the control of th	Indicators (check of any one indicator is (A2) (W/in 12") W/in 12") its (B2) its (B4) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Or Or No	apply, measure from the control of t	n soil s for (C1) or (C2) er (in.) er (in.) Unknown	my hyd 1 2.5 Y to surface): sagery (87 Surface (8	Ni (oil) (VE (pm) 388) We	ondary Indicat Water-Stained Drainage Pati Oxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra FAC Neutral (# OBL+FAC)	ors (at lease d Leaves (B erns (B10) pheres on I deduced fro soil color of (C5) ressed Plan Position (D2 and (D3) operch H2C ohic Relief (Fest (D5) W dominants	t 2 are required) 19) Living Roots (C3) (within 1 in (C4) hange w/in 12") 10 w/in 12")
Type: None Depth (inches) Comments: Weist but we would at the control of the con	Indicators (check of any one indicator is (A2) (W/in 12") W/in 12") its (B2) its (B4) its (B4) its (B4) its (B4) its (B4)	nes that sufficien SI In SI In Or Or Or No	apply, measure from the property vegetated Coarl Deposits (B15) and Deposits (B15) and Deposits (B16) and Deposits (B16) and Deposits (B17). Depth of wat Depth to wat that depth but not ye Depth to sat. Epi Endo	n soil s for (C1) or (C2) er (in.) er (in.) Unknown	my hyd 1 2.5 Y to surface): sagery (87 Surface (8	Ni (oil) (VE (pm) 388) We	ondary Indicat Water-Stained Drainage Pati Oxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or St Geomorphic I Shallow Aquit (w/in 24", car Microtopogra FAC Neutral (# OBL+FAC)	ors (at lease d Leaves (B erns (B10) pheres on I deduced fro soil color of (C5) ressed Plan Position (D2 and (D3) operch H2C ohic Relief (Fest (D5) W dominants	t 2 are required) 19) Living Roots (C3) (within 1 in (C4) hange w/in 12") 10 w/in 12")

Project: West Su Access Borough/City: MSB	Date: 9/23/2020
Applicant/Owner:_A10EA	Sampling Point #: 571
me. a.t	irm: HDR Alaska, Inc.
	ded on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern L	
Local relief: Shape across slope: linear/ convex / concave Shape up/downslope: linear/	
Photo nos/descriptions: NEW 14-11- Camera #:	Veg Type (Viereck Level 4 or other): JLB 2
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: <a href="Yes: Ves: Ves: Ves: Ves: Ves: Ves: Ves: V</td><td></td></tr><tr><td>Are Vegetation <u>\(\mathcal{N} \), Soil _\(\mathcal{N} \), or Hydrology _\(\mathcal{N} \) significantly disturbed? Are " normal<="" u="">	Circumstances" present? Yes Ves No No Tes Tes No Tes <
Are Vegetation <u>J</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? If needed, ex	plain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No Is the sample	ad area
Hydric Soil Present? Yes No within a wet	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover).	% can total >100%.
Tron Combum (dlab) 2")	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. 1. Bet fac 30 Y Facul 5	nd. Number of Dominant Species That are OBL, FACW, or FAC: (A)
2 6	Total Number of Dominant
3	Species Across All Strata: (B)
4 8	Percent of Dominant Species
Total Tree Cover: 30	That are OBL, FACW, or FAC: 57/0 (A/B)
50% of total cover: 6	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
	nd. OBL species X1=
	FACW species X2=
3. Vib edule 3 - PACH 9.	FAC species 39 X3= 237
4 Pabus ida 5 - FACU10.	FACU species X4= X4=
5. Oct pay 5 - FACU 11.	UPL + NL species X5=
6. Vac alack 3 - FNV 12.	Column Totals: 162 (A) 569 (B)
Total Sapling/Shrub Cover: 48	103
50% of total cover: 24 20% of total cover: 9,6	Prevalence Index = B/A = 3.56
Herb Stratum	74. 4
	ind.
1. Cal carl 30 Y FAU 12.	Hydrophytic Vegetation Indicators:
2. Dry Blad ard 25 Y FAC 14. 4. Eggi ard 5 - FAC 15.	Y Dominance Test is>50% Prevalence index is ≤3.0
5. Gal hill 2 - FAC 16.	Morphological Adaptations' (Provide supporting
6. Eggs sylv 2 - FAC 17.	data in Remarks or on a separate sheet)
7	Problematic Hydrophytic Vegetation¹ (Explain)
8	
10 21	1 Indicators of hydric soil and wetland hydrology must
11 22	be present unless disturbed or problematic.
Total Herb Cover: 84	
50% of total cover: 42 20% of total cover: 16.8	Hydrophytic
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Vegetation Yes No
% Cover of Wetland Bryophytes% Total Cover of Bryophytes%	
Remarks: transitional boundary	
Cistings Harry assistanted	

1207

Project: WEST SN ACCESS Borough/City: MSB	Date: 9/29/2020
Applicant/Owner: ADEA .	Sampling Point #: 583
Investigator(s): ELICH Firm: H	IDR Alaska, Inc.
Lat. (dec.°) 61.485403 Long. 150.228911 ± NAD 83 Recorded o	n GPS #: ✓ Marked on map? — Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfo	m: FOTSLTOE Slope (%): 6 Aspect: E
Local relief: Shape across sloper linear convex / concave Shape up/downslope linear c	onvex / concave NWI classification:
Photo nos./descriptions: Solvx2, NESW Camera #: \MD	Veg Type (Viereck Level 4 or other): TB3 a
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No:	_ If no, explain. HGM type: NA
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circu	umstances" present? Yes 🗸 No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain	answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No Is the sampled are	
Hydric Soil Present? Yes No is the sampled are within a wetland?	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % car	
Tree Stratum (dbh≥ 3")	Dominance Test worksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
1. Bet page 10 Y FAREUS.	That are OBL, FACW, or FAC:
2. Picco mar 3 Y show 6.	Total Number of Dominant
<u>}</u>	Species Across All Strata: (B)
4 8	Percent of Dominant Species 57
Total Tree Cover: 13	That are OBL, FACW, or FAC:
50% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. 1. Pilea mar & Y Facw 7. Ribes ahad 5 Y FAC	OBL species X1=
2. Rubus ida 3 - PROV 8. Rubus pedates 7 Y FAC	FACW species 8 X2= 16
3 Rosa azi 3 - PARUA (moved to helps)	FAC species <u>85</u> x3= <u>265</u>
4. Lycc anno 18 Y FIRMIO.	FACU species 53 X4= 212
5. un bora 2 - Yau11.	UPL + NL species X5=
6. Vac vit 3 - FAC12.	Column Totals: 146 (A) 483 (B)
Total Sapling/Shrub Cover: 31	
50% of total cover: 19.5 20% of total cover: 4.2	Prevalence Index = B/A = 3.3
Herb Stratum	
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Cal can 40 Y Fac 12. 2. Dry did 20 Y Facul 13.	Hydrophytic Vegetation Indicators:
3. Atom fel fen 15 - FAC 14.	Y Dominance Test is>50%
4. Gari ary 10 - FAC 15.	Prevalence Index is ≤3.0
5. Carnus (an 13 - Pacul 16.	Morphological Adaptations¹ (Provide supporting
6Corner sue 5 - FAC 17.	data in Remarks or on a separate sheet)
7. Rubus ped 7 - FAC 18.	Problematic Hydrophytic Vegetation¹ (Explain)
8	
10	¹ Indicators of hydric soil and wetland hydrology must
11 22	be present unless disturbed or problematic.
Total Herb Cover: 102	
50% of total cover: 45 51 20% of total cover: 20,4	Hydrophytic
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Vegetation Yes Y No
% Cover of Wetland Bryophytes % Total Cover of Bryophytes %	Present?
(where applicable) Remarks:	
most of the spines trees in this area are deed.	
I was were over alled.	

roject: WEST SU ARCESS Borough/City: MSB	Date: 9 24 20 20
pplicant/Owner: hpea	Sampling Point #: 584
	HDR Alaska, Inc.
at. (dec.°) 61.485393 Long. 150.228499 ± NAD 83 Recorded c	CONTRACTOR OF THE PROPERTY OF
ubregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfo	
cal relief: Shape across slope linear convex / concave Shape up/downslope: linear / g	- 4
noto nos./descriptions: SoIL * 2, N ESW Camera #: V	Veg Type (Viereck Level 4 or other): T(1)24
e climatic / hydrologic conditions on the site typical for this time of year? Yes: 🗸 No:	
e Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circ	V.
e Vegetation <u>V</u> , Soil <u>N</u> , or Hydrology <u>N</u> naturally problematic? If needed, explain	answers here. IC2 8
UMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No Is the sampled are	ea /
Hydric Soil Present? Yes No within a wetland	The second secon
Wetland Hydrology Present? Yes V No	Remarks (e.g., marginal?):
EGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % ca	
ree Stratum (dbh≥ 3")	Dominance Test worksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
frien mar 30 Y FACW 5.	That are OBL, FACW, or FAC:
Bot pap 15 Y. FACV 6.	Total Number of Dominant
	Species Across All Strata:
8,	Percent of Dominant Species
Total Tree Cover: 45	That are OBL, FACW, or FAC:
50% of total cover: 22.5 20% of total cover: 9	Prevalence Index worksheet:
apling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	OBL species X1=
Vac vit 5 - FAC 8.	FACW species 40 X2= 80
Culo pol 15 Y The s	FAC species 45 X3= 135
10	FACU species 32 X4= 128
Sun bor 2 - FACU 11.	UPL + NL species X5=
Spir bean 10 Y MM 12.	Column Totals: 147 (A) 348 (B
Total Sapling/Shrub Cover: 27	
50% of total cover: 13.5 20% of total cover: 5.4	Prevalence Index = B/A = 2.9
Herb Stratum	
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
Form and 15 Y. The 12.	Hydrophytic Vegetation Indicators:
Cerins Can 3 - FACU13.	Y Dominance Test is>50%
Cal card 10 Y. FAC 14.	Y Prevalence Index is ≤3.0
Rub ped 15 Y FAC 16.	= Adominational Adominational (Descripto assessed)
	Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
18	Problematic Hydrophytic Vegetation¹ (Explain
	, Tobiotitizati i iyatopriyati vegetatioti (Explaiti
0	¹ Indicators of hydric soil and wetland hydrology mus be present unless disturbed or problematic.
1	to present united distance of problematic.
Total Herb Cover:	1
50% of total cover: 22.5 20% of total cover: 49	Hydrophytic Vegetation Yes No No
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Present?
6 Cover of Wetland Bryophytes 15 % Total Cover of Bryophytes 40 % (where applicable)	
(minor application)	

Profile Description	n: (Describe to the de	pth needs	ed to document the	indicator	or confirm	the abse	nce of indicat	ors)	
Depth Horizon	Soil Matrix			dox Fea				a.a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	(pos/	_Remarks_
0-2 oi	7.5YR2.5/1							neg)	(or use comment number)
2-16 AB	2,574/2	60	54R4/4	2	C		Si'L	pos	mixed matrix
	75YP 3/1	36		2			SiL	1	w/ lots of organics
16-21 B	3.54R312	100	_	_	_		SiL		
				_					
		_							
		_		_					
		_		_					
¹Type: C = Concen	tration, D = Depletion	, RM = Re	educed Matrix, CS=	Coated S	Sand Grain	s ² Locatio	on: PL = Pore	Lining, RC	= Root Channel, M = Matrix
	ors (check ones that								
Standard Indicator			Indicators fo	r Proble	ematic Hyd	dric Soils			
Histosol or His	stel (A1)		Alaska	Color Cl	nange ⁴ (TA	4)			of hydrophytic vegetation,
Histic Epipedo	on (A2) (8-16* organics	sat'd,	Alaska	Alpine S	wales (TAS	5)			dicator of wetland an appropriate landscape
	mineral soil with chroma	1 ≤2)	T Alaska				ро	sition must b	e present unless disturbed
Black Histic (A	50.0						40	problematic.	color change in Remarks.
surface; @	fide (A4) (within 12"of I	mineral		Gleyed v erlying La	without Hue	5Y or R	edder		color change at Hemarks.
Thick Dark Su			Other (e	g., see p	.91 of 2007				
Alaska Gleyed	f (A13)		Supple	ement: ex	plain in Rem	arks)			
Alaska Redox									
Alaska Gleyed									
Restrictive Layer (if			Drainage Cla	ss: 50	ם				/
Type: NoN			Soil Map Unit			Hv	dric Soil Pres	sent?	Yes V No
Depth (inches)	NA								
Comments:					-				
Comments:	ct F3-dept	eted 1	natrik +						
Comments: 1. Solus we 2. 3.	ct F3-dept	eted 1	matrix +	- 11	7		J-11-11-	1	to the
1. SOLLS ME	ct F3-depl	eted 1	native +		7		-	4	
1. SOLLS ME 2. 3. HYDROLOGY				n soil su	arface):	Seco	ondary Indical	ors (at least	2 are required)
1. Solus me 2. 3. HYDROLOGY Wetland Hydrology Primary Indicators	y Indicators (check or (any one indicator is	nes that a	pply, measure fron	n soil su	ırface):		ondary Indicat		2 are required)
1. Solus Me 2. 3. HYDROLOGY Wetland Hydrology Primary Indicators Y Surface Water	y Indicators (check or (any one indicator is (A1)	nes that a sufficient)	pply, measure from	6)		=		d Leaves (B	9)
1. Solus me 2. 3. HYDROLOGY Wetland Hydrology Primary Indicators	y Indicators (check or (any one indicator is (A1)	nes that a sufficient)	pply, measure fron	6)		=======================================	Water-Staine Drainage Pati	d Leaves (B9 terns (B10) _	9)
1. Solus Me 2. 3. HYDROLOGY Wetland Hydrology Primary Indicators Y Surface Water	y Indicators (check or (any one indicator is (A1) (le (A2) (w/in 12")	nes that a sufficient) Sur Inui	pply, measure from	6) erial Ima	agery (B7)	1 = 3	Water-Stained Drainage Patt Oxid'd Rhizos Presence of F	d Leaves (B9 terns (B10) _ spheres on L Reduced Iron	iving Roots (C3) (within 12")
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1. Solus Me 2. 3. HYDROLOGY Wetland Hydrology Primary Indicators Y Surface Water Y High Water Tab Y Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (B Algal Mat or Cri	y Indicators (check or (any one indicator is (A1) ble (A2) (w/in 12") (w/in 12") (1) sits (B2) (33)	nes that a sufficient) Sur Inui Spa — Mai	pply, measure from face Soil Cracks (Bradation Visible on A arsely Vegetated Co f Deposits (B15) Irogen Sulfide Odor	6) erial Ima encave S	agery (B7)	三季二季二	Water-Stainer Drainage Path Oxid'd Rhizos Presence of F (pos. a,a or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car	d Leaves (BS) terns (B10) _ terns (B10) _ terns on L Reduced Iror soil color ch (C5) ressed Plant Position (D2) terd (D3) to perch H20	iving Roots (C3) (within 12") (C4) ange w/in 12") s (D1) the of slope w/in 12")
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Project: WEST 54 Borough/City: M 5 [3	Date: 9/29 2020
	Sampling Point #: 585
Investigator(s): EL, Ctt Firm: HDR Alaska, Inc.	
Lat. (dec. °) 61.485625 Long. 150. 221de75 ± NAD 83 Recorded on GPS #: Marked of	on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landform: TOTSLOPE S	
Local relief: Shape across slope: linear convex / concave Shape up/downslope: linear convex / concave NWI of	
Photo nos./descriptions: Selk × 2, N 55 W Camera #: Veg Type (Viereck Leve	el 4 or other): <u>IA 24</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No: If no, explain.	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes	s No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here.	
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No Is the sampled area	
Hydric Soil Present? Yes No within a wetland? Yes No	
Wetland Hydrology Present? Yes No Remarks (e.g., marg	ginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%.	
Tree Stratum (dbh≥ 3")	ksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind. Number of Dominant S	
1. Picer mari 35 Y Prew 5. That are OBL, FACW,	or FAC:(A)
2. Get pap 5 - Pacul 6. Total Number of Domin	
3 Species Across All Stra	rata:(B)
4 8 Percent of Dominant S	Species 1034/
That are OBL, FACW,	or FAC: 100 /0 (A/B)
50% of total cover: 20 20% of total cover: 8 Prevalence Index wor	rksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh) Total % Cover	r of: Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species	X1=
1. Vac VVI IF THE 7. Kgs aca FACW species	47 X2= 94
	50 X3= 150
	28 X4= 112
5. Problem 3 (Murch to harb) UPL + NL species	X5=
	25 (A) 356 (B)
Total Sapling/Shrub Cover:	
50% of total cover: 25.5 20% of total cover: 10.6 Prevalence index =	-B/A - 2.8
Herb Stratum	- 0// -
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Earn any 20 Y FAC 12. Hydrophytic Vegetati	ion Indicators:
2. Cornus Cout 3 - FACU 13.	
3. Gco Liv 5 - FACM 14 Dominance Tes	
4.Cat Caa	
	Adaptations ¹ (Provide supporting irks or on a separate sheet)
7 40	
8. Problematic Hy	drophytic Vegetation ¹ (Explain)
9	
L	oil and wetland hydrology must
11 be present unless distr	urbed or problematic.
Total Herb Cover: 35	1
50% of total cover: 17.5 20% of total cover: 7.4 Hydrophytic	
Circular 1/10-ac plot vegetation Ye or other plot dimension: % of bare ground: Present?	es V No
% Cover of Wetland Bryophytes% Total Cover of Bryophytes%	
(where applicable) Remarks:	

OIL									
Profile Description:		DIII H ee d	ea to accument the i	HUICALOI	or confirm	n the abser	nce of indicato	ors)	24
Depth Horizon	Soil Matrix		Re	dox Fea	tures			a,a dip.	
(in.) (opt.)	Color (moist)	%	Color (moist)	%	Type ¹	Loc2	Texture	(pos/ neg)	Remarks (or use comment numbe
-2 Di	5YR2.5/1	-						11041	to as comment number
-4 A	7.5 YR 2.5/1						Si'L		
-4.5 B	5Y5/1		AM TO SHARE				SIL		larger layer on nu
5-5,5 8,	7.5YR2.5/3	Kanen .	THE PARTY OF THE P	-	1-20		SiL	_	
5-19 B2	548/1	68	7.57 R4 6	0	C	PLRC	SiL	-	
	67/P4/3	15	7.54R4/4	7	C	PLIC	- 1/-	_	
			54R3/4	972	000	PLIC	and a		
3-22 by	353 3/2	teo		_			LSa		
Type: C = Concentra	ation, $D = Depletion$,	RM = R	educed Matrix, CS=0	Coated S	Sand Grai	ns ² Locatio	n: PL = Pore	Lining, RC =	Root Channel, M = Ma
ydric Soil Indicator	rs (check ones that	apply, m	easure from top of	minera	i layers u	nless othe	rwise noted)		
tandard Indicators			Indicators fo						
Histosol or Histe	el (A1)		Alaska				³ Or	ne indicator o	of hydrophytic vegetation
- Histic Epipedon	(A2) (8-16" organics,	sat'd.	52 TO 100						icator of wetland
underlain by n	nineral soil with chroma	≤2)			wales (TA				an appropriate landscap e present unless disturbe
Black Histic (A3)		Alaska	Redox w	ith 2.5Y F	lue	or p	problematic.	
Hydrogen Sulfid	e (A4) (within 12"of n	nineral	Alaska	Gleyed v	without Hu	e 5Y or Re	edder "Gi	ve details of	color change in Remark
surface; @				rlying La		,			
Thick Dark Surfa					o.91 of 2007 plain in Re				
Alaska Gleyed (
Alaska Redox (/									
Alaska Gleyed F	Pores (A15)								
estrictive Layer (if p		100	Drainage Cla	ss: N	IWD			-	1
estrictive Layer (if portion of the Type: NONE	resent)	120	Drainage Classoll Map Unit		IWD	Hyc	iric Soil Pres	ent?	Yes / No
Restrictive Layer (if programme type: NONE Depth (inches)		- 120			IWD	Нус	iric Soil Pres	ent?	Yes No
restrictive Layer (if progress) Type: NONE Depth (inches) Comments:	resent)				IWD	Нус	iric Soil Pres	ent?	Yes No
estrictive Layer (if progressive Layer) Type: NONE Depth (inches) omments: DROLOGY	resent)	nes that a	Soil Map Unit	Name:			11.47		
estrictive Layer (if progression of the comments: Depth (inches) Omments: DROLOGY etland Hydrology I	resent) NA ndicators (check or		Soil Map Unit	Name:		Seco	ndary Indicato	ors (at least 2	2 are required)
estrictive Layer (if programments: DROLOGY estland Hydrology in the control of	ndicators (check or	sufficient	Soil Map Unit	Name:		Seco\	ndary Indicate	ors (at least 2 Leaves (B9)	2 are required)
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) DROLOGY Setland Hydrology Interpretation (inches)	ndicators (check or any one indicator is s	sufficient Sui	Soil Map Unit	Name:	urface):	Seco	ndary Indicate Water-Stained Drainage Patte	ors (at least 2 Leaves (B9) ems (B10)	2 are required)
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) DROLOGY etland Hydrology Indicators (inches) Surface Water (A High Water Table	ndicators (check or any one indicator is s 1) (A2) (w/in 12")	Sufficient Sui Inu	Soil Map Unit	Name: 1 Soil Su 6) erial Ima	urface):	Seco 	ndary Indicate Water-Stained Orainage Patte Oxid'd Rhizos	ors (at least 2 I Leaves (B9) erns (B10) _ pheres on Liv	2 are required)) ving Roots (C3) (within 12
estrictive Layer (if progress) Type: NONE Depth (inches) DROLOGY Setland Hydrology Infinary Indicators (if progress) Surface Water (A High Water Table Saturation (A3) (vertical progress)	ndicators (check or any one indicator is so	Sufficient Sui Inu	Soil Map Unit	Name: 1 Soil Su 6) erial Ima	urface):	Seco — \ — [— [3]	ndary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s	ors (at least 2 I Leaves (B9) erns (B10) _ pheres on Liveduced Iron soil color cha	2 are required)) ving Roots (C3) (within 12
estrictive Layer (if progress) Depth (inches) Depth (inches) DROLOGY etland Hydrology Interpretation (A3) (was a constant)	ndicators (check or any one indicator is: 1) (A2) (w/in 12")	Sufficient Sui Inu Spi Ma	Soil Map Unit apply, measure from face Soil Cracks (Boundation Visible on A arsely Vegetated Co of Deposits (B15)	Name: n soil su 6) erial Ima ncave S	urface):	Seco	ndary Indicate Water-Stained Orainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits	ors (at least 2 I Leaves (B9) erns (B10) _ pheres on Liveduced Iron soil color cha (C5)	2 are required)) ving Roots (C3) (within 12 (C4) ange w/in 12")
estrictive Layer (if progress) Type: NONE Depth (inches) DROLOGY etland Hydrology Interpretation (A) High Water Table Saturation (A3) (v Water Marks (B1) Sediment Deposition	ndicators (check or any one indicator is : 1) (A2) (w/in 12") v/in 12")	Sufficient Sui Inu Spi Ma	Soil Map Unit apply, measure from face Soil Cracks (Bracks) face Soil Map Unit	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Seco	ndary Indicate Vater-Stained Orainage Patte Oxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Stunted or Stre	ors (at least 2 I Leaves (B9) erns (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants	2 are required)) ving Roots (C3) (within 12 (C4) ange w/in 12")
estrictive Layer (if progress) Depth (inches) Depth (inches) DROLOGY etland Hydrology Inimary Indicators (if progress) Surface Water (A High Water Table Saturation (A3) (wo	ndicators (check or any one indicator is : 1) (A2) (w/in 12") v/in 12")	Sufficient Sui Inu Spi Ma	Soil Map Unit apply, measure from face Soil Cracks (Boundation Visible on A arsely Vegetated Co of Deposits (B15)	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Second	Indary Indicate Water-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits Geomorphic P	prs (at least 2 Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2)	2 are required)) ving Roots (C3) (within 12 (C4) ange w/in 12")
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) OROLOGY Tetland Hydrology Infrary Indicators (AC) Surface Water (AC) High Water Table Saturation (A3) (V) Water Marks (B1) Sediment Deposit	ndicators (check or any one indicator is sall) (A2) (w/in 12") v/in 12") ts (B2)	Sufficient Sui Inu Spi Ma Hyu	Soil Map Unit apply, measure from face Soil Cracks (Bracks) face Soil Map Unit	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Second	Indary Indicate Water-Stained Orainage Patte Oxid'd Rhizos; Presence of R (pos. α,α or sell Deposits of the composite of the	ors (at least 2) Leaves (B9) erns (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12")
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) DROLOGY Tetland Hydrology Interpretation (A3) (voluments) Saturation (A3) (voluments) Sediment Deposits (B3)	ndicators (check or any one indicator is s 1) (A2) (w/in 12") w/in 12") is (B2)	Sufficient Sui Inu Spi Ma Hyu	Soil Map Unit apply, measure from face Soil Cracks (Boundation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1)
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) DROLOGY etland Hydrology Indicators (inches) Surface Water (Amount of the content o	ndicators (check or any one indicator is s 1) (A2) (w/in 12") w/in 12") is (B2)	Sufficient Sui Inu Spi Ma Hyu	Soil Map Unit apply, measure from face Soil Cracks (Boundation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (inches) DROLOGY Vetland Hydrology Internation (A) High Water Table Saturation (A3) (volume Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crus Iron Deposits (B5)	ndicators (check or any one indicator is s 1) (A2) (w/in 12") w/in 12") is (B2) i) it (B4)	sufficient Sui Inu Spi Ma Hyu Dry	Soil Map Unit apply, measure from face Soil Cracks (Boundation Visible on A arsely Vegetated Co rl Deposits (B15) drogen Sulfide Odor r-Season Water Tab	Name: 1 soil su 6) erial Imancave S (C1)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	2 are required) ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1)
estrictive Layer (if progress) Type: NONE Depth (inches) Depth (in	ndicators (check or any one indicator is s 1) (A2) (w/in 12") v/in 12") its (B2) b) t (B4)	Sufficient Sui Inu Spi Ma Hyu Dry Ott	Soil Map Unit apply, measure from face Soil Cracks (Bi arsely Vegetated Co arsely Vegetated Co ar Deposits (B15) drogen Sulfide Odor -Season Water Tab aer (explain)	n soil su 6) erial Ima ncave S (C1) le (C2)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
estrictive Layer (if programments: DROLOGY Vetland Hydrology Interpretation (A3) (was a larger to be provided by the control of the control	ndicators (check or any one indicator is sall) (A2) (w/in 12") (A2) (w/in 12") (b) (B4) (c) (B4) (c) (r) (r) (r) (r) (r) (r) (r) (r) (r) (r	Sufficient Sui Inu Spi Ma Hyu Dry Ott	Soil Map Unit apply, measure from face Soil Cracks (Bi andation Visible on A arsely Vegetated Co al Deposits (B15) drogen Sulfide Odor a-Season Water Tab arer (explain)	n soil su 6) erial Ima ncave S (C1) le (C2)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
rype: NoNE Depth (inches) Depth (inc	resent) Indicators (check or any one indicator is: 1) (A2) (w/in 12") (A2) (w/in 12") Its (B2) It (B4) Its (B4)	Sufficient Sui Inu Spi Ma Hyu Dry Ott	Soil Map Unit Apply, measure from Ifface Soil Cracks (Brandation Visible on A Barsely Vegetated Co If Deposits (B15) Crogen Sulfide Odor Season Water Tab Ber (explain) Depth of wate Depth to wate	Name: 1 soil su 6) erial Ima ncave S (C1) le (C2)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
rype: NONE Depth (inches) Depth (inc	resent) Indicators (check or any one indicator is: 1) (A2) (w/in 12") (A2) (w/in 12") Its (B2) It (B4) Its (B4)	Sufficient Sui Inu Spi Ma Hyu Dry Ott	Soil Map Unit apply, measure from face Soil Cracks (Bi andation Visible on A arsely Vegetated Co al Deposits (B15) drogen Sulfide Odor a-Season Water Tab arer (explain)	Name: 1 soil su 6) erial Ima ncave S (C1) le (C2)	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron soil color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5)	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
Depth (inches) Depth	resent) Indicators (check or any one indicator is: 1) (A2) (w/in 12") (A2) (w/in 12") Its (B2) It (B4) Its (B4)	Sufficient Sui Inu Spi Ma Hyu Dry Ott	Soil Map Unit Apply, measure from Ifface Soil Cracks (Brandation Visible on A Barsely Vegetated Co If Deposits (B15) Crogen Sulfide Odor Season Water Tab Ber (explain) Depth of wate Depth to wate	Name: a soil su b) erial Ima ncave S (C1) le (C2) er (in.) _ filled?	urface):	Seco — — — — — — — — — — — — — — — — — — —	Indary Indicate Nater-Stained Drainage Patte Dxid'd Rhizos Presence of R (pos. α,α or s Salt Deposits (Stunted or Stre Geomorphic P Shallow Aquita (w/in 24", can dicrotopograp FAC Neutral T	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron social color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5) V dominants >	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
estrictive Layer (if progress) Type: NONE Depth (inches) Surface Water (A High Water Table Saturation (A3) (v Water Marks (B1) Sediment Deposits Drift Deposits (B3 Algal Mat or Crus Iron Deposits (B5 eld Observations (incurface Water Present) aturation Present? Aturation Present?	ndicators (check or any one indicator is sall) (A2) (w/in 12") (A2) (w/in 12") (A3) (w/in 12") (A4) (w/in 12") (A5) (B4) (A6) (A7) (A8) (A8) (A8) (A8) (A8) (A8) (A8) (A8)	e): No very gin at the No very sufficient of the suffine sufficient of the sufficient of the sufficient of the sufficie	Soil Map Unit apply, measure from face Soil Cracks (Bi andation Visible on A arsely Vegetated Co and Deposits (B15) drogen Sulfide Odor and Season Water Tab arer (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	n soil su in soil	arface): agery (B7) Surface (B	Secondary Second	Indary Indicate Mater-Stained Drainage Patte Dxid'd Rhizosy Presence of R (pos. α,α or stail Deposits (Stunted or Strate) Geomorphic P Shallow Aquite (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron social color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5) V dominants >	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)
estrictive Layer (if progress) Depth (inches) Depth (inches) DROLOGY Type: None DROLOGY Type: None DROLOGY Type: None Ty	ndicators (check or any one indicator is sall) (A2) (w/in 12") (A2) (w/in 12") (A2) (b) (A2) (w/in 12") (A3) (b) (A4) (b) (A5) (b) (A6) (b) (A6) (check or any one indicator is sall) (A7) (check or any one indicator is sall) (A7) (check or any one indicator is sall) (A8) (w/in 12") (A8) (w/	e): No very gin at the No very sufficient of the suffine sufficient of the sufficient of the sufficient of the sufficie	Soil Map Unit apply, measure from face Soil Cracks (Bi andation Visible on A arsely Vegetated Co and Deposits (B15) drogen Sulfide Odor and Season Water Tab arer (explain) Depth of wate Depth to wate at depth but not yet Depth to sat. Epi Endo	n soil su in soil	arface): agery (B7) Surface (B	Secondary Second	Indary Indicate Mater-Stained Drainage Patte Dxid'd Rhizosy Presence of R (pos. α,α or stail Deposits (Stunted or Strate) Geomorphic P Shallow Aquite (w/in 24", can Microtopograp FAC Neutral T (# OBL+FACW	prs (at least 2) Leaves (B9) ems (B10) pheres on Liveduced Iron social color cha (C5) essed Plants rosition (D2) ard (D3) perch H2O v hic Relief (D est (D5) V dominants >	ving Roots (C3) (within 12 (C4) ange w/in 12") s (D1) w/in 12") 4) (caused by water)

Project: West Su Access	Borough/	City: MSB		Date: 9/29/2020
Applicant/Owner: AL DEA				Sampling Point #: 586
Investigator(s): EGCH		Firm: H	DR Alaska, Inc.	
	Long. 150, 226008 ± 'N			ed on map? Field Map #:
	central Western Aleutian Interior			
	ear convex / concave Shape up/o			
Photo nos./descriptions: 501 15 x	-2, NESW	Camera #:	Veg Type (Viereck	Level 4 or other): T42+
Are climatic / hydrologic conditions	on the site typical for this time of year	? Yes: No:	If no, explain.	HGM type: ► N A
Are Vegetation N, Soil N, or H	ydrology N significantiy disturbed	Are "Normal Circur	mstances" present?	Yes No BLASH SHIRE
Are Vegetation N, Soil N, or H	ydrology <u>N</u> naturally problematic?	If needed, explain a	inswers here.	IC2
SUMMARY OF FINDINGS				
Hydrophytic Vegetation Present?	Yes No	to the constant		
Hydric Soil Present?	Yes No	Is the sampled area within a wetland?	Yes No	
Wetland Hydrology Present?	Yes No		Remarks (e.g., r	
VEGETATION (Use scientific nan	nes.) Estimate absolute % cover (not	relative cover), % can		
			Dominance Test	worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom	? Ind. Species Cov.	% Dom? Ind.	Number of Domina	ant Species
1. Picer mar 20 Y	PACW5		That are OBL, FAC	CW, or FAC: (A)
2. Bet Pap 15 Y			Total Number of D	ominant
3	7		Species Across All	
4	8			
T	otal Tree Cover: 35		Percent of Domina That are OBL, FAC	
50% of total cover:		. 7	Prevalence Index	
Sapling/Shrub Stratum (woody pla		•	Total % Co	over of: Multiply by:
Abs.Cov.% Dom?	14	/.% Dom? Ind.		
1. Pice mar 315. Y	FACWT. Lycro ann E	- PACY	OBL species	55 X2= 110
2. Bet pap 5 -	FAZU 8. LINN DOV =	- FACH	FACW species _	
3. Voc V4 15 Y.	FAL 9.		FAC species	53 X3= 159
4. Ros aca 10 -	PACU10		FACU species	
5.VAC OIL	- FRO 11		UPL + NL species	
6. Emp nig 15 Y	12		Column Totals: _	162 (A) 485 (B)
	ng/Shrub Cover: 979			
50% of total cover:	20% of total cove	1: 182	Prevalence Inc	dex = B/A = 2.99
Herb Stratum				7
Abs.Cev.% Dom?	Ind. Abs. Cov	.% Dom? Ind.		
1. Eggu av IV T.	FAU 12		Hydrophytic Vege	etation Indicators:
3. Cal can 5 Y	FACU 13.		Y Dominance	Test is>50%
4. Cornus suc 8 Y	FAC 14. FAC 15.			Index is ≤3.0
5. Cornes can 5 X	FACH16.			1.4.1
6. Pry eup 5 Y	FACU17.			cal Adaptations¹ (Provide supporting emarks or on a separate sheet)
7. CACOL LIV 2 -	FACU18.			
8	19		Problematic	: Hydrophytic Vegetation ¹ (Explain)
9	20			
10			1 Indicators of hydr	ic soil and wetland hydrology must
11	22		be present unless	disturbed or problematic.
Te	otal Herb Cover: 37			
50% of total cover:10	.5 20% of total cove	7.4	Hydrophytic	
/	plot dimension: % of ba		Vegetation	Yes No
% Cover of Wetland Bryophytes	% Total Cover of Bryon		Present?	
(where applicable)				
Remarks:				

roject: WEST Su ALLESS		Borough/Cit	y: 1968		_ Date: _ 1/.	29/2020
pplicant/Owner: AVOEA					_ Sampling Po	oint #: 587
ovestigator(s): EZ, CH			Firm: H	DR Alaska, Inc.		
at. (dec.º) 61.485510	Long. 150. 2244	52 ±' NA	D 83 Recorded or	GPS #: Marke	d on map?	Field Map #:
ubregion (circle one): SE 80L	thcentral Western Ale	autian Interior N	Northern Landfor	m: Lowland	_Slope (%): _	2_ Aspect:
ocal relief: Shape across slope:	linear / convex / concav	e Shape up/dov	wnslope: linear/oc	onvex / concave NV	VI classification	1: PFO1 534C
hoto nos./descriptions: 561 LS	NESW		_Camera #:	Veg Type (Viereck L	evel 4 or other	: IAZF
re climatic / hydrologic condition	is on the site typical for t	nis time of year?	Yes: 🗸 No:	If no, explain.	HGM type:	SLOPE
re Vegetation <u>N</u> , Soil <u>N</u> , or	Hydrology N significa	antly disturbed?	Are "Normal Circui	mstances" present?	/es <u>/</u> No	_
re Vegetation <u>N</u> , Soil <u>N</u> , or	Hydrology N natural	y problematic?	lf needed, explain a	answers here.		
UMMARY OF FINDINGS						
Hydrophytic Vegetation Present		No	the sampled area			
Hydric Soil Present?	Yes	No 1	within a wetland?	Yes No		,
Wetland Hydrology Present?	Yes	No		Remarks (e.g., m	arginal?):	
EGETATION (Use scientific n	ames.) Estimate absolut	e % cover (not rela	ative cover). % can	total >100%.		
T				Dominance Test w	orksheet:	
<u>Tree Stratum</u> (dbh≥ 3") Species Cov.% Do	om? Ind. Species	Cov.%	Dom? Ind.	Number of Dominan	t Species	
1. Pic mar to			-	That are OBL, FACV	N, or FAC:	(A
2	6			Total Number of Do	minant	_
3	7			Species Across All S	Strata:	
4	8,			Percent of Dominan	t Species	1-2
	Total Tree Cover:	40		That are OBL, FAC\	N, or FAC:	100 (A/E
50% of total cover: 20	20	% of total cover: _	8	Prevalence Index v	vorksheet:	
Sapling/Shrub Stratum (woody				Total % Cov	ver of:	Multiply by:
Abs.Cov.% Dor		Abs.Cov.%	Dom? Ind.	OBL species		X1=
1. Pin mal 45 Y				FACW species	110	X2= 220
2. Rho grown 12 - 3. Emp nig 5 -	FM 8.			FAC species	grant, marin	X3= 165
4. Vat not 8 -	FM 10.			FACU species		X4=
5. Bet glad 5	FAT 11.			UPL + NL species		X5=
6	12			Column Totals:		385 (8
Total Sa	pling/Shrub Cover:	75		Condititi Totalis:	(~)	(0)
50% of total cover:	32.5	% of total cover: _	15	Prevalence Inde	x - B/A - 2	. 3
Herb Stratum	20	78 Of total cover		1 tovalerice inde	- WA	
Abs.Cov.% Don	n? Ind.	Abs. Cov.%	Dom? Ind.			
1. Cul can 5 -	FAC 12.			Hydrophytic Veget	ation Indicate	rs:
2. Egm arv 15 Y	FAC 13.			-		
3. Rub chan 10 7	FACW14.			Dominance 1		
4. Egm sylv 5 - 5 Corex stee 15 Y	PAU 15					
6						(Provide supportin eparate sheet)
7	18					
B				Problematic	Hydrophytic Ve	egetation¹ (Explain)
9	20					
10				1 Indicators of hydric	soil and wetla	nd hydrology must
11	22			be present unless d	sturbea or pro	Diematic.
	_	50	1.0		,	
50% of total cover:	25 20	% of total cover: _	10	Hydrophytic	\	
Circular 1/10-ac plot <a>_ or oth	er plot dimension:	% of bare	ground:	Vegetation Present?	Yes	No
% Cover of Wetland Bryophytes	% Total	Cover of Bryophy	/tes%			
(where applicable)						

Depth Horizon Soll Matrix Redox Features a, a dip. (in.) (opt.) Color (moist) % Color (moist) % Type! Loc² Texture (pos/ neg) (or use comment) (in.) (opt.) Color (moist) % Color (moist) % Type! Loc² Texture (pos/ neg) (or use comment) (in.) (opt.) Color (moist) % Color (moist) % Type! Loc² Texture (pos/ neg) (or use comment) (in.) (opt.) Color (moist) % Color (moist) % Type! Loc² Texture (pos/ neg) (# (Describe to the de	epth needed	to document the in	ndicator or confirm	the absence of i	ndicators)	Sampling Point #: 58
Gold Color (moist) Scolor (moist)	Depth Horizon			12 - 61				
Composition Page Composition Page Composition Page Composition Page Composition Page						Loc ² Tex	(nos/	Remarks
A De C Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore Lining, RC = Rool Channel, N	and the second second		-	4414	19 1400	100	neg)	(or use comment number
Public Secondary Indicators Secondary I								
ype: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore Lining, RC = Root Channel, Modific Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators for Problematic Hydric Soils*: - Histosol or Histel (A1) - Alaska Color Change' (TA4) - Alaska Redox with 2.5Y Hue - Alaska Gleyed without Hue 5Y or Redder - Underlying Layer - Other (e.g., see p.3 of 2007 - Succenant: axiain in Remerks) - Alaska Gleyed (A13) - Alaska Gleyed Roras (A15) - Alaska Redox (A14) - Alaska Redox (A16) - Alaska Redox	1.0	2042/	Inn -					
ype: C = Concentration, D = Depletion, RM = Reduced Matrix, CS=Coated Sand Grains *Location: PL = Pore Lining, RC = Root Channel, Market Soil Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): Indicators for Problematic Hydric Soils*: Histoscol or Histal (A1) — Alaska Color Change* (TA4) — Histic Epipedon (A2) (6:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (6:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (6:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (6:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (4:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (4:16* organics, sartd, underlain by mineral soil with chromas \$2) Histic Epipedon (A2) (4:16* organics, sartd, underlain by mineral soil with chromas \$2 — Alaska Gleyed without Hus \$7 or Redder Underlying Layer Other (e.g., see p3 of 2007 Sundement: exclain in Remarks) Drainage Class: \$\overline{D}\$ Satisfactive Layer (if present) Type: N 2 NE Drainage Class: \$\overline{D}\$ Soil Map Unit Name: DROLOGY attained Hydrology Indicators (check ones that apply, measure from soil surface): indicators (any one indicator surface): prominerals: Broad Alaska Redox (A14) — Alaska Redox with 2.5Y Hus — Alaska Redox with 2.5Y Hus — Alaska Redox with 2.5Y or Redder Underlying Layer Other (e.g., see p3 of 2007 Sundement: exclain in Remarks) Hydric Soil Present? Yes No Depth (inches) — Hydrology Indicators (check ones that apply, measure from soil surface): Indicators (any one indicators (check ones that apply, measure from soil surface): Indicators (any one indicators (check ones that apply, measure from soil surface): Indicators (any one indicators (check ones that apply, measure from soil surface): Indicators (any one indicators (check ones that apply, measure from soil surface): Indicators (any one indica								
rdric Soll Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted): andard indicators: Indicators for Problematic Hydric Solls*: — Histosco of Nisei (A1) — Histic Epipedon (A2) (8-16* organics, sat'd, underlain by mineral soil with chrome s2) — Black Histic (A3) — Hydrogen Sulfide (A4) (within 12*0f mineral surface; (B2) — Hydrogen Sulfide (A4) (within 12*0f mineral surface; (B2) — Alaska Redox with 0.5 Y Hue — Thick Dark Surface (A12) — Alaska Gleyed without Hue 5Y or Redder — Othar (a.g., see p.s.) of 2007 — Suredement: exclain in Remarks) Drainage Class: D — Soil Mep Unit Name: Drainage Class: D — Hydric Soil Present? Poperh (inches) — Hydric Soil Present? Yes — No — Depth of water (in.) — Saeping in at that depth but not yet filled?? — Wettand Hydrology Present? Yes — No — Depth to water (in.) — Other (explain) — Saeping in at that depth but not yet filled?? — Ututation Present? Yes — No — Depth to unter (in.) — Depth to water (in.) — Saeping in at that depth but not yet filled?? — Ututation Present? Yes — No — Depth to water (in.) — Depth of water (in.) — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to water (in.) — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to water (in.) — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to water (in.) — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat. (in.) — Wettand Hydrology Present? Yes — No — Depth to sat.	-10 6	544/2	100 _					
Indicators (check ones that apply, measure from top of Mineral Jayers unless otherwise noted): Indicator for Problematic Hydric Solis*: — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A2) — History of Nielsei (A2) — History of Nielsei (A3) — Hydrogen Sulfido (A4) (within 12'of mineral surface; (A12) — Hydrogen Sulfido (A4) — Alaska Gleyed without Hue 5Y or Redder — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — No. — Depth (inches) — Mydric Soli Present? — Water Stained Leaves (B9) — Trainage Patterns (B1) — Surface Water (A1) — Mart Deposits (B1) — Mart Deposits (B1) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — In Deposits (B3) — Dry-Season Water Table (C2) — Saturation (In from ground surface): — race Water Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Epi Endo Unknown Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — United Solia Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Y							_	
Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted):		TO WAY						
Indicators (check ones that apply, measure from top of mineral layers unless otherwise noted):								
Indicators (check ones that apply, measure from top of Mineral Jayers unless otherwise noted): Indicator for Problematic Hydric Solis*: — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A2) — History of Nielsei (A2) — History of Nielsei (A3) — Hydrogen Sulfido (A4) (within 12'of mineral surface; (A12) — Hydrogen Sulfido (A4) — Alaska Gleyed without Hue 5Y or Redder — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — No. — Depth (inches) — Mydric Soli Present? — Water Stained Leaves (B9) — Trainage Patterns (B1) — Surface Water (A1) — Mart Deposits (B1) — Mart Deposits (B1) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — In Deposits (B3) — Dry-Season Water Table (C2) — Saturation (In from ground surface): — race Water Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Epi Endo Unknown Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — United Solia Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Y	_							
Indicators (check ones that apply, measure from top of Mineral Jayers unless otherwise noted): Indicator for Problematic Hydric Solis*: — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A1) — History of Nielsei (A2) — History of Nielsei (A2) — History of Nielsei (A3) — Hydrogen Sulfido (A4) (within 12'of mineral surface; (A12) — Hydrogen Sulfido (A4) — Alaska Gleyed without Hue 5Y or Redder — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — Other (e.g., see p. p. 1 of 2007 — Supplement: exclusin in Remarks) — Hydric Soli Present? — No. — Depth (inches) — Mydric Soli Present? — Water Stained Leaves (B9) — Trainage Patterns (B1) — Surface Water (A1) — Mart Deposits (B1) — Mart Deposits (B1) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — Drift Deposits (B3) — Dry-Season Water Table (C2) — In Deposits (B3) — Dry-Season Water Table (C2) — Saturation (In from ground surface): — race Water Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituation Present? — Yes — No. — Depth to water (in.) — Epi Endo Unknown Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — Wetland Hydrology Present? — Yes — No. — Depth to water (in.) — United Solia Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Yes — No. — Depth to sat. (in.) — Wetland Hydrology Present? — Y	ype: C = Concen	tration, D = Depletion	n, RM = Redi	uced Matrix, CS=C	oated Sand Grain	s ² Location: PL	= Pore Lining, RC =	Root Channel, M = Ma
Indicators for Problematic Hydric Solis*: — Alaska Color Change* (TAA) — Histle Epipedon (A2) (8-16* organics, sat'd, undertain by mineral soil with chroma s2) — Black Histle (A3) — Hadaka Redox with 2.5Y Hue — Black Histle (A3) — Alaska Redox with 2.5Y Hue — Alaska Redox with 2.5Y Hue — Hydrogen Sulfide (A4) (within 12'of mineral surface; © — in this pit — Thick Dark Surface (A12) — Alaska Gleyed without Hue 5Y or Redder — Alaska Gleyed without Hue 5Y or Redder — Surplement: explain in Remarks) — Alaska Gleyed (A13) — Alaska Gleyed (A13) — Alaska Gleyed (A13) — Alaska Gleyed Porces (A15) — Surplement: explain in Remarks) — Soli Map Unit Name: — Hydric Soli Present? — Yes No — Normany Indicators (any one indicator is sufficient) — Surface Water (A1) — Surface Water (A2) (win 12*) — Sparsely Vegetated Concave Surface (B8) — Hydrogen Sulfide Or (C1) — Drift Deposits (B3) — Dry-Season Water Table (C2) — In Deposits (B3) — Dry-Season Water Table (C2) — Met Observations (in. from ground surface): — Inter Table Present? — Yes No — Depth of water (in.) — Seeping in at that depth but not yet filled?? — Lituration Present? — Yes No — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituration Present? — Yes No — Depth to water (in.) — Seeping in at that depth but not yet filled?? — Lituration Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes No — Depth to sat. (in.) — Wetland Hydrology Present? — Yes								
Histosol or Histel (A1) Histosol or Histel (A1) Histosol or Histel (A1) Histoschor (A2) Histoschor (A12) Histoschor (A12) Alaska Radox with 2.57 Hue SY or Redder Underlying Layer Other (a.g., see p. 91 of 2007 Supplement: explain in Remarks) Hydric Soil Present? Yes No Drainage Class: D Soil Map Unit Name: Hydric Soil Present? Hydric Soil Present? Hydric Soil Present? Yes No Depth of water (A1) Surface Soil Cracks (B6) High Water Table (A2) (wiin 12') Jorin Deposits (B3) Dry-Season Water Table (C2) Drift Deposits (B3) Dry-Season Water Table (C2) Jorin Deposits (B3) Corporation (A2) Histoschor (A12) Alaska Alpine Swales (TA5) Alaska Redox with 2.57 Hue Sy or Redder Underlying Layer Other (explain) Drainage Class: D Secondary Indicators (at least 2 are required) Water Marks (B1) Surface Water (A1) Surface Water (A1) Surface Soil Cracks (B6) Thick (B1) Seeping in at that depth but not yet filled?? Litoration Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?? Litoration Present? Yes No Depth to water (in.) Depth to water (in.) Litoration Present? Yes No Depth to water (in.) Depth to water (in.) Historage Audit And Hydrology Present? Hydric Soil Present? Hydric Soil Present? Hydric Soil Present? Yes No Depth to water (in.) Hydric Soil Present? Yes No Depth to sate (TA5) Hydrology Audit and ploy or Present? Yes No Depth to water (in.) Hydrology Audit Audit And an appropriate layer or Present (In the Sy or Redder Present? Hydric Soil Present? Yes No Depth to sate (Ta5) Alaska Redox with 2.57 Hue Sy or Redder Hydrology Audit and ploy or Present? Yes No Depth to sate (Ta5) Alaska Red			,,,					
Histic Epipedon (A2) (8-16' organics, sard, underlain by mineral soil with chroma s2) Black Histic (A3) Hydrogen Sulfide (A4) (within 12'of mineral surface; 6 — in this pit Underlain by mineral surface; 6 — in this pit Underlying Layer Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (Pores (A15) Strictive Layer (if present) Type: No No Depth (Inches) Yb— DROLOGY Surface Water (A1) — Seeping in Nath Deposits (B5) Fig Day Seeping in at that depth but not yet filled? Seeping in that depth but not yet filled? Alaska Gleyed (A13) Alaska Gleyed (A15) Strictive Layer (if present) Type: No No Drainage Class: Dy Soil Map Unit Name: Hydric Soil Present? Yes No DROLOGY Seeping in at that depth but not yet fillied? Seeping in at that depth but not yet fillied? Seeping in at that depth but not yet fillied? Seeping in at that depth but not yet fillied? Lituation Present? Yes No Depth to sat. (In.) Suttation Present? Yes No Depth to sat. (In.) Seeping in at that depth but not yet fillied? Lituation Present? Yes No Depth to sat. (In.) Suturation Present? Yes No Depth to sat. (In.) Seeping in at that depth but not yet fillied? Lituation Present? Yes No Depth to sat. (In.) Suturation Present? Yes No Depth to sat. (In.) Wettland Hydrology Present? Yes No Depth to sat. (In.) Suturtiator Present? Yes No Depth to sat. (In.) Seeping in at that depth but not yet fillied?: Lituation Present? Yes No Depth to sat. (In.) Depth to sat. (In.) Suturtiator Present? Yes No Depth to sat. (In.)							³ One indicator of	of hydrophytic vegetation
Black Histic (A3)	,		41-4				one primary indi	icator of wetland
Alaska Redox with 2.5Y Hue Alaska Gleyed (A1) (within 12'of mineral surface; In this pit Underlying Layer Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Redox (A14) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A13) Alaska Gleyed (A14) Alaska Gleyed (A15) Strictive Layer (if present) Type: No PE Soli Map Unit Name: Drainage Class: Depth (inches) Water-Stained Leaves (B9) Trainage Water (A1) Surface Water (A1) Surface Water (A1) Seturation (A3) (w/in 12') S	underlain by	mineral soil with chrom	s, saro, ia ≤2)	Alaska A	Alpine Swales (TA	5)		
Hydrogen Sulfide (A4) (within 12'of mineral surface; ● in this pit				Alaska F	Redox with 2.5Y H	ue		e present uniess disturc
Sundace; @ in his pit			minoral	- Alaska (Sleved without Hu	SV or Radder		color change in Remark
Thick Dark Surface (A12) Alaska Gleyed (A13) Alaska Gleyed Pores (A15) Strictive Layer (if present) Type: No NE Soli Map Unit Name: Drainage Class: Soli Map Unit Name: Hydric Soli Present? Yes No			IIIIIIGIGI			3 TOT NEGGET		
Alaska Gleyed (A13) Alaska Redox (A14) Alaska Gleyed Pores (A15) Strictive Layer (if present) Vipre: No No Repth (inches) Yb Indicators (check ones that apply, measure from soil surface): Mary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A2) (wiin 12") Septiment Deposits (B1) Sediment Deposits (B2) Algal Mat or Crust (B4) Iron Deposits (B5) Algal Mat or Crust (B4) Other (explain) Geomorphic Position (D2) Seping in at that depth but not yet filled?: Filled Sat (A10) Seping in at that depth but not yet filled?: Filled Sat (A10) Surface Wetland Hydrology Present? Yes No Depth to water (in.) Seping in at that depth but not yet filled?: Filled Sat (A10) Fill Deposits (B2) Seping in at that depth but not yet filled?: Filled Sat (A10) Fill Deposits (B2) Seping in at that depth but not yet filled?: Filled Sat (A10) Fill Deposits (B2) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B3) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B3) Fill Deposits (B3) Seping in at that depth but not yet filled?: Fill Deposits (B3) Fill Deposits (B4) Wetland Hydrology Present? Yes No Depth to sat. (in.) Fill Deposits (B4) Fill Deposit	_ Thick Dark Su	rface (A12)		Other (e	g., see p.91 of 2007			
Alaska Redox (A14)Alaska Gleyed Pores (A15) strictive Layer (if present) Type:Ne_Ne				Supple	ment: explain in Rem	arks)		
Alaska Gleyed Pores (A15) Strictive Layer (if present) Type: No NE Soil Map Unit Name: Drainage Class: Do Soil Map Unit Name: Hydric Soil Present? Yes No								
Drainage Class: Drainage C								
Soil Map Unit Name: Hydric Soil Present? Yes No No No No No No No N								
DROLOGY Internation (Check ones that apply, measure from soil surface): Secondary Indicators (at least 2 are required)								. /
DROLOGY attand Hydrology Indicators (check ones that apply, measure from soil surface): mary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A1) Surface Water (A2) (w/in 12") Saturation (A3) (w/in 12") Saturation (A3) (w/in 12") Separsely Vegetated Concave Surface (B8) Surface Marks (B1) Sediment Deposits (B2) Hydrogen Sulfide Odor (C1) Drift Deposits (B3) Dry-Season Water Table (C2) Algal Mat or Crust (B4) Iron Deposits (B5) Indicators (any one indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Sparsely Vegetated Concave Surface (B8) M/TPresence of Reduced Iron (C4) (pos. a.a or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Witcrotopographic Relief (D4) (caused by water frace Water Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Uturation Present? Yes No Depth to sat. (in.) Epi Endo Unknown Seeping in at that depth Unknown				Soil Map Unit	Name:	Hydric So	il Present?	Yes No
						_		
	atland Hydrology mary Indicators _ Surface Water (_ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2)	sufficient) Surfa Inund Spars Mari I	ce Soil Cracks (Be lation Visible on Ad sely Vegetated Co Deposits (B15) ogen Sulfide Odor	6) erial Imagery (B7) ncave Surface (B8 (C1)	Drainag Oxid'd in the state of	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color che posits (C5) I or Stressed Plants	ving Roots (C3) (within 1 (C4) ange w/in 12")
	atland Hydrology mary Indicators _ Surface Water (_ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2)	sufficient) Surfa Inund Spars Mari I	ce Soil Cracks (Be lation Visible on Ad sely Vegetated Co Deposits (B15) ogen Sulfide Odor	6) erial Imagery (B7) ncave Surface (B8 (C1)	Water-S Drainag Oxid'd i N/TPresen (pos. 4 Salt De Stunted	Stained Leaves (B9 pe Patterns (B10) Rhizospheres on Lice of Reduced Iron a.a or soil color chaposits (C5) I or Stressed Plants rphic Position (D2)	ving Roots (C3) (within 1 (C4) ange w/in 12")
TFAC Neutral Test (D5) (# OBL+FACW dominants > # FACU+UPL dometric (in.) 1	etland Hydrology mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") (t) (sits (B2)	Sufficient) Surfa Inund Spars Mari I Hydro	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) Ogen Sulfide Odor Geason Water Tabl	6) erial Imagery (B7) ncave Surface (B8 (C1)	Water-S Drainag Oxid'd d V/Presen (pos. c Salt De Stunted Geomo	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3)	ving Roots (C3) (within 1 (C4) ange w/in 12")
Ald Observations (in. from ground surface): Inface Water Present? Yes No Depth of water (in.) Inface Water Present? Yes No Depth to water (in.) Seeping in at that depth but not yet filled?: Ituration Present? Yes No Depth to sat. (in.) Cludes capillary fringe) Epi Endo Unknown Wetland Hydrology Present? Yes No	mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo	(any one indicator is (A1) (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2) (B4)	Sufficient) Surfa Inund Spars Mari I Hydro	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) Ogen Sulfide Odor Geason Water Tabl	6) erial Imagery (B7) ncave Surface (B8 (C1)	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H20	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12")
rface Water Present? Yes No Depth of water (in.) 10 Seeping in at that depth but not yet filled?: turation Present? Yes No Depth to water (in.) 10 Seeping in at that depth but not yet filled?: turation Present? Yes No Depth to sat. (in.) Wetland Hydrology Present? Yes Pi Endo Unknown	mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo	(any one indicator is (A1) (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2) (B4)	Sufficient) Surfa Inund Spars Mari I Hydro	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) Ogen Sulfide Odor Geason Water Tabl	6) erial Imagery (B7) ncave Surface (B8 (C1)	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5)	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water)
Seeping in at that depth but not yet filled?: turation Present? Yes No Depth to sat. (in.) Cludes capillary fringe) Epi Endo Unknown The present in the	atland Hydrology mary Indicators _ Surface Water (_ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo _ Drift Deposits (B _ Algal Mat or Cru _ Iron Deposits (E	(any one indicator is (A1) (Be (A2) (w/in 12") (w/in 12") 1) sits (B2) (B3) ust (B4)	sufficient) Surfa Inund Spars Mari I Hydro	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) Ogen Sulfide Odor Geason Water Tabl	6) erial Imagery (B7) ncave Surface (B8 (C1)	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5)	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water)
Seeping in at that depth but not yet filled?: turation Present? Yes No Depth to sat. (in.) Cludes capillary fringe) Epi Endo Unknown Wetland Hydrology Present? Yes No	atland Hydrology mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo- Drift Deposits (B Algal Mat or Cru Iron Deposits (E	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2) (B3) ust (B4) (B5)	sufficient) Surfa Inund Spars Mari I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) ogen Sulfide Odor season Water Table (explain)	erial Imagery (B7) ncave Surface (B8 (C1) e (C2)	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5)	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water)
turation Present? Yes No Depth to sat. (in.) Wetland Hydrology Present? Yes No No Depth to sat. (in.) Wetland Hydrology Present? Yes No	mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru Iron Deposits (E	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") 1) sits (B2) (B3) ust (B4) (B5) in. from ground surfacent? Yes	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Adsely Vegetated Coloeposits (B15) ogen Sulfide Odor Jeason Water Table (explain)	erial Imagery (B7) ncave Surface (B8 (C1) le (C2)	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5)	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water)
cludes capillary fringe) Epi Endo Unknown	atland Hydrology mary Indicators _ Surface Water (_ High Water Tab _ Saturation (A3) _ Water Marks (B _ Sediment Depo _ Drift Deposits (E _ Algal Mat or Cru _ Iron Deposits (E	(any one indicator is (A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) 33) ust (B4) 35) in. from ground surfacent? Yes Yes Yes	sufficient) Surfa Inund Spars Marl I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Arcely Vegetated Cor Deposits (B15) Ogen Sulfide Odor Beason Water Table (explain)	erial Imagery (B7) ncave Surface (B8 (C1) e (C2) er (in.) <u>l</u>	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5)	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water)
	etland Hydrology imary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Algal Mat or Cru Iron Deposits (E led Observations (and other contents)	(any one indicator is (A1) le (A2) (w/in 12") (w/in 12") 1) sits (B2) 33) ust (B4) 35) in. from ground surfacent? Yes Yes Yes	sufficient) Surfa Inund Spars Marl I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Arisely Vegetated Col Deposits (B15) Ogen Sulfide Odor Beason Water Table (explain) Depth of water Depth to water	erial Imagery (B7) ncave Surface (B8 (C1) e (C2) er (in.) er (in.) filled?:	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto FAC Ne (# OB)	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5) _+FACW dominants	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water) # FACU+UPL dominants
scribe Recorded Data (stream gauge, monitoring well, social abates, providers inspections).	etland Hydrology imary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (E Algal Mat or Cru Iron Deposits (E eld Observations (Inface Water Present	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") (i) (sits (B2) (33) (ust (B4) (B5) (in. from ground surfacent? (Yes Yes Seep	sufficient) Surfa Inund Spars Mari I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Arisely Vegetated Col Deposits (B15) Ogen Sulfide Odor Beason Water Table (explain) Depth of water Depth to water	erial Imagery (B7) ncave Surface (B8 (C1) e (C2) er (in.) er (in.) filled?:	Water-S Drainag Oxid'd i //Presen (pos. c Salt De Stunted Geomo Shallow (w/in 2 Microto FAC Ne (# OB)	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5) _+FACW dominants	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water) # FACU+UPL dominants
some instructions), it available:	etland Hydrology mary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Iron Depo	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") (w/in 12") (t) (sits (B2) (33) (ust (B4) (35) (in. from ground surfacent? (yes	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Adsely Vegetated Colored Sely Vegetated Sely Veget	erial Imagery (B7) ncave Surface (B8 (C1) le (C2) or (in.) filled?: Unknown	Water-S Drainag Oxid'd i V/Presen (pos. 6 Salt De Stunted Geomo Shallow (w/in 2 Microto FAC Ne (# OB)	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5) _+FACW dominants	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water) # FACU+UPL dominants
marks:	etland Hydrology imary Indicators Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Deposits (B Algal Mat or Cru Iron Deposits (B Iron De	(any one indicator is (A1) (le (A2) (w/in 12") (w/in 12") (w/in 12") (t) (sits (B2) (33) (ust (B4) (35) (in. from ground surfacent? (yes	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Belation Visible on Adsely Vegetated Colored Sely Vegetated Sely Veget	erial Imagery (B7) ncave Surface (B8 (C1) le (C2) or (in.) filled?: Unknown	Water-S Drainag Oxid'd i V/Presen (pos. 6 Salt De Stunted Geomo Shallow (w/in 2 Microto FAC Ne (# OB)	Stained Leaves (B9) pe Patterns (B10) _ Rhizospheres on Li- ce of Reduced Iron a,a or soil color cha posits (C5) I or Stressed Plants rphic Position (D2) Aquitard (D3) 4", can perch H2O pographic Relief (D putral Test (D5) _+FACW dominants	ving Roots (C3) (within 1 (C4) ange w/in 12") s (D1) w/in 12") i4) (caused by water) # FACU+UPL dominants

	Project: WEST Su Access	Borough	/City: MS/B		Date: 9/29/2020
Lat. (dex.** Lit. SER 2.74 Long 1.56 S.9.4 44.52 Long	Applicant/Owner: ADEA			- Introd	Sampling Point #: 592
Subregion (circle one): SE Coulticating Western Aleudian Interior: Northern Landform:	Investigator(s): EZ, CH	#	Firm: Hi	OR Alaska, Inc.	
Local relief: Shape across slope tinear Johnex / concave Shape up/downslope tinear jodnivar / concave NVII classification: PS-54 B Photo nos Jascingholines: Jack J January J J January J	Lat. (dec.º) 61.558 279	Long. 150, 59 4453 ± 1	NAD 83 Recorded on	GPS #: Market	f on map? Field Map #:
Proto nos //descriptions: NES VI Sells Camera #: Veg Type (Viereck Level 4 or other): TAZE has climate! hydrologic conditions on the site typical for this time of year? Yes: No. If no. explain. HGM type: Selly a Wey Seglation M, Soil N. or Hydrology M. significantly disturbed? Are Nomal Circumstances present? Yes No. Are Vegelation M, Soil N. or Hydrology M. naturally problemate? It needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegelation Present? Yes: No. Is the sampled area within a wetland? Yes No. No. Is the sampled area within a wetland? Yes No. No. Notice of the control of t	Subregion (circle one): SE Southo	entral Western Aleutian Interior	r Northern Landfor	m: Futscare	Slope (%): 2 Aspect:
Proto nos //descriptions: NES VI Sells Camera #: Veg Type (Viereck Level 4 or other): TAZE has climate! hydrologic conditions on the site typical for this time of year? Yes: No. If no. explain. HGM type: Selly a Wey Seglation M, Soil N. or Hydrology M. significantly disturbed? Are Nomal Circumstances present? Yes No. Are Vegelation M, Soil N. or Hydrology M. naturally problemate? It needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegelation Present? Yes: No. Is the sampled area within a wetland? Yes No. No. Is the sampled area within a wetland? Yes No. No. Notice of the control of t	Local relief: Shape across slope lin	ear / convex / concave Shape up/	downslope linear/ c	nvex / concave NW	I classification: PSS4B
Are climatic / hydrologic conditions on the site hydral for this time of year? Yes: No: If no, explain. HGM type: Serve No:					
Are Vegetation M. Soil M. or Hydrology M. significantly disturbed? Are "Normal Circumstances" present? Yes M. No. Ind. Soil M. or Hydrology M. naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophylic Vegetation Present? Yes No. Is the sampled area within a wetland? Yes M. No. Wetland Hydrology Present? Yes No. No. Is the sampled area within a wetland? Yes M. No. Permarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total > 100%. Deminance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: 100%. Deminance of Dominant Species That are OBL, FACW, or FAC: 100%. Total Number of Dominant Species That are OBL, FACW, or FAC: 100%. Deminance of Domi					
Are Vegetation M. Soil M. or Hydrology M. naturally problematic? If needed, explain answers here.					
Summary OF FINDINGS					
Hydrophylic Vegelation Present? Yes Ves No Is the sampled area within a wetland? Yes No Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) Estimate absolute % cover (not relative cover), % can total >100%. Remarks (a.g., marginal?); VegETATION (Use scientific names.) VegeTaTION (U					
Hydric Soll Present? Yes	Hydrophytic Vegetation Present?	Yes No			
Wetland Hydrology Present? Yes No Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total > 100%.	Hydric Soil Present?	Yes No	is the sampled area within a wetland?	Yes No	
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total > 100%. Dominance Test worksheet: Dominan	Wetland Hydrology Present?	Yes No			
Dominance Test worksheet: Number of Dominant Species Cov.% Dom? Ind.		ues) Estimate absolute % cover (not	relative cover) % can		
Species		Self Estation appearance for Self-Aries	1010017. 70 0011		orksheet:
1	,	Ind Species Cov	% Dom? Ind	Number of Deminant	Species
Column Total Sapling/Shrub Cover: Gel Solution Gel		Prost -			
Species Across All Strata: Species Across				Total Number of Don	ninant
B	3				Annales .
That are OBL, FACW, or FAC: OO (A/B)	4	8			
Sapiling/Shrub Stratum (woody plants < 3" obh)	To	otal Tree Cover: 20			
Sabing/Shrub Stratum (woody plants < 3" olbh) Abs.Cov.% Dom? Ind. In	50% of total cover:		4		
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. OBL species R X1 = 18	0070 01 10101 001011			Total % Cov	er of: Multiply by:
1.			v.% Dom? Ind.		
3 Val vit 5 - PM 9 Val vival 5 - PM 10 Marz few 5 - PM 11 Madrim pol 5 - PM 11 Madrim pol 5 - PM 12 Marz few 5 - PM 13 Marz few 5 - PM 14 Marz few 5 - PM 15 Marz few 5 - PM 16 Marz few	1. Picen mar 30 Y	FACH 7. VAC OXY 1	DBL		
Facu		TM 8. Bet gland 5	- FAC		
Solution Foundation Solution Solutio	3. Vac vit 51 -	FM 9. Vac oval 8	_ <u> </u>		The state of the s
Column Totals: 13 (A) 428 (B) Total Sapling/Shrub Cover: 10 Total Sapling/Shrub Cover: 10 Total Sapling/Shrub Cover: 20 20% of total cover: 20 20 Prevalence Index = B/A = 2 32			· '		
Total Sapling/Shrub Cover: 50% of total cover: 50		COLINGO DOL	- Hew		
So% of total cover: So . S 20% of total cover: 20 2 2 2 2 2 2 2 2	Col			Column Totals:	(B) 4X9 (B)
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. 1. Rub chan 30 Y FMLW12. 2. Crex paue ID Y 08L 13. 3. Crex traise 7 - 08L 14. 4. Gro liv 3 - FMLV15. 5. Latrans can 5 - FMLV16. 6. Lete material 5 - FMLV17. 7		ig/Shrub Cover: 1001	700		2 22
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind. 1. Rub chan 30 Y FMLW12. 2. Crex paue ID Y 08L 13. 3. Crex traise 7 - 08L 14. 4. Gro liv 3 - FMLV15. 5. Latrans can 5 - FMLV16. 6. Lete material 5 - FMLV17. 7		50.5 20% of total cove	r: 20,2	Prevalence Inde	x = B/A =
Hydrophytic Vegetation Indicators: Secretary came 19 Y 06L 13.					
Agric Limis 7 - OBL 14. Y Dominance Test is>50% Y Prevalence Index is \le 3.0			7.% Dom? Ind.		
3 14. Dominance Test is>50% Yevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Problematic Hydrophytic Vegetation¹ (Explain) Yevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Problematic Hydrophytic Vegetation¹ (Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Yevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Yevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) Yevalence Index is ≤3.0 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation Yevalence Index is ≤3.0 Problematic Hydrophytic Vegetation Problematic Hydrophytic Vegetation Yevalence Index is ≤3.0 Problematic Hydrophytic Vegetation Yevalence Index is ≤3.0 Problematic Hydrophytic Vegetation Yevalence Index is ≤3.0 Problematic Hydrophytic Vegetation Problematic Hydrophytic Vegetation Yevalence Index is ≤3.0 Problematic Hydrophytic Vegetation				Hydrophytic Vegeta	ation Indicators:
A Gro iv 3	3 Corre uniosa 7 -	OBL- 14.			
Circular 1/10-ac plot _ or other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes % (where applicable) Mark to the present unless disturbed or problematic. Yes No Yes No Yes No		PACH 15.		Prevalence In	dex is ≤3.0
6.		FAM 16		Morphologica	Adaptations¹ (Provide supporting
8	6. Cover microg 5 -	FACW 17			
8				Problematic H	hydrophytic Vegetation¹ (Explain)
10					
Total Herb Cover: 40 50% of total cover: 30 20% of total cover: 12 Hydrophytic Vegetation Present? Circular 1/10-ac plot or other plot dimension: 60 % Total Cover of Bryophytes 60 % Total Cover of Bryophytes 60 %				1 Indicators of hydric	sail and wattend hydrology must
Total Herb Cover: 40 50% of total cover: 30 20% of total cover: 12 Circular 1/10-ac plot or other plot dimension: 7 % of bare ground: 7 % Cover of Wetland Bryophytes 60 % Total Cover of Bryophytes 60 % (where applicable) Total Herb Cover: 40 Hydrophytic Vegetation Present?					
50% of total cover: 30 20% of total cover: 12 Hydrophytic Vegetation Present? Circular 1/10-ac plot or other plot dimension: 9% of bare ground: Present? Where applicable) No 10 10 10 10 10 10 10 10 10 10 10 10 10					
Circular 1/10-ac plot or other plot dimension: % of bare ground:			12-	Hudenehude	/
Circular 1/10-ac plot or other plot dimension: % of bare ground: Present? % Cover of Wetland Bryophytes % Total Cover of Bryophytes % (where applicable)	/				Yes No No
(where applicable)	Circular 1/10-ac plot or other p	Not dimension: % of ba	are ground:		
Remarks:		/e Total Cover or bryo	76		
	Remarks:				
	i				

Profile Description: (Describe to the depth nee		manta use absence of indicators)
Depth Horizon Soil Matrix	Redox Features	a,a dip.
(in.) (opt.) Color (moist) %	Color (moist) % Type	re ¹ Loc ² Texture (pos/ Remarks neg) (or use comment numb
First C. Consentation D. Deplation D.A.	8.1	
		Grains ² Location: PL = Pore Lining, RC = Root Channel, M = Ma
ydric Soil Indicators (check ones that apply, tandard Indicators:	Indicators for Problematic	
Y_ Histosol or Histel (A1)	Alaska Color Change	
Histic Epipedon (A2) (8-16" organics, sat'd,		one primary indicator of wetland
underlain by mineral soil with chroma ≤2)	Alaska Alpine Swales	position must be present unless disturt
Black Histic (A3)	Alaska Redox with 2.5	or problematic.
Hydrogen Sulfide (A4) (within 12"of mineral surface;	Alaska Gleyed without	t Hue 5Y or Redder *Give details of color change in Remark
Thick Dark Surface (A12)	Underlying Layer Other (e.g., see p.91 of 2	2007
Alaska Gleyed (A13)	Supplement: explain in	Remarks)
Alaska Redox (A14)		
Alaska Gleyed Pores (A15)	7	a contract of the contract of
estrictive Layer (if present)	Drainage Class:√P D	
Type: NoNe	Soil Map Unit Name:	Hydric Soil Present? Yes No
Depth (inches)		
Comments:		
DROLOGY		
etland Hydrology Indicators (check ones tha	it apply, measure from soil surface)): Secondary Indicators (at least 2 are required)
imary Indicators (any one indicator is sufficie		Water-Stained Leaves (B9)
AND AREA TO THE SECTION OF THE PARTY OF THE	Surface Soil Cracks (B6)	Drainage Patterns (B10)
	nundation Visible on Aerial Imagery (15 1 1 10 10 10
	Sparsely Vegetated Concave Surface	(B8) (pos. α,α or soil color change w/in 12")
	Marl Deposits (B15)	Salt Deposits (C5)
	-lydrogen Sulfide Odor (C1)	Stunted or Stressed Plants (D1)
	Ory-Season Water Table (C2)	Y Geomorphic Position (D2)
Algal Mat or Crust (B4)	Other (explain)	Shallow Aquitard (D3) (W/in 24", can perch H2O w/in 12")
		Microtopographic Relief (D4) (caused by water)
Iron Deposits (B5)		Y FAC Neutral Test (D5)
_ Iron Deposits (B5)		(# OBL+FACW dominants > # FACU+UPL dominants
	-	
eld Observations (in. from ground surface);	Depth of water (in.)	
eld Observations (in. from ground surface): urface Water Present? Yes No	Depth of water (in.) Depth to water (in.)	
/ater Table Present? Yes V		
eld Observations (in. from ground surface): urface Water Present? Yes No	Depth to water (in.)	Wetland Hydrology Present? Yes No
eld Observations (in. from ground surface): urface Water Present? ater Table Present? Seeping in at aturation Present? Yes No	Depth to water (in.) t that depth but not yet filled?: 4 Depth to sat. (in.) 6 Epi Endo Unknown	
eld Observations (in. from ground surface): urface Water Present? ater Table Present? Seeping in ataturation Present? Yes No	Depth to water (in.) t that depth but not yet filled?: 4 Depth to sat. (in.) 6 Epi Endo Unknown	
eld Observations (in. from ground surface): urface Water Present? ater Table Present? Seeping in at aturation Present? Yes No coludes capillary fringe)	Depth to water (in.) t that depth but not yet filled?: 4 Depth to sat. (in.) 6 Epi Endo Unknown	

Project: WEST SU ACCESS Borough/City: MSB	Date: 9/29/2020
Applicant/Owner: MDEK	Sampling Point #: 59.3
	IDR Alaska, Inc.
_at. (dec.") 61,557547 Long. 150,594947 ± NAD 83 Recorded or	
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Landfo	
ocal relief: Shape across slope: inear convex / concave Shape up/downslope linear convex / concave	
Photo nos./descriptions: Soil X2 , NES W Camera #:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No:	
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circu	
Are Vegetation M, Soil M, or Hydrology M naturally problematic? If needed, explain	
SUMMARY OF FINDINGS	ICZ Tout
Hydrophytic Vegetation Present? Yes V	
Hydric Soil Present? Yes No Is the sampled are within a wetland?	
The state of the s	? Yes No Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % car	n total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")	
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species That are OBL, FACW, or FAC:
1. Vicea mar 10 Y BAOWS.	
2. Ret pap 15 7 FACM 6	Total Number of Dominant Species Across All Strata: (B)
4. 8.	Species Across Ali Strata:(B)
Total Tree Cover: 25	Percent of Dominant Species That are OBL, FACW, or FAC:
- Art	That are OBL, FACW, or FAC: Prevalence Index worksheet:
50% of total cover: 2.5 20% of total cover: 5	
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of:Multiply by:
Abs.Cov,% Dom? Ind. Abs.Cov.% Dom? Ind. 1. Alan i dasa 30 Y pac 7.	OBL species X1= X1=
2. Spire b 7 - FOCUS.	FACW species X2= 20
3. Menz ferr 12 Y FACH 9.	FAC species 138 X3= 354
4. Vac oval 8 - PAC 10.	FACU species 49 X4= 196
5. Bet pap 5 - FACM11.	UPL + NL species X5=
6	Column Totals: 177 (A) 570 (B)
Total Sapling/Shrub Cover: 62	
50% of total cover: 31 20% of total cover: 12,4	Prevalence Index = B/A = 3.228
Herb Stratum	
Abs. Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Cal can 65 Y FAX 12.	Hydrophytic Vegetation Indicators:
2. Dry exp 10 - FACU13.	Y Dominance Test is>50%
3. Grani air 10 - 122 14.	Dominance Lest is>50% Prevalence Index is ≤3.0
4. Egg sylv 5 - FRU 15.	
5	Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)
7 18	
8	Problematic Hydrophytic Vegetation¹ (Explain)
9	
10 21	¹ Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 90	
50% of total cover: 45 20% of total cover: 18	Hydrophytic
Circular 1/10-ac plot or other plot dimension: % of bare ground:	Vegetation Yes No No
% Cover of Wetland Bryophytes % Total Cover of Bryophytes %	Present?
(where applicable)	
Remarks: Reed somes brus : Atalia water is form	K .
Remarks: Peed sprace brees; Starling norter informe local	

Depth	11-1	0.000					II IA GD26	nce of indicat	urs)	4		
1.4	Horizon	Soil Matrix		Re	dox Featu	ires	_		a,a dip.	Th.		
<u>(in.)</u>	<u>(opt.)</u>	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc2	Texture	(pos/ neg)	(or	Remar use commer	
-12	Oi	104 R3/2	100				_	ory	NT	191	000 0017111101	HIMITO
-20	A/B	104R3/2	100		_	_	_	SiL	NT			. 1
					_							17
					_							
	A SE				_			-14 114				
						- 4			_			
									- 1			
									-			
ype: (C = Concentration	on, D = Depletion,	, RM = Red	uced Matrix, CS=	Coated Sa	and Grains	2Locatio	on: PL = Pore	Lining BC	= Boo	t Channel	M – Ma
		(check ones that									t Onarine,	IAI — IAID
	d Indicators:	(0.100.1.00.1.00.1.00.1.00.1.00.1.00.1.		Indicators fo)•			
	tosol or Histel ((A1)		Alaska					ne indicator	r of hvd	rophytic ve	getatio
		N2) (8-16" organics	antid.	-			•	ดก	e primary ir	ndicator	of wetland	
1113	underlain by min	ieral soil with chroma	s, satu, a ≤2)	Alaska	Alpine Sw	ales (TA5)		drology, and			
Bla	ck Histic (A3)			Alaska	Redox wit	h 2.5Y Hu	le		sition must problematio		sem uniess	disturt
Hy	drogen Sulfide	(A4) (within 12"of i	mineral	Alaska	Gleyed wi	thout Hue	5Y or R	40	ve details o		change in	Remar
sur	face; @	in this pit		Unde	erlying Lay	er						
_ Thi	ck Dark Surfac	e (A12)			a.g., see p.9 ement: expl		neke)					
_ Ala	ska Gleyed (A1	13)		Cabbit	orrorn. Oxpr	am m rem	aiksi					
Ala	ska Redox (A1	4)										
Ala	ska Gleyed Po	res (A15)										
strictiv	e Layer (if pres	sent)		Drainage Cla	ss: PD							
Туре:	None	5		Soil Map Unit	1 10		Hv	dric Soil Pres	ent?	Yes	/ N	0
Depth	(inches) f	VA										
ommen	its:							10 -0	-1		7.0	
DROL etland imary I Surfa High Satu Wate Sedii Drift Algal	OGY Hydrology Inc	A2) (w/in 12") n 12") (B2)	sufficient) — Surfa — Inund — Spars — Mart I — Hydro	oly, measure from ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Sutfide Odor season Water Tab	6) Aerial Imag Oncave Sur	ery (B7)	1 11/41111 14111	ondary Indicat Water-Stainer Drainage Pate Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp	d Leaves (E ems (B10) pheres on ladduced Iro soil color of (C5) ressed Plan Position (D2 ard (D3) a perch H2C obic Relief (Living For (C4) thange value (D1)	Roots (C3) w/in 12")	
DROL etland imary I Surfa High Satu Wate Sedii Drift Algal	OGY Hydrology Incondicators (an ace Water (A1) Water Table (An action (A3) (w/information (A3)) Marks (B1) Ment Deposits Deposits (B3) Mat or Crust (indicators)	v one indicator is : A2) (w/in 12") n 12") (B2)	sufficient) Surfa Inund Spars Mart I Hydro Dry-S	ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor Jeason Water Tab	6) Aerial Imag Oncave Sur	ery (B7)	1 11/41111 14111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car	d Leaves (B erns (B10) pheres on Reduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5)	Living For (C4) thange vots (D1)?	Roots (C3) w/in 12") (2") used by water	er)
DROL etland mary I Surfa High Satu Wate Sedii Drift Algal	Hydrology Incondicators (an ace Water (A1) Water Table (An aration (A3) (w/iner Marks (B1) ment Deposits (B3) Mat or Crust (in Deposits (B5)	v one indicator is: A2) (w/in 12") n 12") (B2) B4)	sufficient) Surfa Inund Spars Mart Hydro Dry-S Other	ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	6) verial Imag oncave Sur (C1) ole (C2)	ery (B7) rface (B8)	1 11/41111 14111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (B erns (B10) pheres on Reduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5)	Living For (C4) thange vots (D1)?	Roots (C3) w/in 12") (2") used by water	er)
DROL etland mary ! _ Surfa _ High _ Satu _ Wate _ Sedii _ Drift _ Algal _ Iron Id Obs	Hydrology Incondicators (an ace Water (A1) Water Table (Aration (A3) (w/iner Marks (B1) ment Deposits (B3) I Mat or Crust (in Deposits (B5) servations (in from Water Present?	v one indicator is: A2) (w/in 12") n 12") (B2) B4) rom ground surfact Yes ×	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Suffide Odor leason Water Tab (explain)	6) herial Imagoncave Sur (C1) her (C2) er (in.) _2	gery (B7) rface (B8)	1 11/41111 14111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (B erns (B10) pheres on Reduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5)	Living For (C4) thange vots (D1)?	Roots (C3) w/in 12") (2") used by water	er)
DROL etland mary I Surfa High Satu Wate Sedii Drift Algal Iron	Hydrology Incondicators (an ace Water (A1) Water Table (An aration (A3) (w/iner Marks (B1) ment Deposits (B3) Mat or Crust (in Deposits (B5)	v one indicator is: A2) (w/in 12") n 12") (B2) B4)	sufficient) Surfa Inund Spars Mart Hydro Dry-S Other	ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Sulfide Odor leason Water Tab (explain)	6) herial Imagoncave Sur (C1) her (C2) er (in.) _2	gery (B7) rface (B8)	1 11/41111 14111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (B erns (B10) pheres on Reduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5)	Living For (C4) thange vots (D1)?	Roots (C3) w/in 12") (2") used by water	er)
DROL etland mary I Surfa High Satu Wate Sedii Drift Algal Iron	Hydrology Incondicators (an ace Water (A1) Water Table (Aration (A3) (w/iner Marks (B1) ment Deposits (B3) I Mat or Crust (in Deposits (B5) servations (in from Water Present?	Ny one indicator is: A2) (w/in 12") (B2) B4) rom ground surfact Yes × Yes × Yes ×	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Bi lation Visible on A sely Vegetated Co Deposits (B15) ogen Suffide Odor leason Water Tab (explain)	6) Aerial Imagoncave Sur (C1) Ale (C2) er (in.)	gery (B7)	1 11/41111 14111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (B erns (B10) pheres on Reduced Iro soil color of (C5) ressed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5)	Living For (C4) thange vots (D1)?	Roots (C3) w/in 12") (2") used by water	er)
DROL etland mary t Surfa High Satu Wate Sedii Drift Algal Iron I	Hydrology Incondicators (an ace Water (A1) Water Table (Aration (A3) (w/iner Marks (B1) ment Deposits (B3) I Mat or Crust (in Deposits (B5) servations (in from Water Present?	Ny one indicator is: A2) (w/in 12") (B2) B4) rom ground surfact Yes × Yes × Yes ×	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Bilation Visible on Assely Vegetated Concepts (B15) Ogen Suffide Odor Beason Water Table (explain) Depth of water Depth to water depth but not yet	er (in.)	gery (B7)	1111111111111111	Water-Stainer Drainage Patt Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Str Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral	d Leaves (Berns (B10) pheres on leduced Iro soil color of (C5) essed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5) V dominants	Living For (C4) thange was (D1) O w/in 1 (D4) (ca	Roots (C3) w/in 12") (2") used by water	er)
DROL tland mary I Surfa High Satu Wate Sedii Drift Algal Iron Id Obs face V ter Ta uration	Hydrology Incondicators (an ace Water (A1) Water Table (An ace Warks (B1) and Deposits (B3) I Mat or Crust (II) Deposits (B5) De	rom ground surface Yes Yes Yes Yes Yes Yes	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Bilation Visible on Asely Vegetated Co Deposits (B15) Ogen Suffide Odor Season Water Tab (explain) Depth of water Depth to water Depth to sat. Epi Endo	er (in.)	gery (B7) rface (B8)		Water-Stained Drainage Pati Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Sti Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral (# OBL+FAC)	d Leaves (Berns (B10) pheres on leduced Iro soil color of (C5) essed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5) V dominants	Living For (C4) thange was (D1) O w/in 1 (D4) (ca	Roots (C3) w/in 12") (2") used by water	er)
DROL tland mary I Surfa High Satu Wate Sedii Drift Algal Iron Id Obs face V ter Ta uration	Hydrology Incondicators (an ace Water (A1) Water Table (An ace Warks (B1) and Deposits (B3) I Mat or Crust (II) Deposits (B5) De	rom ground surface Yes Yes Yes Yes Yes Yes	sufficient) Surfa Inund Spars Mart I Hydro Dry-S Other	ce Soil Cracks (Bilation Visible on Asely Vegetated Co Deposits (B15) Ogen Suffide Odor Season Water Tab (explain) Depth of water Depth to water Depth to sat. Epi Endo	er (in.)	gery (B7) rface (B8)		Water-Stained Drainage Pati Oxid'd Rhizos Presence of F (pos. α,α or Salt Deposits Stunted or Sti Geomorphic F Shallow Aquit (w/in 24", car Microtopograp FAC Neutral (# OBL+FAC)	d Leaves (Berns (B10) pheres on leduced Iro soil color of (C5) essed Plan Position (D2) and (D3) a perch H2C ohic Relief (Fest (D5) V dominants	Living For (C4) thange was (D1) O w/in 1 (D4) (ca	Roots (C3) w/in 12") (2") used by water	er)

Project: WEST SU Bo	prough/City: MS [3	Date: 9/29/2020
Applicant/Owner: ATPEA		Sampling Point #: 594
Investigator(s): EC, CH	Firm: HDR Alaska, Inc.	
Lat. (dec.°) 61.557422 Long. 150.595639 ±	' NAD 83 Recorded on GPS #: Market	ed on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian	Interior Northern Landform: Foot lope	Slope (%): Aspect:
Local relief: Shape across slope linear convex / concave Sha	pe up/downslope: linear / convex concave N	NI classification:
Photo nos./descriptions: Solls & 2, NESW	Camera #: Veg Type (Viereck L	evel 4 or other): IC2a
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes: No: If no, explain.	HGM type: N4
Are Vegetation <u>I</u> , Soil <u>I</u> , or Hydrology <u>N</u> significantly dis		Yes VNo
Are Vegetation <u>√</u> , Soil <u>√</u> , or Hydrology <u></u> N naturally proble	matic? If needed, explain answers here.	
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Present? Yes No	is the sampled area	
Hydric Soil Present? Yes No	within a wetland? Yes No	
Wetland Hydrology Present? Yes No	Remarks (e.g., m	narginal?):
VEGETATION (Use scientific names.) Estimate absolute % cov		
Tree Stratum (dbh≥ 3")	Dominance Test w	orksheet:
Species Coy.% Dom? Ind. Species		
1. Picen glanca 20 Y FACU 5.		W, or FAC: (A)
2. Set pap 15 Y FACH 6.	1000111001010	0
3 7	Species Across All	Strata: (B)
Total Tree Cover: 26	Percent of Dominar	
77	That are OBL, FAC	
50% of total cover: 17.5 20% of total	al cover:	
Sapling/Shrub Stratum (woody plants < 3" dbh) Abs.Cov.% Dom? Ind.	Abs.Cov.% Dom? Ind.	ver of: Multiply by:
Abs.Cov.% Dom? Ind. 1. Oplo hor 25 Y FACY 7. Merz ferr	I DHI species	X1=
2. Vib chile 5 - FACH 8. Rosen aci	FAC'M annuing	
3. Pices spaces 5 - FACM 9. Lyc. an	FACU FAC species	15 X3= 45
4. Bet pro 5 - FACH 10.	FACU species	155 X4= 620
5. Rub ida 15 - Fred 11.		
6. Pyrula asa 5 - FACM 12.	Column Totals:	170 (A) 665 (B)
Total Sapling/Shrub Cover: 100		2015
50% of total cover: 20% of total	al cover: 20 Prevalence Ind	ex = B/A = 3.9.35
Herb Stratum		
	os. Cov.% Dom? Ind.	
1. Carnes con 5 Y FACU 12. 2. Exprisyly 5 Y FAC 13.	Hydrophytic Vege	tation Indicators:
3. DM exp 10 Y FACULTA		Test is>50%
4. Eggi arv 5 Y FAU 15.		index is ≤3.0
5. Cal car S Y FAC 16.		eal Adaptations ¹ (Provide supporting
6. Gymnody 5 Y FACH17.		marks or on a separate sheet)
718	Problematic	Hydrophytic Vegetation¹ (Explain)
8, 19 9. 20.		
9 20 10 21	1 Indicators of hydri	c soil and wetland hydrology must
11		disturbed or problematic.
Total Herb Cover: 35		
50% of total cover: 17.5 20% of total	al cover: 7 Hydrophytic	/
Circular 1/10-ac piot or other plot dimension:	Vegetation	Yes No
% Cover of Wetland Bryophytes% Total Cover of		
(where applicable)		
Remarks:		

Depth Horizo	ion: (Decembe to the c	tonth nond	ad ta dan mant that		- 4b b		4 \	Sampling Point #: 594			
	tion: (Describe to the c				n the absen	ce of Indic	ators)				
(in.) (ont)				dox Features			a,a dip.	D			
	Color (moist)	<u>%</u>	Color (moist)	% Type ¹	Loc2	_Texture	<u>(pos/</u> - <u>neg)</u>	Remarks (or use comment number)			
0-2 A				_				Wordenes			
2-6 =	575/1	. 75	15 -		-	SiL		1)			
	10YR2/1	25				SiL					
o-IL By	104123/6	40			-	SIL		motered turngla			
	7154123/4	40				SiL		(splot matrie)			
1-18 B2	2,544	100				SIL					
	400. 4										
- 40											
Type: C Conc	centration, D = Depletio	n, RM = R	educed Matrix, CS=0	Coated Sand Grai	ns ² Location	: PL = Po	re Lining, RC	= Root Channel, M = Matri			
	cators (check ones tha										
tandard Indica		100		r Problematic Hy							
Histosol or	Histel (A1)			Alaska Color Change ⁴ (TA4)			³ One indicator of hydrophytic veget				
Histic Epip	edon (A2) (8-16" organic	cs. sat'd.	Alacka	(E)	one primary indicator of wetland						
underlai	n by mineral soll with chror	na ≤2)	_	Alaska Alpine Swales (TA5)			hydrology, and an appropriate landscap- position must be present unless disturbe				
Black Histic	(A3)		Alaska	Alaska Redox with 2.5Y Hue or problematic.							
	Sulfide (A4) (within 12"o	f mineral		Gleyed without Hu	e 5Y or Rec	dder	ive details د	of color change in Remarks.			
-	in this pit		Unde Other (s	,							
	Surface (A12)			Other (e.g., see p.91 of 2007 Supplement: explain in Remarks)							
Alaska Gle											
Alaska Red											
	yed Pores (A15)										
estrictive Layer			Drainage Cla	ss: WD							
Type:	NONE		Soil Map Unit	Name:	Hydr	Hydric Soil Present? Yes NoV					
Depth (inche	s) NA										
comments:								1671			
				W.	48						
				W _Z	- A	- 115		12 21 3y			
			MAG.	M	40 1.A	110		1			
DROLOGY	ogy Indicators (check	ones that a	apply, measure f ron	n soil surface):	Secon			t 2 are required)			
DROLOGY	ogy Indicators (check s (any one indicator i			n soil surface):		dary Indic					
DROLOGY /etland Hydrolonimary Indicator	s (any one indicator is er (A1)	s sufficient) rface Soil Cracks (Bi	6)	= w	dary Indic	ators (at leas	39)			
DROLOGY /etland Hydrolonimary Indicator	s (any one indicator is	s sufficient)	6)	= w	dary Indic ater-Stain	ators (at leas ned Leaves (E atterns (B10)	39)			
/DROLOGY /etland Hydrole nimary Indicator — Surface Wat — High Water 1	s (any one Indicator i: er (A1) 「able (A2) (w/in 12")	s sufficient) rface Soil Cracks (Bi	6) erial Imagery (B7		dary Indic ater-Stain rainage Pr odd'd Rhiz resence of	eators (at leas led Leaves (E atterns (B10) ospheres on f Reduced Iro	Diving Roots (C3) (within 12*			
PROLOGY Vetland Hydrologimary Indicator Surface Wat High Water	s (any one Indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12")	Sufficient Su Inu Sp) rface Soil Cracks (Bi Indation Visible on A arsely Vegetated Co	6) erial Imagery (B7		dary Indic dater-Stain rainage Pr xid'd Rhiz resence of pos. α,α	ned Leaves (E atterns (B10) ospheres on f Reduced Incor soil color c	39) Living Roots (C3) (within 12"			
PROLOGY Vetland Hydrolonimary Indicator Surface Wat High Water Saturation (A	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1)	Sufficient Su Inu Sp Ma) rface Soil Cracks (Br Indation Visible on A arsely Vegetated Co rf Deposits (B15)	6) erial Imagery (B7 ncave Surface (B		dary Indic 'ater-Stain rainage Pr xid'd Rhiz resence of pos. α,α alt Deposi	eators (at leas ned Leaves (E atterns (B10) ospheres on f Reduced Iro or soil color of ts (C5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°)			
/DROLOGY /rimary Indicator - Surface Wat - High Water T - Saturation (A - Water Marks - Sediment De	s (any one indicator is er (A1) Fable (A2) (w/in 12") k3) (w/in 12") (B1) pposits (B2)	s sufficient Su Inu Sp Ma) rface Soil Cracks (Bi Indation Visible on A arsely Vegetated Co If Deposits (B15) drogen Sulfide Odor	6) erial Imagery (B7 encave Surface (B (C1)	W Di Di Oi Pr (Si Si Si Si Si Si Si	dary Indic later-Stain rainage Pa xid'd Rhiz resence of pos. α,α alt Deposi tunted or \$	eators (at lease ded Leaves (B10) ospheres on f Reduced Iroor soil color cots (C5)	Living Roots (C3) (within 12°, on (C4) hange w/in 12°)			
/DROLOGY /etland Hydrole /rimary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1) eposits (B2) s (B3)	s sufficient Su Inu Sp Ma Hyu) rface Soil Cracks (Brindation Visible on A arsely Vegetated Co rf Deposits (B15) drogen Sulfide Odor r-Season Water Tab	6) erial Imagery (B7 encave Surface (B (C1)	W Di Di Oi Oi Oi Oi Oi Oi	dary Indic later-Stain rainage Pr xid'd Rhiz resence or resence or alt Deposi tunted or S eomorphic	eators (at least and Leaves (B atterns (B10) ospheres on f Reduced Incorr soil color of ts (C5) Stressed Plan c Position (D2	Living Roots (C3) (within 12° on (C4) hange w/in 12°)			
rimary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1) eposits (B2) s (B3) Crust (B4)	s sufficient Su Inu Sp Ma Hyu) rface Soil Cracks (Bi Indation Visible on A arsely Vegetated Co If Deposits (B15) drogen Sulfide Odor	6) erial Imagery (B7 encave Surface (B (C1)	W Do	dary Indic later-Stain rainage Pa xid'd Rhiz resence of pos. α,α alt Deposi tunted or \$ eomorphic hallow Aqu	eators (at lease ded Leaves (B10) ospheres on f Reduced Iroor soil color cots (C5)	Living Roots (C3) (within 12°, on (C4) hange w/in 12°) ots (D1)			
/DROLOGY /etland Hydrole /mary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1) eposits (B2) s (B3) Crust (B4)	s sufficient Su Inu Sp Ma Hyu) rface Soil Cracks (Brindation Visible on A arsely Vegetated Co rf Deposits (B15) drogen Sulfide Odor r-Season Water Tab	6) erial Imagery (B7 encave Surface (B (C1)	W Do	dary Indic later-Stain rainage Pa xid'd Rhiz resence of loos. α,α alt Deposi tunted or s eomorphic hallow Aqu w/in 24", c	eators (at lease ded Leaves (B10) ospheres on freduced Iron freduced Iro	Living Roots (C3) (within 12°, on (C4) hange w/in 12°) ots (D1)			
/DROLOGY /etland Hydrole rimary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1) eposits (B2) s (B3) Crust (B4)	s sufficient Su Inu Sp Ma Hyu) rface Soil Cracks (Brindation Visible on A arsely Vegetated Co rf Deposits (B15) drogen Sulfide Odor r-Season Water Tab	6) erial Imagery (B7 encave Surface (B (C1)	W Do Oo Oo Oo Oo Oo Oo Oo	dary Indicater-Stain rainage Processes α,α of alt Depositunted or Second policy of the composituation of the	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°) hats (D1) D w/in 12°) (D4) (caused by water)			
/DROLOGY /etland Hydrologimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	s (any one indicator is er (A1) Fable (A2) (w/in 12") A3) (w/in 12") (B1) eposits (B2) s (B3) Crust (B4)	s sufficient Su Inu Sp Ma Hyu Dry) rface Soil Cracks (Brindation Visible on A arsely Vegetated Co rf Deposits (B15) drogen Sulfide Odor r-Season Water Tab	6) erial Imagery (B7 encave Surface (B (C1)	W Do Oo Oo Oo Oo Oo Oo Oo	dary Indicater-Stain rainage Processes α,α of alt Depositunted or Second policy of the composituation of the	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°) ots (D1)			
/DROLOGY /etland Hydrology /mary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite	s (any one indicator is er (A1) Table (A2) (w/in 12") A3) (w/in 12") (B1) Poposits (B2) s (B3) Crust (B4) s (B5)	s sufficient Su Inu Sp Hy Dry Ott	rface Soil Cracks (Brindation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odor -Season Water Taborer (explain)	erial imagery (B7 encave Surface (B (C1) le (C2)	W Do Oo Oo Oo Oo Oo Oo Oo	dary Indicater-Stain rainage Processes α,α of alt Depositunted or Second policy of the composituation of the	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°) hats (D1) D w/in 12°) (D4) (caused by water)			
/DROLOGY /etland Hydrole rimary Indicator Surface Wat High Water T Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposits	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) posits (B2) s (B3) Crust (B4) s (B5) s (in. from ground surfacesent? Yes	s sufficient Su Inu Sp Ma Hyu Dry Ott	rface Soil Cracks (Brindation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odor -Season Water Taborer (explain)	erial Imagery (B7 incave Surface (B) (C1) le (C2)	W Do Oo Oo Oo Oo Oo Oo Oo	dary Indicater-Stain rainage Processes α,α of alt Depositunted or Second policy of the composituation of the	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°) hats (D1) D w/in 12°) (D4) (caused by water)			
/DROLOGY /etland Hydrole /rimary Indicator _ Surface Wat _ High Water T _ Saturation (A _ Water Marks _ Sediment De _ Drift Deposite _ Algal Mat or _ Iron Deposite / Iron Deposite	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) sposits (B2) s (B3) Crust (B4) s (B5) as (in. from ground surfacesent? Yes sent? Yes	s sufficient Su Inu Sp Ma Hy Dry Ott	rface Soil Cracks (Bi indation Visible on A arsely Vegetated Co if Deposits (B15) drogen Sulfide Odor i-Season Water Tab her (explain)	erial Imagery (B7 encave Surface (B) (C1) le (C2)	W Do Oo Oo Oo Oo Oo Oo Oo	dary Indicater-Stain rainage Processes α,α of alt Depositunted or Second policy of the composituation of the	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12° on (C4) hange w/in 12°) hats (D1) D w/in 12°) (D4) (caused by water)			
/DROLOGY /etland Hydrology /mary Indicator _ Surface Water _ High Water T _ Saturation (A _ Water Marks _ Sediment De _ Drift Deposite _ Algal Mat or _ Iron Deposite ield Observation urface Water Presented	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) sposits (B2) s (B3) Crust (B4) s (B5) s (in. from ground surfacesent? Yes sent? Yes Seep	s sufficient Su Inu Sp Ma Hy Dry Ott	prince Soil Cracks (Bindation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odor Season Water Tabler (explain) Depth of water Depth to water at depth but not yet	erial Imagery (B7 encave Surface (B) (C1) le (C2) er (in.) filled?:	W Di Oi Oi Oi Oi Oi Oi Oi	dary Indic dater-Stain rainage Pri xid'd Rhizi resence of alt Deposi tunted or S eomorphic hallow Aq win 24", c icrotopogr AC Neutra (# OBL+FA	eators (at least and Leaves (B atterns (B10) ospheres on f Reduced Iro or soil color of ts (C5) Stressed Plan or Position (D2 uitand (D3) an perch H20 raphic Relief (at Test (D5) CW dominants	Living Roots (C3) (within 12") In (C4) hange w/in 12") Its (D1) D w/in 12") (D4) (caused by water) > # FACU+UPL dominants)			
/DROLOGY Vetland Hydrology Inimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Iron Deposite Vater Table Presentation Presentation	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) posits (B2) s (B3) Crust (B4) s (B5) es (in. from ground surfacesent? Yes sent? Yes Seep	s sufficient Su Inu Sp Ma Hy Dry Ott	priace Soil Cracks (Brandation Visible on A carsely Vegetated Court Deposits (B15) drogen Sulfide Odor V-Season Water Tabler (explain) Depth of water Depth to water Depth but not yet Depth to sat.	erial Imagery (B7 oncave Surface (B) (C1) le (C2) er (in.) filled?: (in.)	W Di Oi Oi Oi Oi Oi Oi Oi	dary Indic dater-Stain rainage Pri xid'd Rhizi resence of alt Deposi tunted or S eomorphic hallow Aq win 24", c icrotopogr AC Neutra (# OBL+FA	eators (at lease ded Leaves (B10) ospheres on f Reduced Iro or soil cofor cots (C5) Stressed Pland C Position (D3) an perch H20 raphic Relief of Test (D5)	Living Roots (C3) (within 12") In (C4) hange w/in 12") Its (D1) D w/in 12") (D4) (caused by water) > # FACU+UPL dominants)			
/DROLOGY /chimary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite Ield Observation urface Water Provider Table Presenctudes capillan	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) posits (B2) s (B3) Crust (B4) s (B5) es (in. from ground surfacesent? Yes sent? Yes of (ringe)	s sufficient Su Inu Sp An Hy Dr Ott ace): No	nface Soil Cracks (Brandation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odor Season Water Taborer (explain) Depth of water Depth to water Depth to water Depth to sat. Epi Endo	erial Imagery (B7 Imagery (B7 Imagery (B7 Imagery (B7 Imagery (B7 Imager) (B7 Imager) (B7 Imager) (In.)	W Di Oi Oi Oi Oi Oi Oi	dary Indicitater-Stain rainage Proxid'd Rhizz resence of alt Depositunted or Seconorphic raillow Aquivin 24", coicrotopogra C Neutra (# OBL+FA)	eators (at least and Leaves (B atterns (B10) ospheres on f Reduced Iro or soil color of ts (C5) Stressed Plan or Position (D2 uitand (D3) an perch H20 raphic Relief (at Test (D5) CW dominants	Living Roots (C3) (within 12") In (C4) hange w/in 12") Its (D1) D w/in 12") (D4) (caused by water) > # FACU+UPL dominants)			
/DROLOGY /etland Hydrology /mary Indicator Surface Water High Water Saturation (A Water Marks Sediment De Drift Deposite Algal Mat or Iron Deposite /eld Observation urface Water Provider Table Presenctudes capillan	s (any one indicator is er (A1) Fable (A2) (w/in 12") (B1) posits (B2) s (B3) Crust (B4) s (B5) es (in. from ground surfacesent? Yes sent? Yes Seep	s sufficient Su Inu Sp An Hy Dr Ott ace): No	nface Soil Cracks (Brandation Visible on A arsely Vegetated Court Deposits (B15) drogen Sulfide Odor Season Water Taborer (explain) Depth of water Depth to water Depth to water Depth to sat. Epi Endo	erial Imagery (B7 Imagery (B7 Imagery (B7 Imagery (B7 Imagery (B7 Imager) (B7 Imager) (B7 Imager) (In.)	W Di Oi Oi Oi Oi Oi Oi	dary Indicitater-Stain rainage Proxid'd Rhizz resence of alt Depositunted or Seconorphic raillow Aquivin 24", coicrotopogra C Neutra (# OBL+FA)	eators (at least and Leaves (B atterns (B10) ospheres on f Reduced Iro or soil color of ts (C5) Stressed Plan or Position (D2 uitand (D3) an perch H20 raphic Relief (at Test (D5) CW dominants	Living Roots (C3) (within 12") In (C4) hange w/in 12") Its (D1) D w/in 12") (D4) (caused by water) > # FACU+UPL dominants)			

roject: WEST SU	Borough/City: MSB	Date: 9/29/20
pplicant/Owner: MOEX		Sampling Point #: 595
vestigator(s): EZ, CH		DR Alaska, Inc.
		GPS #: Marked on map? Field Map #:
ubregion (circle one): SE Southcentra	Western Aleutian Interior Northern Landfor	m: Swale Hoeslow Slope (%): 5 Aspect: S
ocal relief: Shape across slope: linear	convex / concave Shape up/downslope: linear / co	onvex concave NWI classification:
hoto nos./descriptions: SULS x 2, N		Veg Type (Viereck Level 4 or other):
re climatic / hydrologic conditions on the	site typical for this time of year? Yes: No:	If no, explain. HGM type: SLOPE
	gy N significantly disturbed? Are "Normal Circui	
re Vegetation <u>N</u> , Soil <u>N</u> , or Hydrolo	gy N naturally problematic? If needed, explain a	answers here.
UMMARY OF FINDINGS		BLACK
Hydrophytic Vegetation Present?	es No V	/
Hydric Soil Present?	es No Is the sampled are within a wetland?	
Wetland Hydrology Present?	res No	Remarks (e.g., marginal?):
FGFTATION (Use scientific names) [stimate absolute % cover (not relative cover). % can	total >100%.
	,	Dominance Test worksheet:
Tree Stratum (dbh≥ 3") Species Cov.% Dom? Ind	. Species Cov.% Dom? Ind.	Number of Dominant Species
0 V	KU 5	That are OBL, FACW, or FAC: (A
	KW 6	Total Number of Dominant
3. Picca gland 10 Y Fr	<u>ен</u> 7	Species Across All Strata: (B)
4	8	Percent of Dominant Species
. Total T	ree Cover: 4-0	Percent of Dominant Species That are OBL, FACW, or FAC: Land 50 (A/E)
50% of total cover:	20% of total cover:	Prevalence Index worksheet:
Sapting/Shrub Stratum (woody plants <		Total % Cover of: Multiply by:
Abs.Cov.% Dom? In	d. Abs.Cov.% Dom? Ind.	OBL species X1=
and the second s	10 7. Vib edule 2 - FACU	FACW species 10 X2= 20
	<u> </u>	FAC species 80 X3= 240
· 	KM 9	FACU species 761 X4= 304
5 5	(1)	
6. Rustro per	12 (mored to herbs)	II. ACA
		Column Totals: 166 (A) 265 (B
Total Sapling/Sh 50% of total cover: 27:		Prevalence Index = B/A = 3.39
	5 20% of total cover:	Prevalence index = b/A =
Herb Stratum Abs.Cov.% Dom? Inc	Abs. Cov.% Dom? Ind.	
	<u>6</u> 12	Hydrophytic Vegetation Indicators:
	<u>6</u> 13	34
	CM14	Dominance Test is>50% Prevalence Index is ≤3.0
	<u>6</u> 15	Frevalence much is 25.0
	16	Morphological Adaptations¹ (Provide supporting
	<u>LV</u> 17	data in Remarks or on a separate sheet)
B	19	Problematic Hydrophytic Vegetation ¹ (Explain)
9	20	105
10	_ 21	1 Indicators of hydric soil and wetland hydrology must
11	22	be present unless disturbed or problematic.
Total H	erb Cover: 71	(2)
50% of total cover: 35.5	20% of total cover: 14.2	Hydrophytic
	imension: % of bare ground:	Vegetation Yes No
	10 % Total Cover of Bryophytes 20 %	Present?
(where applicable)		

OIL Profile Description: (Describe to the depth needs	d to document the indicator or confirm t	Sampling Point #: 59				
		W. 127				
	Redox Features	α,α dip.				
(in.) (opt.) Color (moist) %	Color (moist) % Type1	neg) (or use comment num				
0-9 0i 104R2/1		onu				
1-11 A 104R2/2	<u> </u>	SiL_ Neg				
1-15 B, 5YR2.5/2		_ SiL Nea				
5-18 B. 104R3/2-		SiL Hea				
		The same of the sa				
		The Market of the San Life of the Committee of the Commit				
Type: C = Concentration, D = Depletion, RM = Re	duced Matrix. CS=Coated Sand Grains	² Location: PL = Pore Lining, RC = Root Channel, M = M				
Hydric Soil Indicators (check ones that apply, me						
Standard Indicators:	Indicators for Problematic Hydr					
Histosol or Histel (A1)	Alaska Color Change ⁴ (TA4)					
V ·	Alaska Color Charge (TA4)	one primary indicator of wetland				
Histic Epipedon (A2) (8-16" organics, sat'd, underlain by mineral soil with chroma ≤2)	Alaska Alpine Swales (TA5)					
Black Histic (A3)	Alaska Redox with 2.5Y Hue	position must be present unless dist or problematic.				
	Alaska Gleyed without Hue !	5Y or Redder *Give details of color change in Remarks.				
Hydrogen Sulfide (A4) (within 12"of mineral surface; @* in this pit	Underlying Layer					
Thick Dark Surface (A12)	Other (e.g., see p.91 of 2007					
Alaska Gleyed (A13)	Supplement: explain in Remai	rks)				
Alaska Redox (A14)						
Alaska Gleyed Pores (A15)						
	Designation Classic Co.					
al action	Drainage Class: SPD					
Type: NoNE Depth (inches) NA Comments:	Soil Map Unit Name:	Hydric Soil Present? Yes No				
Type: NONE Depth (inches) NA Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (check ones that apprimary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A1) Inur Y High Water Table (A2) (w/in 12") Inur Y Saturation (A3) (w/in 12") Spa Water Marks (B1) Mar Sediment Deposits (B2) Hyde Drift Deposits (B3) Dry	Soil Map Unit Name:	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. a,a or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12")				
Type: NONE Depth (inches) NA Comments: YDROLOGY Vetland Hydrology Indicators (check ones that apprint in the primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A2) (w/in 12") Inurface Naturation (A3) (w/in 12") Span Water Marks (B1) Mar Sediment Deposits (B2) Hyde Drift Deposits (B3) Dry	Soil Map Unit Name: pply, measure from soil surface): face Soil Cracks (B6) faction Visible on Aerial Imagery (B7) rsely Vegetated Concave Surface (B8) I Deposits (B15) rogen Sulfide Odor (C1) Season Water Table (C2)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12")				
Type: None Depth (inches) NA Comments: VDROLOGY Vetland Hydrology Indicators (check ones that a Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A2) (Win 12") Inur Y High Water Table (A2) (Win 12") Spa Water Marks (B1) Mar Sediment Deposits (B2) Hydrological Control Control Orift Deposits (B3) Dry Algal Mat or Crust (B4)	Soil Map Unit Name: pply, measure from soil surface): face Soil Cracks (B6) faction Visible on Aerial Imagery (B7) rsely Vegetated Concave Surface (B8) I Deposits (B15) rogen Sulfide Odor (C1) Season Water Table (C2)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Type: NONE Depth (inches) NA Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (check ones that a Primary Indicators (any one Indicator is sufficient) Surface Water (A1) Surface Water (A1) Inur Y High Water Table (A2) (w/in 12") Inur Y Saturation (A3) (w/in 12") Spa Water Marks (B1) Mar Sediment Deposits (B2) Hyd Drift Deposits (B3) Dry Algal Mat or Crust (B4) Oth Iron Deposits (B5)	Soil Map Unit Name: pply, measure from soil surface): face Soil Cracks (B6) faction Visible on Aerial Imagery (B7) rsely Vegetated Concave Surface (B8) I Deposits (B15) rogen Sulfide Odor (C1) Season Water Table (C2)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water)				
Type: NONE Depth (inches) NA Comments: 2. 3. YDROLOGY Vetland Hydrology Indicators (check ones that apprimary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water (A1) Inur Y High Water Table (A2) (w/in 12") Inur Y Saturation (A3) (w/in 12") Spa Water Marks (B1) Mar Sediment Deposits (B2) Hyde Drift Deposits (B3) Dry Algal Mat or Crust (B4) Other Iron Deposits (B5)	Soil Map Unit Name: apply, measure from soil surface): ace Soil Cracks (B6) adation Visible on Aerial Imagery (B7) rsely Vegetated Concave Surface (B8) I Deposits (B15) rogen Sulfide Odor (C1) Season Water Table (C2) er (explain)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Type: None Depth (inches) NA Comments: //DROLOGY Vetland Hydrology Indicators (check ones that and Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Water Table (A2) (w/in 12") Inur Y Saturation (A3) (w/in 12") Span Water Marks (B1) Mar Sediment Deposits (B2) Hydrology Drift Deposits (B3) Dry Algal Mat or Crust (B4) Other Iron Deposits (B5) Selded Observations (in. from ground surface): Surface Water Present? Yes No	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Judation Visible on Aerial Imagery (B7) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B7) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B7) Judation Visible on Aerial Imagery (B8)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Type: None Depth (inches) No D	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Judation Visible on Aerial Imagery (B7) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B7) Judation Visible on Aerial Imagery (B8) Judation Visible on Aerial Imagery (B8)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Depth (inches)	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Idation Visible on Aerial Imagery (B7) Insely Vegetated Concave Surface (B8) I Deposits (B15) I Deposits (B15) I Deposits (C2) I Depth of water (In.) Depth of water (In.) Depth to water (In.) I depth but not yet filled?:	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Type: NONE Depth (inches) NA Comments: YDROLOGY Vetland Hydrology Indicators (check ones that a Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surfight Water Table (A2) (w/in 12") Inurial I	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Idation Visible on Aerial Imagery (B7) Insely Vegetated Concave Surface (B8) I Deposits (B15) I Deposits (B15) I Deposits (C2) I Depth of water (In.) Depth of water (In.) Depth to water (In.) I depth but not yet filled?:	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (w/in 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5)				
Type: None None Depth (inches) None	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Idation Visible on Aerial Imagery (B7) In Deposits (B15) In Depo	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (win 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5) (# OBL+FACW dominants > # FACU+UPL dominant) Wetland Hydrology Present? Yes No				
Type: None None Depth (inches) None	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (win 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5) (# OBL+FACW dominants > # FACU+UPL dominant) Wetland Hydrology Present? Yes No				
Type: NONE Depth (inches) NA Comments: 2. 3. YDROLOGY Wetland Hydrology Indicators (check ones that apprimary Indicators (any one Indicator is sufficient) Surface Water (A1) Surface Water Table (A2) (w/in 12") Inurface Water Table (A3) (w/in 12") Spate Water Marks (B1) Mare Sediment Deposits (B2) Hydrologist (B3) Drift Deposits (B3) Dry. Algal Mat or Crust (B4) Other Iron Deposits (B5) Field Observations (in. from ground surface): Surface Water Present? Yes No Seeping in at the	Soil Map Unit Name: Deply, measure from soil surface): Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6) Jace Soil Surface Jace Soil Cracks (B6)	Secondary Indicators (at least 2 are required) Water-Stained Leaves (B9) Drainage Patterns (B10) Oxid'd Rhizospheres on Living Roots (C3) (within Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) (win 24", can perch H2O w/in 12") Microtopographic Relief (D4) (caused by water) FAC Neutral Test (D5) (# OBL+FACW dominants > # FACU+UPL dominant) Wetland Hydrology Present? Yes No				

Project: WEST SU	Borough/City: MGB	Date: 1/29/2020
Applicant/Owner: ProPA	4	Sampling Point #: 596
Investigator(s): EZ, CH	Firm: F	HDR Alaska, Inc.
Lat. (dec.°) 61.556488	long. 150. 595174 ± ' NAD 83 Recorded o	on GPS #: Marked on map? Fleid Map #:
	outhcentral Western Aleutian Interior Northern Landfo	
	e: thear convex / concave Shape up/downslope: linear / o	
	L5 × 2 , NESW Camera #:	
	ons on the site typical for this time of year? Yes: / No:	
	or Hydrology N significantly disturbed? Are "Normal Circu	
	or Hydrology N naturally problematic? If needed, explain	
SUMMARY OF FINDINGS		
Hydrophytic Vegetation Press	ent? Yes No V	
Hydric Soil Present?	Yes No Is the sampled are within a wetland?	
Wetland Hydrology Present?	Yes V No	Remarks (e.g., marginal?):
VEGETATION (Use scientific	c names.) Estimate absolute % cover (not relative cover). % car	n total >100%. Dominance Test worksheet:
Tree Stratum (dbh≥ 3")		F.4
	Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species That are OBL, FACW, or FAC: (A)
1. Bet pay 20 2. Pic glaven 10	Y PAN 6.	
2. FIG GLANGE	I PATU 6	Total Number of Dominant Species Across All Strata:
4.	8.	Species Across All Strata:(B)
	Total Tree Cover: 3 0	Percent of Dominant Species
	16	That are OBL, FACW, or FAC: (A/B) Prevalence Index worksheet:
30 % Of total cover.	20% of total cover.	
Sapling/Shrub Stratum (wood Abs.Cov.% D		Total % Cover of: Multiply by:
1. Vib edule 5	Y facy 7. Pube had 2 - FAZ	OBL species X1=
2. Mons ensea 10	Y FM 8. VAC OVAL 5 Y FAC	FACW species X2=
3. Losa aca 3	- PACM 9.	FAC species 112 X3= 336
4. Rub ida 5	Y tru 10.	FACU species <u>45 55</u> X4= <u>220</u>
5. MINZ for 7	Y tright.	UPL + NL species X5=
6. Alnu Fen 5	12	Column Totals: 167 (A) 55% (B)
Total :	Sapting/Shrub Cover: 42	
50% of total cover: _	41	Prevalence Index = B/A = 332
Herb Stratum		
Abs.Cov.% D		
1. Cal can 35	Y FM 12.	Hydrophytic Vegetation Indicators:
2. Arrhy felfin 45	Y FAL 13	Dominance Test is>50%
3. Vera vir 3 4. Escu av 7	- FAC 14	Prevalence Index is ≤3.0
5. COYN CAN 5	- FAC 15	-
6		Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
7	18	
8		Problematic Hydrophytic Vegetation¹ (Explain)
9	20	
10		¹ Indicators of hydric soil and wetland hydrology must
11		be present unless disturbed or problematic.
	Total Herb Cover: 95	1
50% of total cover: _	47,5 20% of total cover: 19	Hydrophytic
Circular 1/10-ac plot or c	other plot dimension: % of bare ground:	Vegetation Yes 7 No V
% Cover of Wetland Bryophy (where applicable)	tes% Total Cover of Bryophytes%	
Remarks:		A
Several deed open	ce tree, but regetation doesn't	grile meet.

SOIL									Sampling Point #: 596		
Profile Description:	(Describe to the de	pth needed	to document the	indicator	or confirm	the abse	ence of indicate	ors)	ouriphing Form is:		
Depth Horizon	Soil Matrix			dox Fea				a,a dip.			
(in.) (opt.)	1,000/1,000/100				Loc2	Texture	(pos/	Remarks			
0-2 A	7,5 TR2,5/1			~	1100	500	TOXIOIO	neg)	(or use comment number)		
2-6 =	575/1	-		=			<u></u>	-	1 1		
6-8 B,	104R3/2			=		=	SI	nes	bried organics		
8-18 B.	10YR4/2	85 2	2.57R2.5 3	2		4.	Ci	2			
	1011412		TR314	13	C	14	<u> </u>	neg	(100 -1)		
			116411			M	<u>مها ود</u>		(diffuer redox)		
				_		_					
	$\overline{}$				_	_	10				
¹Type: C = Concentr	ation, D = Depletion,	RM = Redu	uced Matrix, CS=	Coated S	Sand Grain	 ns ² Locatio	on: PL = Pore	Lining, BC	= Root Channel, M = Matrix		
Hydric Soil Indicato									THE		
Standard Indicators		- 1	Indicators fo								
Histosol or Histo	el (A1)		Alaska				³ Or	e indicator	of hydrophytic vegetation,		
Histic Epipedon	(A2) (8-16" organics	. sat'd.	Alaska				one primary indicator of wetland hydrology, and an appropriate landscape				
underlain by r	nineral soil with chroma	≤2)				,	DOS	ition must b	e present unless disturbed		
Black Histic (A3	3)		Alaska	Redox w	ith 2.5Y H	ue	or problematic. SY or Redder Give details of color change in Remarks.				
Hydrogen Sulfic	le (A4) (within 12"of r	nineral				e 5Y or R					
surface; @				erlying La	ayer 5.91 of 2007						
Thick Dark Surf					plain in Ren						
Alaska Gleyed											
Alaska Redox (
Alaska Gleyed I								1			
Restrictive Layer (if p			Drainage Cla		ND				A.		
туре.			Soil Map Uni	t Name:		Hy	dric Soil Pres	ent?	Yes No V		
Depth (inches) _	O AF					}_					
Comments:											
	E7 -0 41	101			Lad	1					
3. GOVI MELLS	F3-Dayrul	rd Marr	Le, But Sur	re my	Moply	1003	not pr	escott,	doorst meet soil		
IYDROLOGY							1				
Wetland Hydrology			ly, measure f rom	n soll si	ırface):	Seco	ondary Indicate	ors (at least	2 are required)		
Primary Indicators (any one indicator is:	sufficient)					Water-Stained				
Surface Water (A		Surfa	ce Soil Cracks (B	66)			Drainage Patte				
High Water Table	(A2) (w/in 12")	Inund	ation Visible on A	Aerial Ima	agery (B7)		Oxid'd Rhizos	oheres on L	iving Roots (C3) (within 12")		
Saturation (A3) (w/in 12") — Sparsely Vegetated Concave Surface (B8)					3) —	Presence of Reduced Iron (C4) (pos. α,α or soil color change w/in 12") Salt Deposits (C5)					
Water Marks (B1) Mart Deposits (B15)											
Sediment Deposi			gen Sulfide Odo	r (C1)			Stunted or Str		s (D1)		
Drift Deposits (B3			eason Water Tab				Geomorphic P				
Algal Mat or Crust (B4) Other (explain)						Shallow Aquitard (D3)					
Iron Deposits (B5		140				_	(w/in 24", can				
						Microtopographic Relief (D4) (caused by water)FAC Neutral Test (D5) (# OBL+FACW dominants > # FACU+UPL dominants)					
Field Observations (in	, from ground surfac	:e):					(# UBL+FACV	dominants :	> # FACU+UPL dominants)		
Surface Water Preser		No V	Depth of wat	er (in)	_						
Water Table Present?		No /	Depth to wat								
, i www.itt		000	depth but not yet								
Saturation Present?	Yes <u>✓</u>					344	lamel filtred		V		
(includes capillary frin		No	The second second			weti	land Hydrolog	y rresent?	Yes No		
Describe Recorded Da		nonitorina w		Unkno		ons) if eve	ailahla:	2,112	Y		
	(auti gaaga, ii			, Pierion	- mapacili	Jinay, ir av	allabie.				
Remarks:				-				- 199			
Sutrated ()	1 ~ 2										

Project: WEST S. ALLESS Borough/City: MSB	Date: 9/24/2020
Applicant/Owner: ADVA	Sampling Point #: 597
Investigator(s): EC, CH Firm	n: HDR Alaska, Inc.
Lat. (dec.°) 61.555612 Long. 150.596686 ± NAD 83 Recorde	d on GPS #: Marked on map? Field Map #:
Subregion (circle one): SE Southcentral Western Aleutian Interior Northern Lan	dform: Lawland Slope (%): 2 Aspect:
Local relief: Shape across slope: linear convex / concave Shape up/downslope: linear	/ convex / concave NWI classification: TEM 13
Photo nos./descriptions: SOLK, NESW Camera #:	Veg Type (Viereck Level 4 or other): TLA24)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes: V No:	If no, explain. HGM type: Stope
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Ci	ircumstances" present? Yes No
Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, expla	ain answers here.
SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? Yes No No	
Hydric Soil Present? Yes No Vision a wetter	
Wetland Hydrology Present? Yes No	Remarks (e.g., marginal?):
VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). %	
Tree Stratum (dbh≥ 3")	Dominance Test worksheet:
Species Cov.% Dom? Ind. Species Cov.% Dom? Ind.	Number of Dominant Species
1 5	That are OBL, FACW, or FAC:
2	- Total Number of Dominant
3 7	Species Across All Strata: (B)
4 8	
Total Tree Cover:	Percent of Dominant Species That are OBL, FACW, or FAC: [A/B]
50% of total cover: 20% of total cover:	Prevalence Index worksheet:
Sapling/Shrub Stratum (woody plants < 3" dbh)	Total % Cover of:Multiply by:
Abs.Cov.% Dom? Ind. Abs.Cov.% Dom? Ind.	
1. Samb race 5 Y FACH 7. 2. Alms ten 18 Y FAC 8.	FACW species X2=
3. Pubus ida 5 Y Facu 9. 4. Pubus trisk 2 - Fac 10.	
5	
6, 12	- UPL + NL species X5= - Column Totals: 138 (A) 432 (B)
Total Sapling/Shrub Cover: 25	Column Forals. 138 (A) 132 (B)
50% of total cover: 18.5 20% of total cover: 855	Prevalence Index = B/A = 3,13
Herb Stratum	Prevalence Index = B/A =
Abs.Cov.% Dom? Ind. Abs. Cov.% Dom? Ind.	
1. Cal can 90 Y FAC 12.	Hydrophytic Vegetation Indicators:
2 13	
3 Fam arv 10 - FAC 14.	Dominance Test is>50% (50, not over 50) Prevalence Index is <3.0 doesn't mut
	Trevalence midex is \$5.0 ACE AT MICE
5. VIO a color 2 - 16	Morphological Adaptations¹ (Provide supporting
7	data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation¹ (Explain)
9	
10 21	¹ Indicators of hydric soil and wetland hydrology must
11	be present unless disturbed or problematic.
Total Herb Cover: 115	4 ,
50% of total cover: <u>57, 5</u> 20% of total cover: <u>23</u>	Hydrophytic
Circular 1/10-ac plot vor other plot dimension: % of bare ground: % Cover of Wetland Bryophytes % Total Cover of Bryophytes 10 % (where applicable)	Vegetation Present?
Remarks:	
L (15	
12.	

WETLAND DETERMINATION DATA FORM - Alaska Region Borough/City: MGB Project: WEST SU AZZESS Applicant/Owner: MUSA Investigator(s): EL, CH Firm: HDR Alaska, Inc. Lat. (dec. °) (1.557030 Long. 150.592705 ± NAD 83 Recorded on GPS #: ___ Marked on map? __ Field Map #: __ Subregion (circle one): SE Southcentra Western Aleutian Interior Northern Landform: Mand/ Wilida Slope (%): 8 Aspect: Local relief: Shape across slope; linear convex / concave Shape up/downslope. linear convex / concave NWI classification: Photo nos./descriptions: SollS > 2 | NESW Camera #: Veg Type (Viereck Level 4 or other): IC 2 Type Are climatic / hydrologic conditions on the site typical for this time of year? Yes: ____ No: ____ If no, explain. HGM type: NA Are Vegetation N, Soil N, or Hydrology N, significantly disturbed? Are "Normal Circumstances" present? Yes V No Are Vegetation N, Soil N, or Hydrology N naturally problematic? If needed, explain answers here. SUMMARY OF FINDINGS Hydrophytic Vegetation Present? is the sampled area Hydric Soil Present? Yes within a wetland? Wetland Hydrology Present? Remarks (e.g., marginal?): VEGETATION (Use scientific names.) Estimate absolute % cover (not relative cover). % can total >100%. **Dominance Test worksheet:** Tree Stratum (dbh≥ 3") Cov.% Dom? Ind. Number of Dominant Species That are OBL, FACW, or FAC: FACW 5. Total Number of Dominant Species Across All Strata: (B) Percent of Dominant Species Total Tree Cover: That are OBL, FACW, or FAC: 10 Prevalence Index worksheet: 50% of total cover: _ 20% of total cover: _ Sapling/Shrub Stratum (woody plants ≤ 3" dbh) Total % Cover of: Multiply by: Abs.Cov.% Dom? Abs.Cov.% Dom? Ind. **OBL** species FAL 7. VAL W FAL **FACW** species FREW 8. Lyc and TACH **FAC** species FACH 9. hina FALM FACU species TAM FAC 11. UPL + NL species FAL 12. Column Totals: Total Sapling/Shrub Cover: 50% of total cover: 45.5 Prevalence Index = B/A = 20% of total cover: Herb Stratum Abs.Cov.% Dom? Dom? FARM 12. **Hydrophytic Vegetation Indicators:** MU13.__ Dominance Test is>50% Prevalence Index is ≤3.0 191 15. Morphological Adaptations1 (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Total Herb Cover: 25 20% of total cover: _5, b 14 Hydrophytic 50% of total cover: ___ Vegetation

(where applicable)

Remarks:

Circular 1/10-ac plot or other plot dimension: % of bare ground:

% Cover of Wetland Bryophytes ______% Total Cover of Bryophytes _____%

Present?

DIL (D. 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1		1					Sampling Po	oint #: 528
rofile Description: (Describe to the	depth needed	to document the in	ndicator or confirm	the absenc	e of Indicate	ors)	14	31
Depth Horizon Soil Mate	rix	Rec	lox Features			a,a dip.		
(in.) (opt.) Color (moist)	<u>%</u>	Color (moist)	% Type ¹	Loc2	Texture	(pos/		emarks_
1-3 02 57R2.5/1	_ LOD _			- VIII .		<u>neg)</u>	tor use co	edmun tnemm
-9 A 5Y5/1	[00]				CO LS:	-	1	
11 B. 2.5 YR 2.3/2					Sil	_		
13 B2 104PAIL	(0)		15-1-		CI.	1.00		
219 B2 10YR 514		•		No. of Street,	Cil	-		
UZ IVINOJA	_ LOD _	-		-	711_			
					10	_		
					1.0	_		
pe: C = Concentration, D = Depletion	on, RM = Red	uced Matrix, CS=C	Coated Sand Grains	² Location:	PL = Pore	Lining, RC	= Root Char	nel, M = Ma
dric Soil Indicators (check ones th								
andard Indicators:	15		r Problematic Hyd					
Histosol or Histel (A1)			Color Change ⁴ (TA		3OI	ne indicator	of hydrophyt	ic vegetation
Histic Epipedon (A2) (8-16" organ	ics sat'd			- 41	one	primary in	dicator of we	tland
underlain by mineral soil with chro	ma ≤2)	Alaska A	Alpine Swales (TA5)	hyd	irology, and	d an appropria be present ur	ate landscap
Black Histic (A3)		Alaska F	Redox with 2.5Y Hu	ie		problematic		iless distutd
Hydrogen Sulfide (A4) (within 12"	of mineral	- Alaska G	Sleyed without Hue	5Y or Red	40		f color chang	e in Remark
surface; @" in this pit		Under	riving Laver	01 01 1100				
Thick Dark Surface (A12)		Other (e.	g., see p.91 of 2007		11.			
_ Alaska Gleyed (A13)		Supple	ment: explain in Rem	arks)				
Alaska Redox (A14)								
Alaska Gleyed Pores (A15)								*
SINCHVA LAVAR III DIBEENII		Drainage Clas	201					/
to a contract the				_				
Туре:		Soil Map Unit		Hydri	c Soil Pres	ent?	Yes	No
тура.				Hydri	c Soil Pres	ent?	Yes	No
Type: North (inches) North				Hydri	c Soil Pres	ent?	Yes	No
Type: None Depth (inches) MA	100			Hydri	c Soil Pres	ent?	Yes	No
Type: North Cinches) North Cinches) North Cinches) North Cinches North C		Soil Map Unit	Name:	Hydri	c Soil Pres	ent?	Yes	No
Type: North (inches)	ones that app	Soil Map Unit	Name:		,25°	1	Yes	
OROLOGY Interest Market M		Soil Map Unit	Name:	Second	,25°	ors (at leas	t 2 are require	
OROLOGY Itland Hydrology Indicators (checkmary Indicators (any one indicator)	is sufficient)	Soil Map Unit	Name:	Second — Wa	lary Indicate	ors (at leas I Leaves (B	t 2 are require	ed)
Depth (inches) Market Depth (inches) D	is sufficient) Surfa	Soil Map Unit	Name: soil surface):	Second — Wa	lary Indicate ater-Stainec ainage Patt	ors (at leas I Leaves (B erns (B10)	t 2 are require 9)	ad)
Depth (inches) Managements: DROLOGY etland Hydrology Indicators (check mary Indicators (any one indicator Surface Water (A1) High Water Table (A2) (w/in 12")	is sufficient) Surfa	Soil Map Unit Dly, measure from ce Soil Cracks (B6 lation Visible on Ae	Name: soil surface): i) erial Imagery (B7)	Second Was Dra Ox	lary Indicate ater-Stainec ainage Patt	ors (at leas I Leaves (B erns (B10) pheres on I	t 2 are require 9) Living Roots (ad)
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Site 002: Soil. Photo taken September 15, 2020.



Site 002: Northern view of vegetation. Photo taken September 15, 2020.





Site 002: Southern view of vegetation. Photo taken September 15, 2020.



Site 002: Western view of vegetation. Photo taken September 15, 2020.





Site 004: Soil. Photo taken September 15, 2020.



Site 004: Soil. Photo taken September 15, 2020.





Site 004: Northern view of vegetation. Photo taken September 15, 2020.



Site 004: Southern view of vegetation. Photo taken September 15, 2020.





Site 009: Soil. Photo taken September 15, 2020.

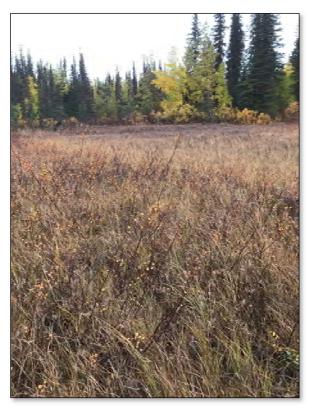


Site 009: Soil. Photo taken September 15, 2020.





Site 009: Northern view of vegetation. Photo taken September 15, 2020.



Site 009: Eastern view of vegetation. Photo taken September 15, 2020.





Site 011: Soil. Photo taken September 15, 2020.



Site 011: Northern view of vegetation. Photo taken September 15, 2020.





Site 011: Eastern view of vegetation. Photo taken September 15, 2020.



Site 011: Southern view of vegetation. Photo taken September 15, 2020.





Site 015: Soil. Photo taken September 15, 2020.

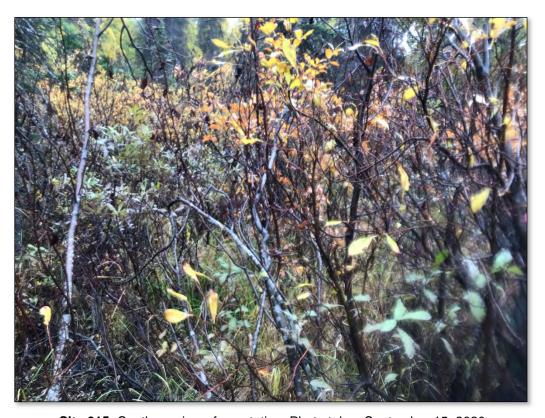


Site 015: Soil. Photo taken September 15, 2020.





Site 015: Northern view of vegetation. Photo taken September 15, 2020.



Site 015: Southern view of vegetation. Photo taken September 15, 2020.





Site 016: Soil. Photo taken September 16, 2020.



Site 016: Northern view of vegetation. Photo taken September 16, 2020.





Site 016: Eastern view of vegetation. Photo taken September 16, 2020.



Site 016: Southern view of vegetation. Photo taken September 16, 2020.





Site 017: Soil. Photo taken September 16, 2020.



Site 017: Northern view of vegetation. Photo taken September 16, 2020.





Site 017: Southern view of vegetation. Photo taken September 16, 2020.



Site 017: Western view of vegetation. Photo taken September 16, 2020.





Site 022: Soil. Photo taken September 16, 2020.



Site 022: Soil. Photo taken September 16, 2020.





Site 022: Northern view of vegetation. Photo taken September 16, 2020.



Site 022: Southern view of vegetation. Photo taken September 16, 2020.





Site 023: Soil. Photo taken September 16, 2020.



Site 023: Soil. Photo taken September 16, 2020.





Site 023: Northern view of vegetation. Photo taken September 16, 2020.



Site 023: Southern view of vegetation. Photo taken September 16, 2020.





Site 028: Soil. Photo taken September 16, 2020.



Site 028: Soil. Photo taken September 16, 2020.





Site 028: Northern view of vegetation. Photo taken September 16, 2020.



Site 028: Southern view of vegetation. Photo taken September 16, 2020.





Site 037: Soil. Photo taken September 18, 2020.



Site 037: Soil. Photo taken September 18, 2020.





Site 037: Northern view of vegetation. Photo taken September 18, 2020.



Site 037: Southern view of vegetation. Photo taken September 18, 2020.





Site 040: Soil. Photo taken September 18, 2020.



Site 040: Soil. Photo taken September 18, 2020.





Site 040: Northern view of vegetation. Photo taken September 18, 2020.



Site 040: Southern view of vegetation. Photo taken September 18, 2020.





Site 042: Soil. Photo taken September 18, 2020.



Site 042: Soil. Photo taken September 18, 2020.





Site 042: Northern view of vegetation. Photo taken September 18, 2020.



Site 042: Southern view of vegetation. Photo taken September 18, 2020.





Site 043a: Soil. Photo taken September 18, 2020.



Site 043a: Soil. Photo taken September 18, 2020.



Site 043a: Northern view of vegetation. Photo taken September 18, 2020.



Site 043a: Southern view of vegetation. Photo taken September 18, 2020.





Site 045: Soil. Photo taken September 18, 2020.



Site 045: Soil. Photo taken September 18, 2020.





Site 045: Northern view of vegetation. Photo taken September 18, 2020.



Site 045: Southern view of vegetation. Photo taken September 18, 2020.



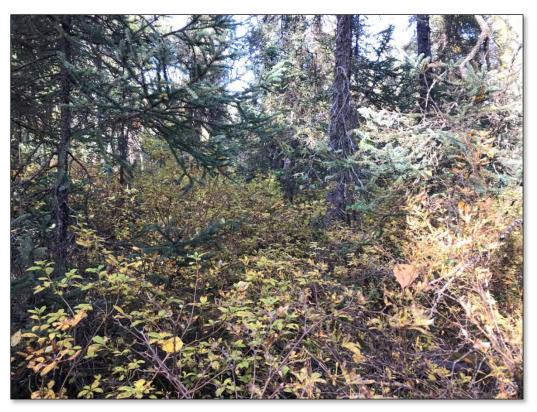


Site 054: Soil. Photo taken September 18, 2020.



Site 054: Soil. Photo taken September 18, 2020.





Site 054: Northern view of vegetation. Photo taken September 18, 2020.



Site 054: Southern view of vegetation. Photo taken September 18, 2020.





Site 500: Soil. Photo taken September 15, 2020.



Site 500: Soil. Photo taken September 15, 2020.





Site 500: Northern view of vegetation. Photo taken September 15, 2020.



Site 500: Southern view of vegetation. Photo taken September 15, 2020.



Site 501: Soil. Photo taken September 15, 2020.

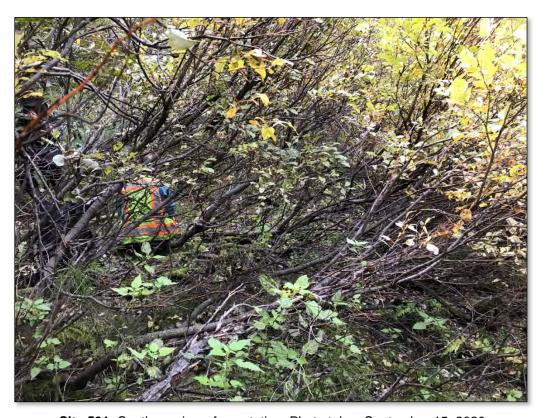


Site 501: Soil. Photo taken September 15, 2020.





Site 501: Northern view of vegetation. Photo taken September 15, 2020.



Site 501: Southern view of vegetation. Photo taken September 15, 2020.





Site 503: Soil. Photo taken September 15, 2020.



Site 503: Soil. Photo taken September 15, 2020.





Site 503: Northern view of vegetation. Photo taken September 15, 2020.

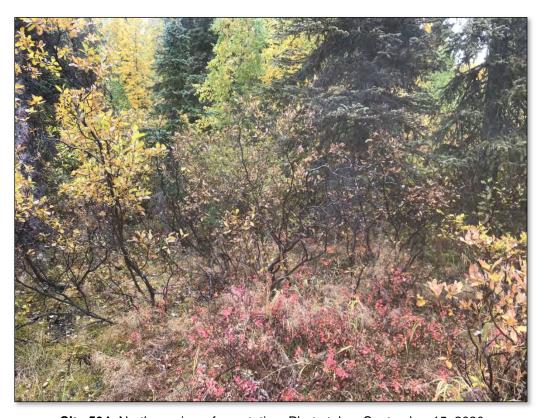


Site 503: Southern view of vegetation. Photo taken September 15, 2020.





Site 504: Soil. Photo taken September 15, 2020.



Site 504: Northern view of vegetation. Photo taken September 15, 2020.





Site 504: Eastern view of vegetation. Photo taken September 15, 2020.



Site 504: Southern view of vegetation. Photo taken September 15, 2020.





Site 506: Soil. Photo taken September 15, 2020.



Site 506: Soil. Photo taken September 15, 2020.





Site 506: Northern view of vegetation. Photo taken September 15, 2020.



Site 506: Southern view of vegetation. Photo taken September 15, 2020.



Site 508: Soil. Photo taken September 15, 2020.



Site 508: Soil. Photo taken September 15, 2020.





Site 508: Northern view of vegetation. Photo taken September 15, 2020.



Site 508: Southern view of vegetation. Photo taken September 15, 2020.





Site 509: Soil. Photo taken September 15, 2020.



Site 509: Soil. Photo taken September 15, 2020.





Site 509: Northern view of vegetation. Photo taken September 15, 2020.



Site 509: Southern view of vegetation. Photo taken September 15, 2020.





Site 513: Soil. Photo taken September 16, 2020.



Site 513: Soil. Photo taken September 16, 2020.





Site 513: Eastern view of vegetation. Photo taken September 16, 2020.



Site 513: Southern view of vegetation. Photo taken September 16, 2020.



Site 514: Soil. Photo taken September 16, 2020.



Site 514: Soil. Photo taken September 16, 2020.





Site 514: Northern view of vegetation. Photo taken September 16, 2020.



Site 514: Southern view of vegetation. Photo taken September 16, 2020.





Site 516: Soil. Photo taken September 16, 2020.



Site 516: Soil. Photo taken September 16, 2020.





Site 516: Northern view of vegetation. Photo taken September 16, 2020.



Site 516: Western view of vegetation. Photo taken September 16, 2020.





Site 520: Soil. Photo taken September 16, 2020.



Site 520: Soil. Photo taken September 16, 2020.





Site 520: Northern view of vegetation. Photo taken September 16, 2020.



Site 520: Southern view of vegetation. Photo taken September 16, 2020.





Site 522: Soil. Photo taken September 16, 2020.



Site 522: Soil. Photo taken September 16, 2020.





Site 522: Southern view of vegetation. Photo taken September 16, 2020.



Site 522: Western view of vegetation. Photo taken September 16, 2020.





Site 528: Soil. Photo taken September 16, 2020.

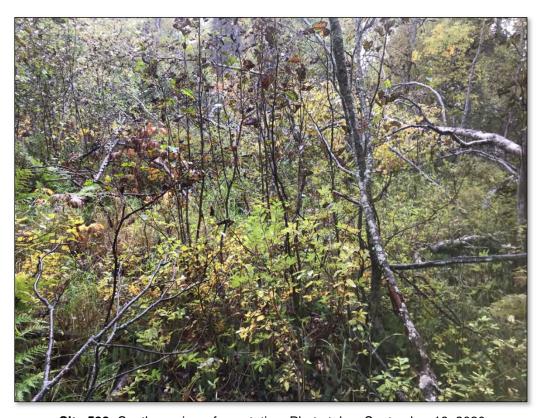


Site 528: Soil. Photo taken September 16, 2020.





Site 528: Northern view of vegetation. Photo taken September 16, 2020.



Site 528: Southern view of vegetation. Photo taken September 16, 2020.





Site 529: Soil. Photo taken September 16, 2020.



Site 529: Soil. Photo taken September 16, 2020.





Site 529: Northern view of vegetation. Photo taken September 16, 2020.



Site 529: Southern view of vegetation. Photo taken September 16, 2020.





Site 534: Soil. Photo taken September 18, 2020.



Site 534: Soil. Photo taken September 18, 2020.





Site 534: Northern view of vegetation. Photo taken September 18, 2020.



Site 534: Southern view of vegetation. Photo taken September 18, 2020.





Site 536: Soil. Photo taken September 18, 2020.



Site 536: Soil. Photo taken September 18, 2020.





Site 536: Northern view of vegetation. Photo taken September 18, 2020.



Site 536: Southern view of vegetation. Photo taken September 18, 2020.





Site 537: Soil. Photo taken September 18, 2020.



Site 537: Soil. Photo taken September 18, 2020.





Site 537: Northern view of vegetation. Photo taken September 18, 2020.



Site 537: Southern view of vegetation. Photo taken September 18, 2020.





Site 547: Soil. Photo taken September 18, 2020.



Site 547: Soil. Photo taken September 18, 2020.





Site 547: Northern view of vegetation. Photo taken September 18, 2020.



Site 547: Southern view of vegetation. Photo taken September 18, 2020.





Site 550: Soil. Photo taken September 18, 2020.



Site 550: Soil. Photo taken September 18, 2020.





Site 550: Northern view of vegetation. Photo taken September 18, 2020.



Site 550: Southern view of vegetation. Photo taken September 18, 2020.





Site 551: Soil. Photo taken September 18, 2020.



Site 551: Soil. Photo taken September 18, 2020.





Site 551: Northern view of vegetation. Photo taken September 18, 2020.



Site 551: Southern view of vegetation. Photo taken September 18, 2020.





Site 555: Soil. Photo taken September 23, 2020.



Site 555: Soil. Photo taken September 23, 2020.





Site 555: Northern view of vegetation. Photo taken September 23, 2020.



Site 555: Southern view of vegetation. Photo taken September 23, 2020.





Site 556: Soil. Photo taken September 23, 2020.



Site 556: Soil. Photo taken September 23, 2020.





Site 556: Northern view of vegetation. Photo taken September 23, 2020.



Site 556: Southern view of vegetation. Photo taken September 23, 2020.





Site 561: Soil. Photo taken September 23, 2020.



Site 561: Soil. Photo taken September 23, 2020.



Site 561: Northern view of vegetation. Photo taken September 23, 2020.



Site 561: Southern view of vegetation. Photo taken September 23, 2020.





Site 572: Soil. Photo taken September 23, 2020.



Site 572: Soil. Photo taken September 23, 2020.





Site 572: Northern view of vegetation. Photo taken September 23, 2020.



Site 572: Southern view of vegetation. Photo taken September 23, 2020.





Site 574: Soil. Photo taken September 23, 2020.



Site 574: Soil. Photo taken September 23, 2020.





Site 574: Northern view of vegetation. Photo taken September 23, 2020.



Site 574: Southern view of vegetation. Photo taken September 23, 2020.





Site 577: Soil. Photo taken September 23, 2020.



Site 577: Soil. Photo taken September 23, 2020.



Site 577: Northern view of vegetation. Photo taken September 23, 2020.



Site 577: Southern view of vegetation. Photo taken September 23, 2020.





Site 579: Soil. Photo taken September 23, 2020.



Site 579: Soil. Photo taken September 23, 2020.





Site 579: Northern view of vegetation. Photo taken September 23, 2020.



Site 579: Eastern view of vegetation. Photo taken September 23, 2020.





Site 583: Soil. Photo taken September 29, 2020.



Site 583: Soil. Photo taken September 29, 2020.





Site 583: Northern view of vegetation. Photo taken September 29, 2020.



Site 583: Southern view of vegetation. Photo taken September 29, 2020.





Site 584: Soil. Photo taken September 29, 2020.



Site 584: Soil. Photo taken September 29, 2020.





Site 584: Northern view of vegetation. Photo taken September 29, 2020.



Site 584: Southern view of vegetation. Photo taken September 29, 2020.



Site 585: Soil. Photo taken September 29, 2020.



Site 585: Soil. Photo taken September 29, 2020.





Site 585: Northern view of vegetation. Photo taken September 29, 2020.



Site 585: Southern view of vegetation. Photo taken September 29, 2020.



Site 586: Soil. Photo taken September 29, 2020.



Site 586: Soil. Photo taken September 29, 2020.





Site 586: Northern view of vegetation. Photo taken September 29, 2020.



Site 586: Western view of vegetation. Photo taken September 29, 2020.



Site 587: Soil. Photo taken September 29, 2020.



Site 587: Soil. Photo taken September 29, 2020.





Site 587: Northern view of vegetation. Photo taken September 29, 2020.



Site 587: Southern view of vegetation. Photo taken September 29, 2020.





Site 592: Soil. Photo taken September 29, 2020.



Site 592: Soil. Photo taken September 29, 2020.



Site 592: Eastern view of vegetation. Photo taken September 29, 2020.



Site 592: Western view of vegetation. Photo taken September 29, 2020.





Site 593: Soil. Photo taken September 29, 2020.



Site 593: Soil. Photo taken September 29, 2020.





Site 593: Northern view of vegetation. Photo taken September 29, 2020.



Site 593: Southern view of vegetation. Photo taken September 29, 2020.





Site 594: Soil. Photo taken September 29, 2020.



Site 594: Soil. Photo taken September 29, 2020.





Site 594: Northern view of vegetation. Photo taken September 29, 2020.



Site 594: Southern view of vegetation. Photo taken September 29, 2020.



Site 595: Soil. Photo taken September 29, 2020.



Site 595: Soil. Photo taken September 29, 2020.





Site 595: Northern view of vegetation. Photo taken September 29, 2020.



Site 595: Southern view of vegetation. Photo taken September 29, 2020.



Site 596: Soil. Photo taken September 29, 2020.



Site 596: Soil. Photo taken September 29, 2020.





Site 596: Northern view of vegetation. Photo taken September 29, 2020.



Site 596: Southern view of vegetation. Photo taken September 29, 2020.



Site 597: Soil. Photo taken September 29, 2020.



Site 597: Soil. Photo taken September 29, 2020.



Site 597: Eastern view of vegetation. Photo taken September 29, 2020.



Site 597: Western view of vegetation. Photo taken September 29, 2020.





Site 598: Soil. Photo taken September 29, 2020.



Site 598: Soil. Photo taken September 29, 2020.

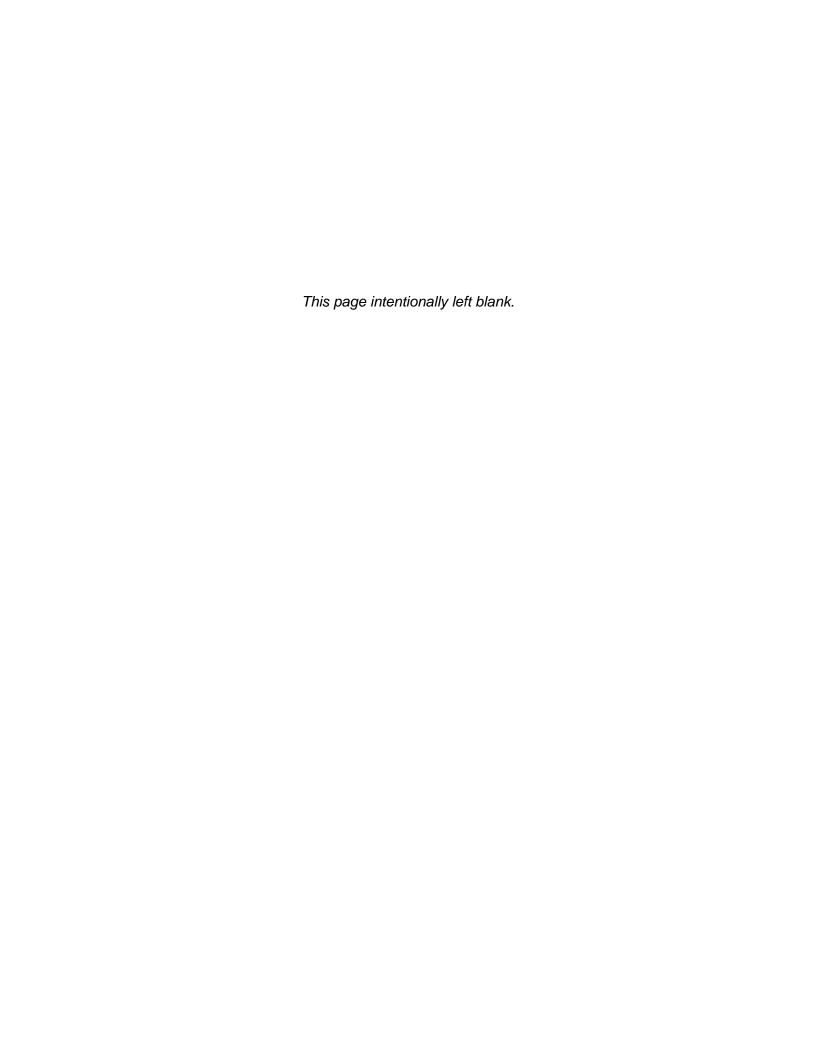




Site 598: Northern view of vegetation. Photo taken September 29, 2020.



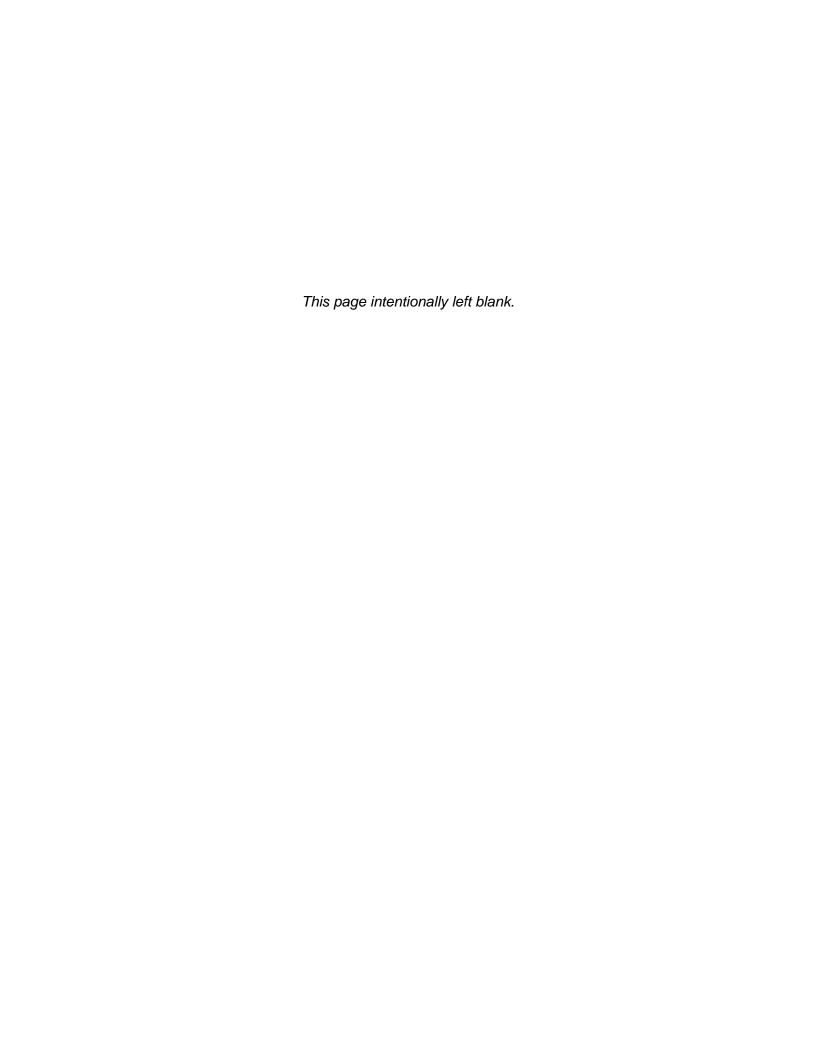
Site 598: Western view of vegetation. Photo taken September 29, 2020.



Appendix B

Observation Point Photographs

September 15, 16, 18, 23, and 29, 2020



Appendix B: Summary of Observation Point Sites

Site	Latitude	Longitude	NWI Code ^a	HGM Class ^b
001	61.98064	-152.58670	PEM1C	Slope
003	61.98162	-152.59311	R3UBH	Riverine Channel
005	61.98106	-152.59301	U	N/A
006	61.98040	-152.59151	PUBH	Slope
007	61.98000	-152.59017	U	N/A
800	61.98041	-152.58867	U	N/A
010	61.98660	-152.42671	U	N/A
012	61.98684	-152.42736	PEM1F	Riverine
013	61.98544	-152.42868	PUBH	Slope
014	61.98567	-152.42651	PSS1F	Slope
018	61.55398	-150.71889	R3UBH	Riverine Channel
019	61.55353	-150.71974	U	N/A
020	61.55402	-150.71780	R3UBH	Riverine Channel
021	61.55455	-150.71617	PEM1B	Slope
024	61.59414	-150.82504	U	N/A
025	61.59350	-150.82701	U	N/A
026	61.59369	-150.82818	U	N/A
027	61.59358	-150.82854	R3UBH	Riverine Channel
029	61.59430	-150.82855	U	N/A
030	61.59495	-150.82637	U	N/A
031	61.59482	-150.82527	PSS1/USA	Riverine
032	61.59458	-150.82300	PEM1F	Riverine
033	61.59464	-150.82282	PEM1/SS1B	Riverine
034	61.59496	-150.82274	R3UBH	Riverine Channel
035	61.59512	-150.81949	PEM1F / PSS1/EM1C	Riverine
036	61.59420	-150.82069	U	N/A
038	61.53119	-150.48716	U	N/A
039	61.53245	-150.49238	R3UBH	Riverine Channel
041	61.53240	-150.49044	U	N/A
043b	61.51292	-150.45450	PSS1B	Flat
044	61.51268	-150.45575	U	N/A
046	61.51185	-150.45725	PSS1B	Flat
047	61.51075	-150.45468	U	N/A

Appendix B: Summary of Observation Point Sites

Site	Latitude	Longitude	NWI Code ^a	HGM Class ^b
048	61.51067	-150.45408	PSS1/EM1B	Depressional
049	61.51057	-150.45229	PEM1C	Flat
050	61.50890	-150.45035	PSS4B	Flat
051	61.50859	-150.44930	PSS4/EM1C	Flat
052	61.50829	-150.44888	PSS1B	Flat
053	61.51059	-150.45028	PSS1/EM1B	Flat
502	61.97828	-152.54631	U	N/A
505	61.97761	-152.55238	PEM1C	Slope
507	61.98263	-152.39943	PEM1/SS1C	Slope
510	61.98351	-152.39778	PEM1C	Slope
511	61.55482	-150.69886	PEM1/SS1C	Slope
512	61.55457	-150.69908	PSS1B	Slope
515	61.55291	-150.69726	PFO1/EM1B	Slope
517	61.55324	-150.69612	U	N/A
518	61.55396	-150.69793	PSS1/EM1B	Slope
519	61.60733	-150.87529	PSS1/EM1C	Slope
521	61.60729	-150.87135	PEM1/SS1C	Slope
523	61.60718	-150.86851	R3UBH	Riverine Channel
524	61.60706	-150.86868	U	N/A
525	61.60701	-150.86830	R3UBH	Riverine Channel
526	61.60744	-150.87565	R3UBH	Riverine Channel
527	61.55446	-150.66673	PEM1/SS1C	Slope
530	61.55406	-150.66871	PSS3/EM1C	Slope
531	61.55506	-150.66426	PEM1/SS1B	Slope
532	61.55778	-150.60789	PSS1/EM1C	Slope
533	61.55716	-150.61033	PSS1/EM1C	Slope
535	61.55668	-150.61223	PFO1/SS1B	Slope
538	61.55629	-150.61141	PSS1/EM1B	Slope
539	61.55632	-150.61084	R3UBH	Riverine Channel
540	61.55627	-150.60793	PEM1/SS1B	Slope
541	61.55596	-150.60744	U	N/A
542	61.55591	-150.60770	PSS1/EM1C	Slope
543	61.55642	-150.60718	U	N/A

Appendix B: Summary of Observation Point Sites

Site	Latitude	Longitude	NWI Code ^a	HGM Class ^b
544	61.55676	-150.60769	PFO1/SS1B	Slope
545	61.55444	-150.56319	PEM1C	Riverine
546	61.55434	-150.56358	PEM1F	Riverine
548	61.55452	-150.56440	U	N/A
549	61.55452	-150.56304	R3UBH	Riverine Channel
552	61.55255	-150.53489	PSS1/EM1B	Slope
553	61.55250	-150.53482	U	N/A
554	61.62049	-150.90951	PSS1B	Slope
557	61.61919	-150.90708	R3UBH	Riverine Channel
558	61.61910	-150.90612	R3UBH	Riverine Channel
559	61.61916	-150.90584	PUBH	Riverine
560	61.61887	-150.90517	R3UBH	Riverine Channel
562	61.61818	-150.90518	U	N/A
563	61.61825	-150.90485	R3UBH	Riverine Channel
564	61.61835	-150.90433	R3UBH	Riverine Channel
565	61.61828	-150.90401	U	N/A
566	61.61854	-150.90443	R3UBH	Riverine Channel
567	61.61890	-150.90417	R3UBH	Riverine Channel
568	61.61928	-150.90422	PUBH	N/A
569	61.61949	-150.90469	R3UBH	Riverine Channel
571	61.61987	-150.90716	R3UBH	Riverine Channel
573	61.58322	-150.78503	PFO1/SS1B	Slope
575	61.58234	-150.78536	U	N/A
576	61.58218	-150.78524	U	N/A
578	61.58235	-150.78409	U	N/A
580	61.58277	-150.78308	PFO1/SS1B	Slope
581	61.48553	-150.22736	PEM1/SS1F	Slope
582	61.48556	-150.22779	PSS1/EM1C	Slope
588	61.48580	-150.22491	PFO4/SS1C	Slope
589	61.48584	-150.22608	PFO4/SS1B	Slope
590	61.48560	-150.22704	PFO4/SS1C	Slope
591	61.55867	-150.59431	PEM1/SS4B	Slope

 ^a NWI: National Wetlands Inventory. Cowardin et al. 1979. See Table 4 for full descriptions.
 ^b HGM: Hydrogeomorphic. Brinson 1993





Site 001: Northern view of vegetation. Photo taken September 15, 2020.



Site 001: Southern view of vegetation. Photo taken September 15, 2020.





Site 003: Upstream view of stream. Photo taken September 15, 2020.



Site 003: Downstream view of stream. Photo taken September 15, 2020.





Site 005: Northern view of vegetation. Photo taken September 15, 2020.



Site 005: Southern view of vegetation. Photo taken September 15, 2020.



Site 006: Eastern view of waterbody. Photo taken September 15, 2020.



Site 006: Western view of vegetation. Photo taken September 15, 2020.





Site 007: Northern view of vegetation. Photo taken September 15, 2020.

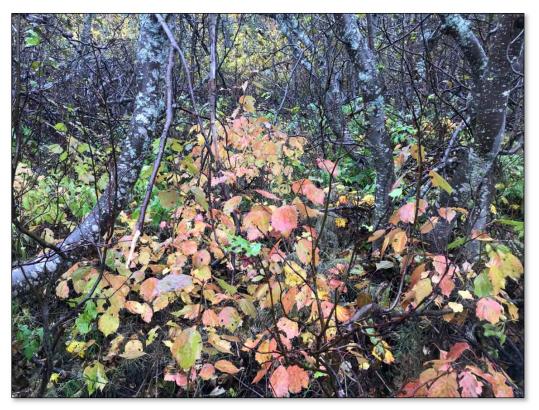


Site 007: Southern view of vegetation. Photo taken September 15, 2020.





Site 008: Eastern view of vegetation. Photo taken September 15, 2020.



Site 008: Southern view of vegetation. Photo taken September 15, 2020.





Site 010: Northern view of vegetation. Photo taken September 15, 2020.



Site 010: Southern view of vegetation. Photo taken September 15, 2020.





Site 012: Northeastern view of vegetation. Photo taken September 15, 2020.



Site 012: Southwestern view of vegetation. Photo taken September 15, 2020.





Site 013: Northeastern view of waterbody. Photo taken September 15, 2020.



Site 013: Southwestern view of waterbody. Photo taken September 15, 2020.





Site 014: Upstream view of stream. Photo taken September 15, 2020.



Site 014: Downstream view of stream. Photo taken September 15, 2020.





Site 018: Upstream view of stream. Photo taken September 16, 2020.



Site 018: Downstream view of stream. Photo taken September 16, 2020.





Site 019: Northern view of vegetation. Photo taken September 16, 2020.



Site 019: Southern view of vegetation. Photo taken September 16, 2020.





Site 020: Upstream view of stream. Photo taken September 16, 2020.



Site 020: Downstream view of stream. Photo taken September 16, 2020.





Site 021: Northeast view of vegetation. Photo taken September 16, 2020.



Site 021: Southwest view of vegetation. Photo taken September 16, 2020.





Site 024: Northern view of vegetation. Photo taken September 16, 2020.



Site 024: Southern view of vegetation. Photo taken September 16, 2020.





Site 025: Northern view of vegetation. Photo taken September 16, 2020.



Site 025: Southern view of vegetation. Photo taken September 16, 2020.





Site 026: Northern view of vegetation. Photo taken September 16, 2020.



Site 026: Southern view of vegetation. Photo taken September 16, 2020.



Site 027: Upstream view of stream. Photo taken September 16, 2020.



Site 027: Downstream view of stream. Photo taken September 16, 2020.





Site 029: Northern view of vegetation. Photo taken September 16, 2020.



Site 029: Southern view of vegetation. Photo taken September 16, 2020.





Site 030: Northern view of vegetation. Photo taken September 16, 2020.



Site 030: Southern view of vegetation. Photo taken September 16, 2020.





Site 031: Northern view of gravel bar. Photo taken September 16, 2020.



Site 031: Southern view of gravel bar. Photo taken September 16, 2020.





Site 032: Upstream view of stream. Photo taken September 16, 2020.



Site 032: Downstream view of stream. Photo taken September 16, 2020.





Site 033: Northern view of vegetation. Photo taken September 16, 2020.



Site 033: Southern view of vegetation. Photo taken September 16, 2020.





Site 034: Upstream view of stream. Photo taken September 16, 2020.



Site 034: Downstream view of stream. Photo taken September 16, 2020.





Site 035: Upstream view of stream. Photo taken September 16, 2020.



Site 035: Downstream view of stream. Photo taken September 16, 2020.



Site 036: Northern view of vegetation. Photo taken September 16, 2020.



Site 036: Southern view of vegetation. Photo taken September 16, 2020.



Site 038: Northern view of vegetation. Photo taken September 18, 2020.



Site 038: Southern view of vegetation. Photo taken September 18, 2020.





Site 039: Upstream view of stream. Photo taken September 18, 2020.



Site 039: Downstream view of stream. Photo taken September 18, 2020.





Site 041: Northern view of vegetation. Photo taken September 18, 2020.



Site 041: Southern view of vegetation. Photo taken September 18, 2020.





Site 043b: Northern view of vegetation. Photo taken September 18, 2020.



Site 043b: Southern view of vegetation. Photo taken September 18, 2020.





Site 044: Northern view of vegetation. Photo taken September 18, 2020.



Site 044: Southern view of vegetation. Photo taken September 18, 2020.





Site 046: Northern view of vegetation. Photo taken September 18, 2020.



Site 046: Eastern view of vegetation. Photo taken September 18, 2020.





Site 047: Eastern view of vegetation. Photo taken September 18, 2020.



Site 047: Southern view of vegetation. Photo taken September 18, 2020.





Site 048: Northern view of vegetation. Photo taken September 18, 2020.



Site 048: Southern view of vegetation. Photo taken September 18, 2020.





Site 049: Northern view of vegetation. Photo taken September 18, 2020.



Site 049: Southern view of vegetation. Photo taken September 18, 2020.



Site 050: Northern view of vegetation. Photo taken September 18, 2020.



Site 050: Southern view of vegetation. Photo taken September 18, 2020.





Site 051: Northern view of vegetation. Photo taken September 18, 2020.



Site 051: Western view of vegetation. Photo taken September 18, 2020.





Site 052: Northern view of vegetation. Photo taken September 18, 2020.



Site 052: Eastern view of vegetation. Photo taken September 18, 2020.





Site 053: Northern view of vegetation. Photo taken September 18, 2020.



Site 053: Southern view of vegetation. Photo taken September 18, 2020.





Site 502: Northern view of vegetation. Photo taken September 15, 2020.



Site 502: Eastern view of vegetation. Photo taken September 15, 2020.





Site 505: Eastern view of vegetation. Photo taken September 15, 2020.



Site 505: Southern view of vegetation. Photo taken September 15, 2020.





Site 507: Northern view of vegetation. Photo taken September 15, 2020.



Site 507: Southern view of vegetation. Photo taken September 15, 2020.





Site 510: Northern view of vegetation. Photo taken September 15, 2020.



Site 510: Western view of vegetation. Photo taken September 15, 2020.





Site 511: Northern view of vegetation. Photo taken September 16, 2020.

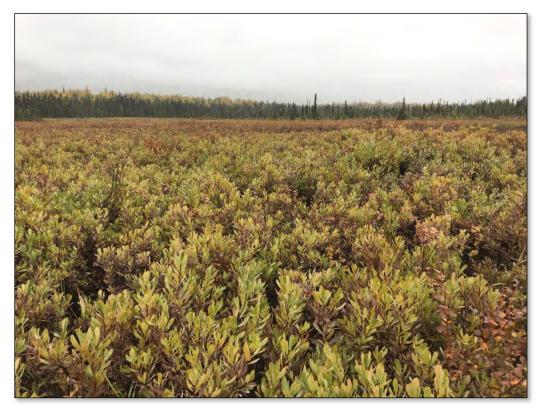


Site 511: Eastern view of vegetation. Photo taken September 16, 2020.





Site 512: Eastern view of vegetation. Photo taken September 16, 2020.



Site 512: Western view of vegetation. Photo taken September 16, 2020.





Site 515: Northern view of vegetation. Photo taken September 16, 2020.



Site 515: Southern view of vegetation. Photo taken September 16, 2020.



Site 517: Northern view of vegetation. Photo taken September 16, 2020.



Site 517: Southern view of vegetation. Photo taken September 16, 2020.





Site 518: Northern view of vegetation. Photo taken September 16, 2020.

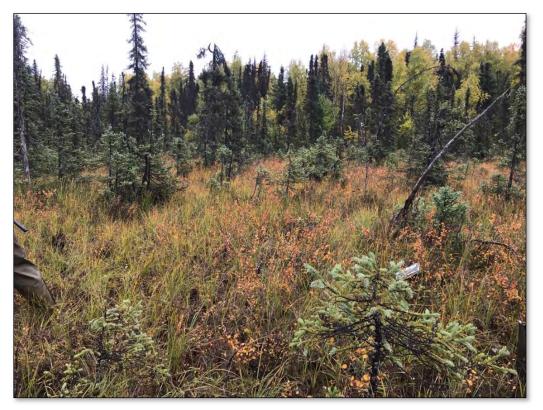


Site 518: Southern view of vegetation. Photo taken September 16, 2020.





Site 521: View of small waterbody. Photo taken September 16, 2020.



Site 521: View of vegetation. Photo taken September 16, 2020.





Site 523: Upstream view of stream. Photo taken September 16, 2020.



Site 523: Downstream view of stream. Photo taken September 16, 2020.





Site 524: Eastern view of vegetation. Photo taken September 16, 2020.



Site 524: Western view of vegetation. Photo taken September 16, 2020.





Site 525: Upstream view of seep at toeslope. Photo taken September 16, 2020.



Site 525: Northwestern view across stream. Photo taken September 16, 2020.





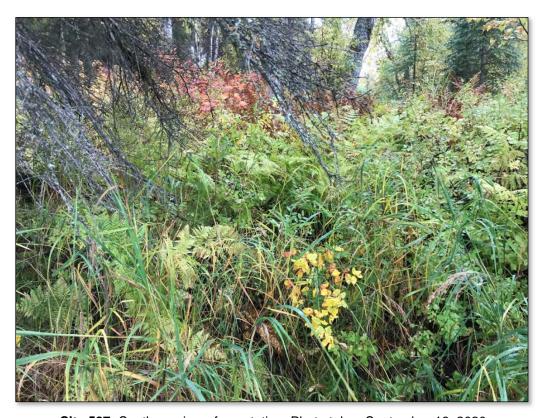
Site 526: Upstream view of stream. Photo taken September 16, 2020.



Site 526: Downstream view of stream. Photo taken September 16, 2020.



Site 527: Northern view of vegetation. Photo taken September 16, 2020.

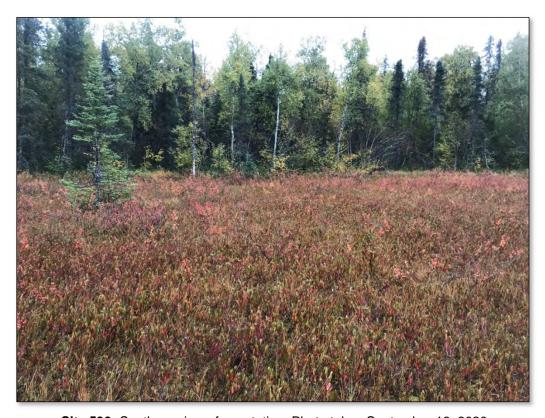


Site 527: Southern view of vegetation. Photo taken September 16, 2020.





Site 530: Northern view of vegetation. Photo taken September 16, 2020.



Site 530: Southern view of vegetation. Photo taken September 16, 2020.





Site 531: Northern view of vegetation. Photo taken September 16, 2020.



Site 531: Southern view of vegetation. Photo taken September 16, 2020.





Site 532: Northern view of vegetation. Photo taken September 18, 2020.



Site 532: Southern view of vegetation. Photo taken September 18, 2020.





Site 533: Northern view of vegetation. Photo taken September 18, 2020.



Site 533: Southern view of vegetation. Photo taken September 18, 2020.





Site 535: Northern view of vegetation. Photo taken September 18, 2020.



Site 535: Southern view of vegetation. Photo taken September 18, 2020.





Site 538: Northern view of vegetation. Photo taken September 18, 2020.



Site 538: Southern view of vegetation. Photo taken September 18, 2020.





Site 539: Upstream view of stream. Photo taken September 18, 2020.



Site 539: Downstream view of stream. Photo taken September 18, 2020.





Site 540: Northern view of vegetation. Photo taken September 18, 2020.



Site 540: Southern view of vegetation. Photo taken September 18, 2020.





Site 541: Northern view of vegetation. Photo taken September 18, 2020.



Site 541: Southern view of vegetation. Photo taken September 18, 2020.





Site 542: Northern view of vegetation. Photo taken September 18, 2020.



Site 542: Southern view of vegetation. Photo taken September 18, 2020.





Site 543: Northern view of vegetation. Photo taken September 18, 2020.



Site 543: Southern view of vegetation. Photo taken September 18, 2020.





Site 544: Eastern view of vegetation. Photo taken September 18, 2020.



Site 544: Western view of vegetation. Photo taken September 18, 2020.





Site 545: Eastern view of vegetation. Photo taken September 18, 2020.



Site 545: Southern view of vegetation. Photo taken September 18, 2020.





Site 546: Eastern view of vegetation. Photo taken September 18, 2020.



Site 546: Western view of vegetation. Photo taken September 18, 2020.





Site 548: Northern view of vegetation. Photo taken September 18, 2020.



Site 548: Southern view of vegetation. Photo taken September 18, 2020.



Site 549: View across stream. Photo taken September 18, 2020.



Site 549: Downstream view of stream. Photo taken September 18, 2020.





Site 552: Northern view of vegetation. Photo taken September 18, 2020.



Site 552: Southern view of vegetation. Photo taken September 18, 2020.



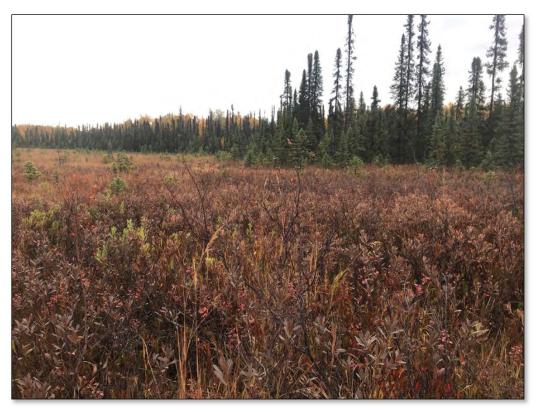


Site 553: Northern view of vegetation. Photo taken September 18, 2020.



Site 553: Southern view of vegetation. Photo taken September 18, 2020.





Site 554: Northern view of vegetation. Photo taken September 23, 2020.



Site 554: Southern view of vegetation. Photo taken September 23, 2020.





Site 557: Upstream view of stream. Photo taken September 23, 2020.



Site 557: Downstream view of stream. Photo taken September 23, 2020.





Site 558: Upstream view of stream. Photo taken September 23, 2020.



Site 558: Downstream view of stream. Photo taken September 23, 2020.





Site 559: View across stream. Photo taken September 23, 2020.



Site 559: View of relic channel. Photo taken September 23, 2020.





Site 560: Upstream view of stream. Photo taken September 23, 2020.



Site 560: Downstream view of stream. Photo taken September 23, 2020.



Site 562: Northern view of vegetation. Photo taken September 23, 2020.



Site 562: Southern view of vegetation. Photo taken September 23, 2020.





Site 563: Upstream view of stream. Photo taken September 23, 2020.



Site 563: Downstream view of stream. Photo taken September 23, 2020.





Site 564: Upstream view of stream. Photo taken September 23, 2020.



Site 564: Downstream view of stream. Photo taken September 23, 2020.





Site 565: Northern view of vegetation. Photo taken September 23, 2020.



Site 565: Southern view of vegetation. Photo taken September 23, 2020.





Site 566: Upstream view of stream. Photo taken September 23, 2020.



Site 566: Downstream view of stream. Photo taken September 23, 2020.





Site 567: Upstream view of stream. Photo taken September 23, 2020.



Site 567: Downstream view of stream. Photo taken September 23, 2020.





Site 568: View of waterbody. Photo taken September 23, 2020.



Site 568: Northern view of vegetation. Photo taken September 23, 2020.





Site 569: Upstream view of stream. Photo taken September 23, 2020.



Site 569: Downstream view of stream. Photo taken September 23, 2020.





Site 571: Upstream view of stream. Photo taken September 23, 2020.



Site 571: Downstream view of stream. Photo taken September 23, 2020.





Site 573: Northern view of vegetation. Photo taken September 23, 2020.



Site 573: Southern view of vegetation. Photo taken September 23, 2020.





Site 575: Northern view of vegetation. Photo taken September 23, 2020.



Site 575: Southern view of vegetation. Photo taken September 23, 2020.





Site 576: Southern view of vegetation. Photo taken September 23, 2020.



Site 576: Western view of vegetation. Photo taken September 23, 2020.





Site 578: Northern view of vegetation. Photo taken September 23, 2020.



Site 578: Southern view of vegetation. Photo taken September 23, 2020.





Site 580: Northern view of vegetation. Photo taken September 23, 2020.



Site 580: Southern view of vegetation. Photo taken September 23, 2020.



Site 581: Northern view of vegetation. Photo taken September 29, 2020.



Site 581: Southern view of vegetation. Photo taken September 29, 2020.





Site 582: Northern view of vegetation. Photo taken September 29, 2020.



Site 582: Southern view of vegetation. Photo taken September 29, 2020.



Site 588: Northern view of vegetation. Photo taken September 29, 2020.



Site 588: Western view of vegetation. Photo taken September 29, 2020.





Site 589: Northern view of vegetation. Photo taken September 29, 2020.



Site 589: Southern view of vegetation. Photo taken September 29, 2020.





Site 590: Eastern view of vegetation. Photo taken September 29, 2020.



Site 590: Western view of vegetation. Photo taken September 29, 2020.



Site 591: Northern view of vegetation. Photo taken September 29, 2020.



Site 591: Southern view of vegetation. Photo taken September 29, 2020.

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Antecedent Precipitation Tool Output

September 15, 16, 18, 23, and 29, 2020



Antecedent Precipitation Tool v.1.0 - Watershed Sampling Summary Generated on 2020-11-24

User Inputs

Coordinates	61.98382, -152.49168
Date	2020-09-15
Geographic Scope	Custom Polygon

Intermediate Data

Custom Watershed Name	09152020_fieldwork_2
Watershed Size	3.02 mi ²
# Random Sampling Points	3

Preliminary Result

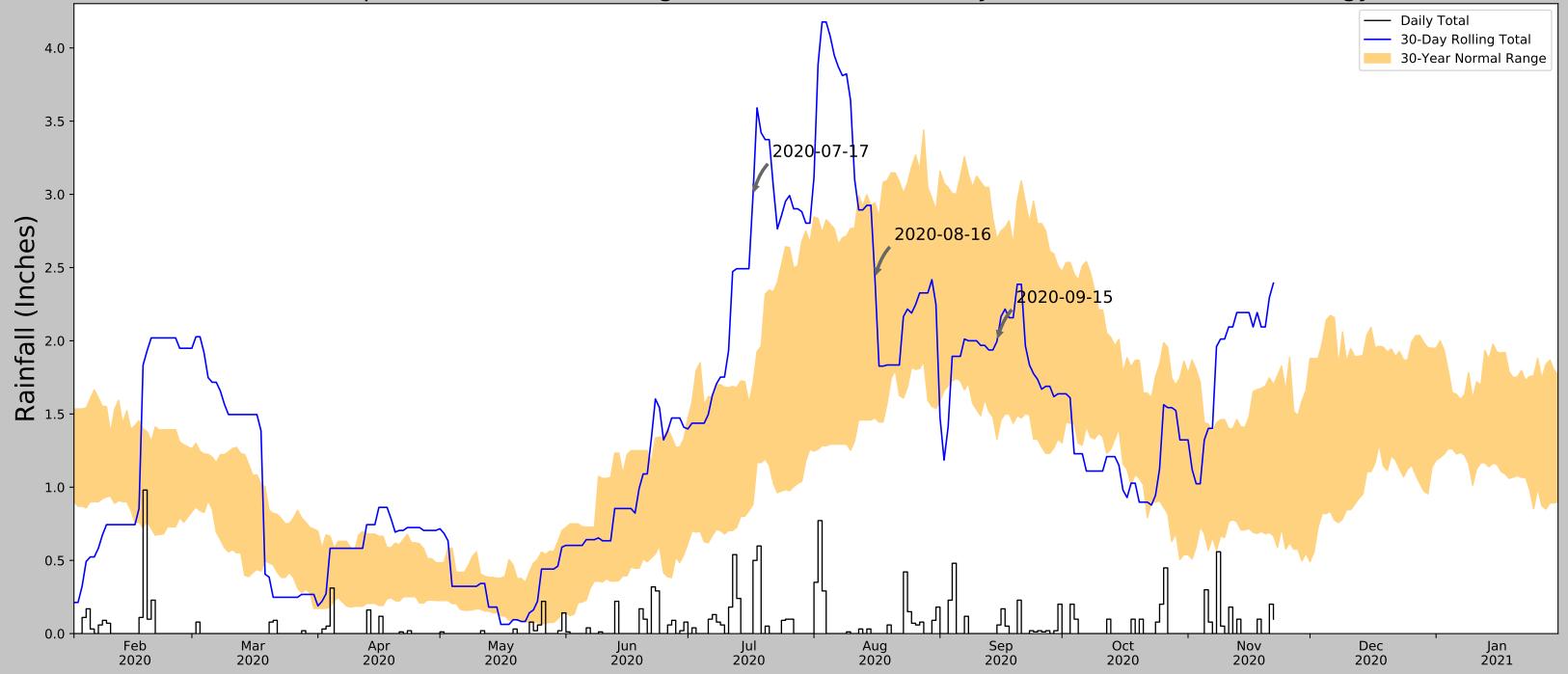
Average Antecedent Precipitation Score	12.0
Preliminary Determination	Normal Conditions

100.0%

Normal Conditions

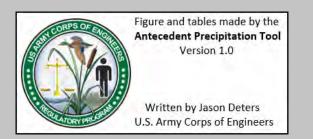
Sampling Point Breakdown

Antecedent Precipitation Score	Antecedent Precipitation Condition	WebWIMP H ₂ O Balance	Drought Index (PDSI)	# of Points
13	Normal Conditions	Wet Season	Not available	1
13	Normal Conditions	Dry Season	Not available	1
10	Normal Conditions	Wet Season	Not available	1

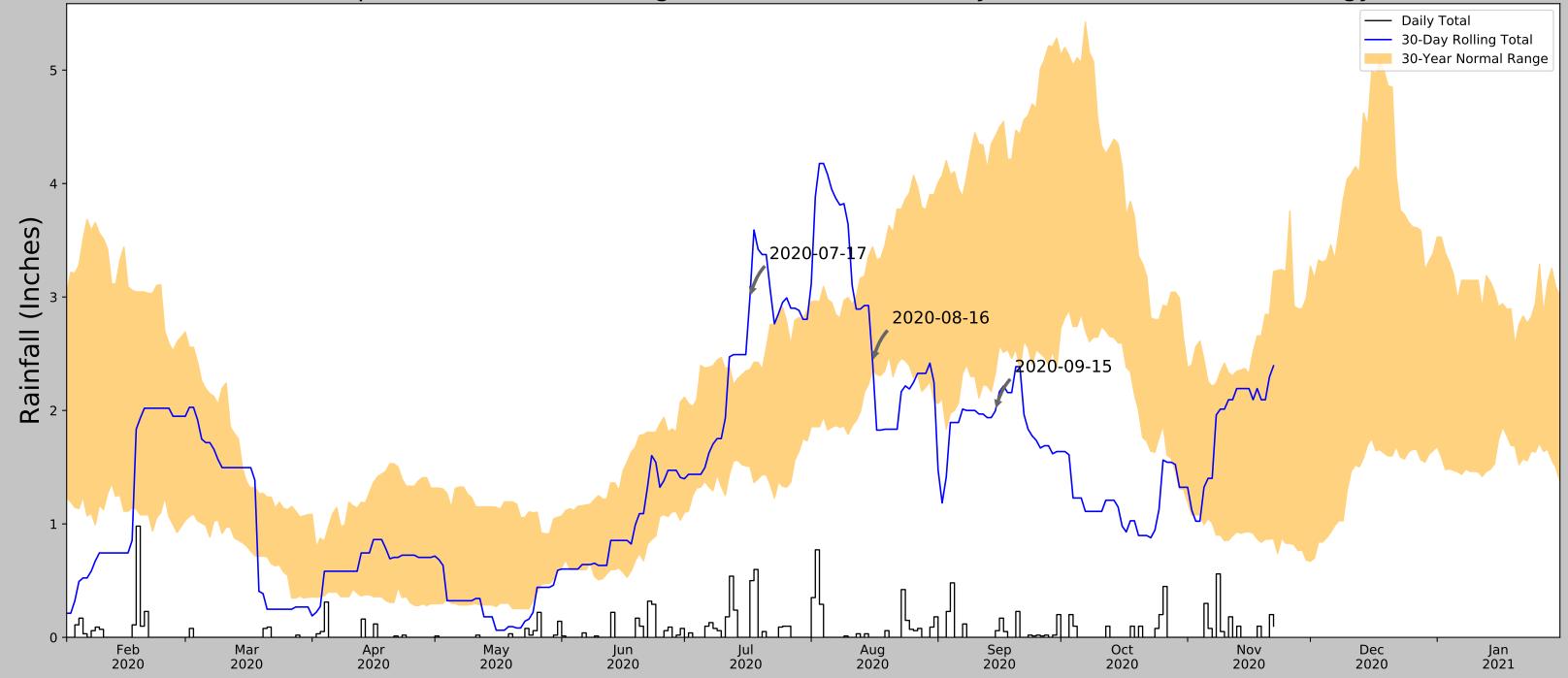


Coordinates	61.98382, -152.49168
Observation Date	2020-09-15
Elevation (ft)	1492.79
Drought Index (PDSI)	Not available
WebWIMP H₂O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-15	1.328346	2.697638	1.996063	Normal	2	3	6
2020-08-16	1.472835	2.943701	2.425197	Normal	2	2	4
2020-07-17	0.881102	1.707087	2.992126	Wet	3	1	3
Result							Normal Conditions - 13

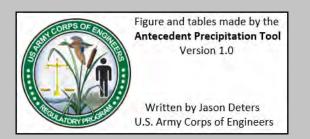


PUNTILLA	62.0911, -152.735	1857.94	10.821	365.15	8.821	9834	84
HAYES RIVER	61.9872, -152.0758	1000.0	13.498	492.79	12.726	789	0
FAREWELL LAKE	62.5422, -153.6206	1060.039	52.973	432.751	46.762	87	0
Telaquana Lake	60.98, -153.92	1274.934	83.843	217.856	55.995	364	6
SKWENTNA	61.9772, -151.2169	149.934	41.379	1342.856	74.187	222	0
Tokositna Valley	62.63, -150.78	850.066	70.807	642.724	77.373	55	0
TRAPPER CREEK 7SW	62.2622, -150.4228	424.869	69.547	1067.921	105.567	1	0

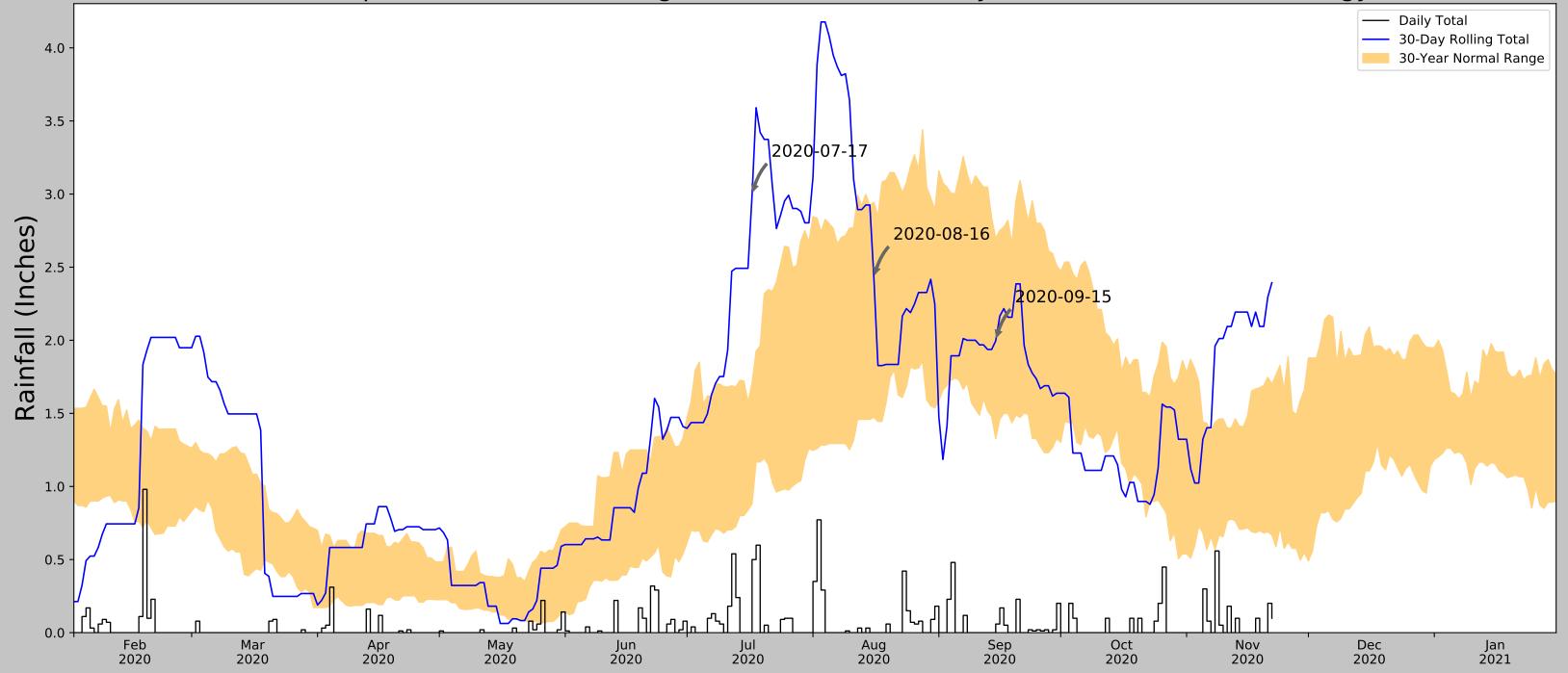


Coordinates	61.986165, -152.373392
Observation Date	2020-09-15
Elevation (ft)	1492.79
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-15	2.327165	4.417717	1.996063	Dry	1	3	3
2020-08-16	2.359055	3.441339	2.425197	Normal	2	2	4
2020-07-17	1.506299	2.359449	2.992126	Wet	3	1	3
Result							Normal Conditions - 10



HAYES RIVER	61.9872, -152.0758	1000.0	9.658	492.79	9.105	7115	0
PUNTILLA	62.0911, -152.735	1857.94	13.777	365.15	11.23	3508	84
FAREWELL LAKE	62.5422, -153.6206	1060.039	55.535	432.751	49.024	87	0
Telaquana Lake	60.98, -153.92	1274.934	86.225	217.856	57.586	364	6
SKWENTNA	61.9772, -151.2169	149.934	37.541	1342.856	67.306	222	0
Tokositna Valley	62.63, -150.78	850.066	67.794	642.724	74.08	55	0
TRAPPER CREEK 7SW	62.2622, -150.4228	424.869	65.834	1067.921	99.931	1	0

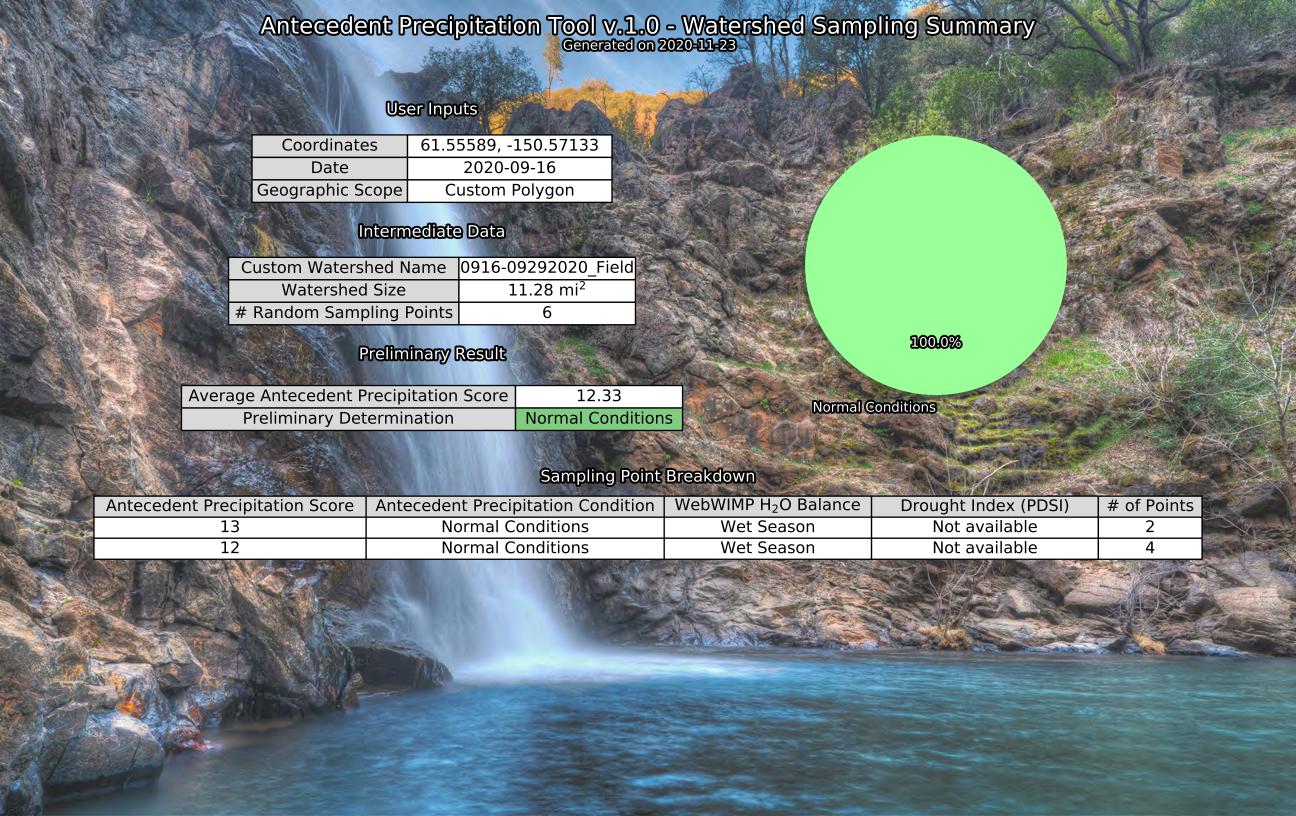


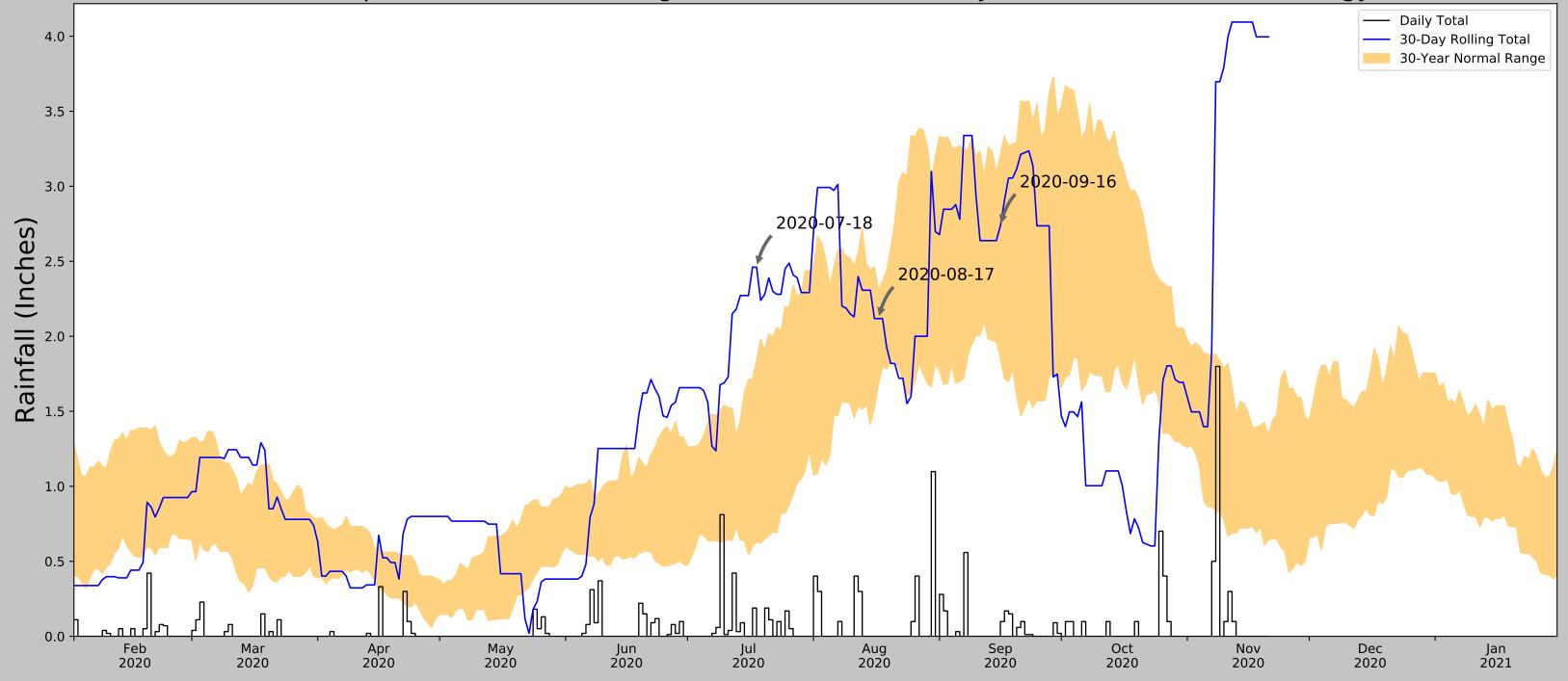
Coordinates	61.981638, -152.610186
Observation Date	2020-09-15
Elevation (ft)	1649.23
Drought Index (PDSI)	Not available
WebWIMP H₂O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-15	1.328346	2.697638	1.996063	Normal	2	3	6
2020-08-16	1.472835	2.943701	2.425197	Normal	2	2	4
2020-07-17	0.881102	1.707087	2.992126	Wet	3	1	3
Result							Normal Conditions - 13

CORPS OF ENGL	Figure and tables made by the Antecedent Precipitation Tool
	Version 1.0
TORY PRO	Written by Jason Deters U.S. Army Corps of Engineers

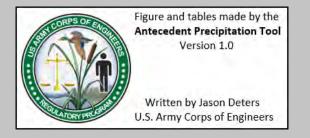
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
PUNTILLA	62.0911, -152.735	1857.94	8.576	208.71	5.649	9834	84
HAYES RIVER	61.9872, -152.0758	1000.0	17.347	649.23	19.068	789	0
FAREWELL LAKE	62.5422, -153.6206	1060.039	50.555	589.191	52.536	87	0
Telaquana Lake	60.98, -153.92	1274.934	81.584	374.296	67.249	364	6
SKWENTNA	61.9772, -151.2169	149.934	45.225	1499.296	88.157	222	0
Tokositna Valley	62.63, -150.78	850.066	73.892	799.164	92.303	55	0
TRAPPER CREEK 7SW	62.2622, -150.4228	424.869	73.275	1224.361	122.689	1	0



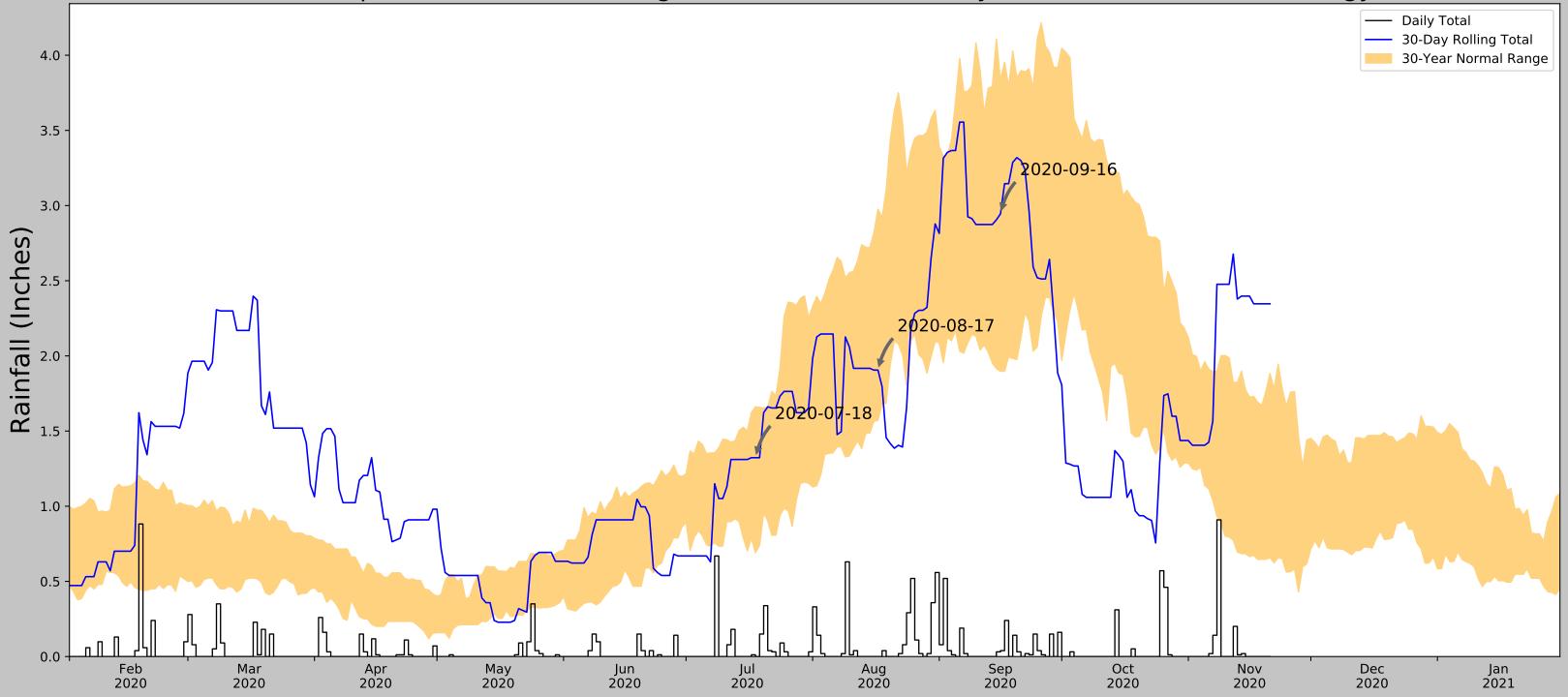


Coordinates	61.55589, -150.57133
Observation Date	2020-09-16
Elevation (ft)	1635.5
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.860236	3.208268	2.736221	Normal	2	3	6
2020-08-17	1.680709	2.301575	2.11811	Normal	2	2	4
2020-07-18	0.630315	1.838189	2.46063	Wet	3	1	3
Result							Normal Conditions - 13

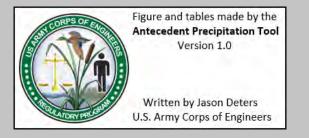


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
FT RICHARDSON WTP	61.2272, -149.6503	470.144	38.002	1165.356	61.387	9556	59
Alexander Lake	61.75, -150.89	160.105	17.005	1475.395	32.741	351	31
WILLOW 4SW	61.7064, -150.1139	212.927	18.266	1422.573	34.204	1	0
POINT MACKENZIE	61.4169, -150.0819	160.105	18.783	1475.395	36.165	502	0
WILLOW 3.6 SE	61.6995, -149.9897	304.134	21.521	1331.366	38.337	617	0
Point Mackenzie	61.39, -150.03	250.0	21.223	1385.5	38.955	325	0

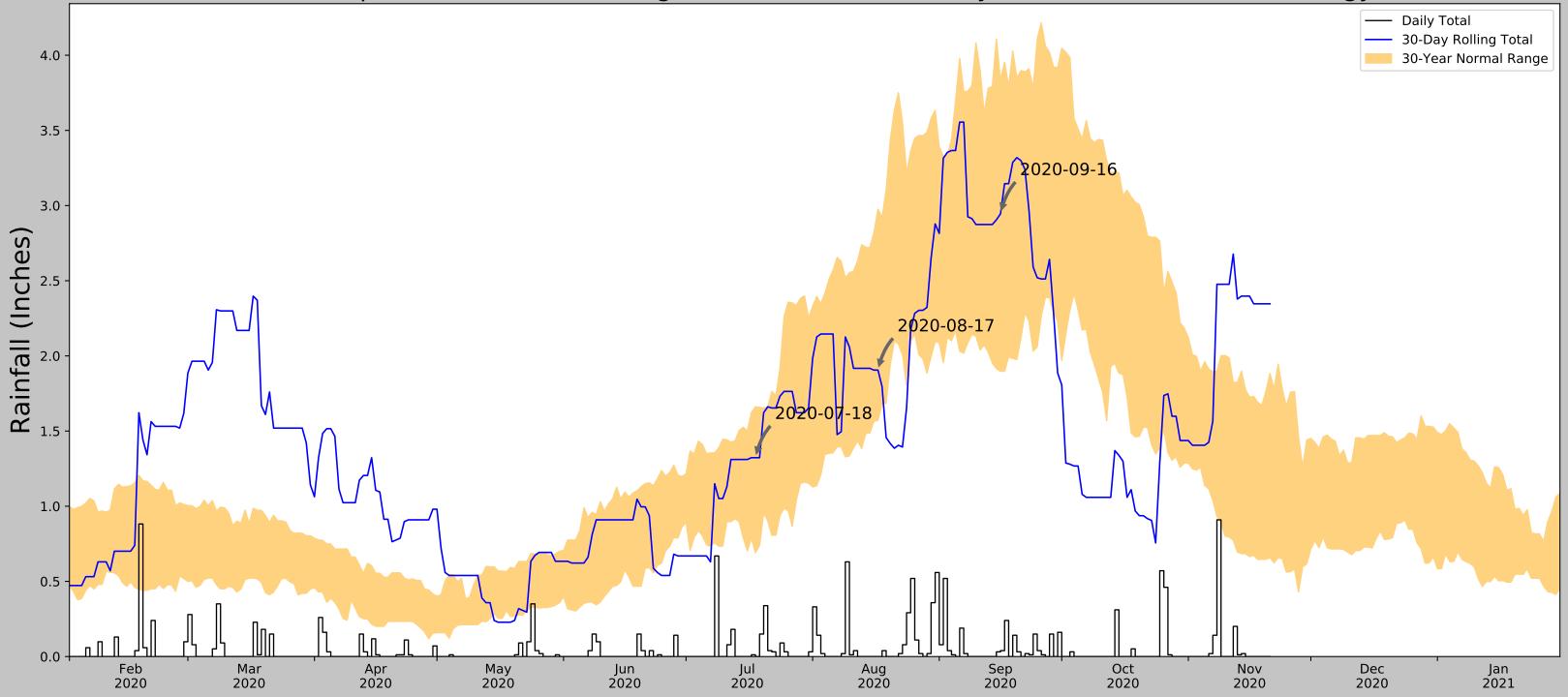


Coordinates	61.490541, -150.251776
Observation Date	2020-09-16
Elevation (ft)	91.27
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.897638	3.834252	2.944882	Normal	2	3	6
2020-08-17	1.572047	2.975591	1.905512	Normal	2	2	4
2020-07-18	0.690551	1.661811	1.322835	Normal	2	1	2
Result							Normal Conditions - 12

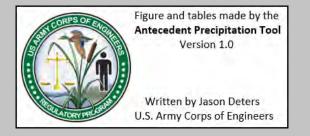


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	23.431	28.809	11.219	11352	90

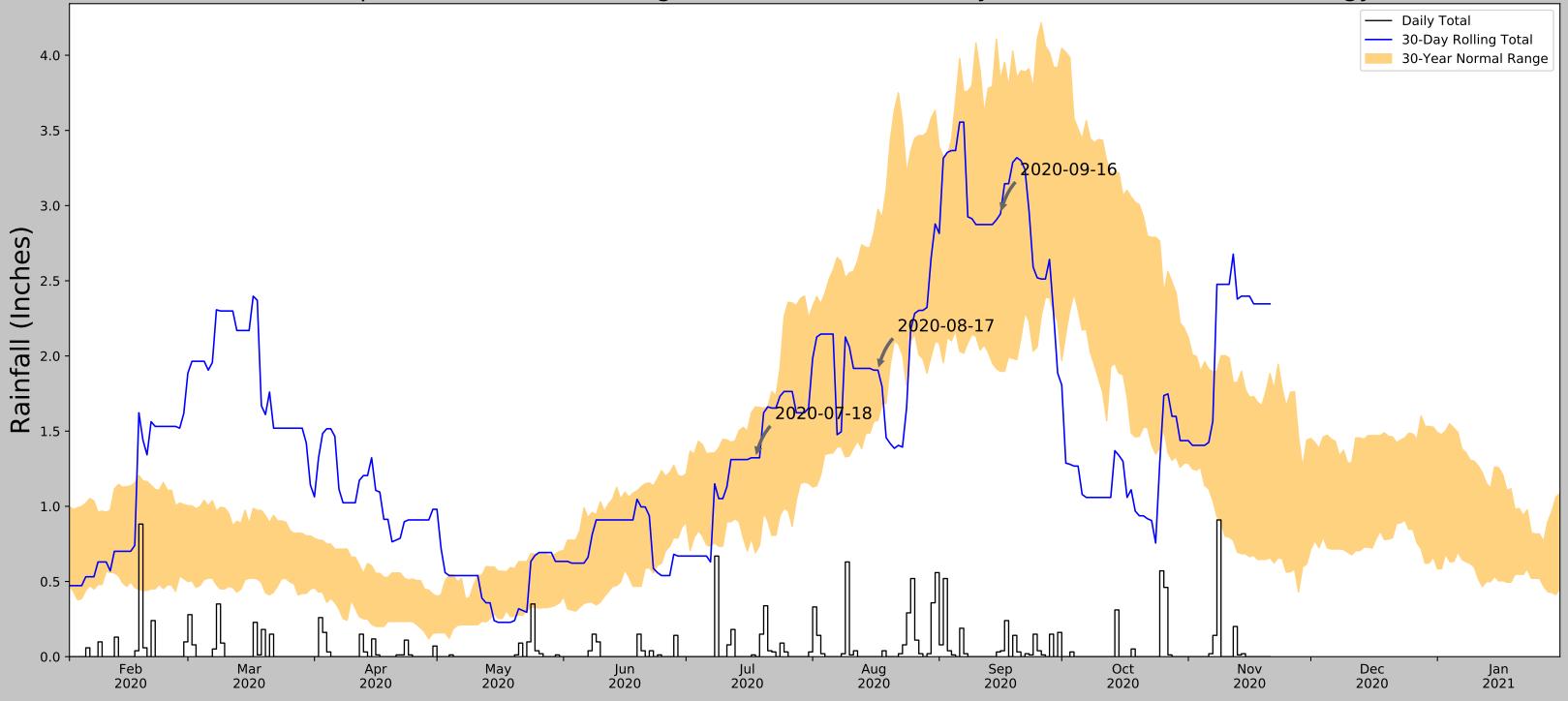


Coordinates	61.499097, -150.416405
Observation Date	2020-09-16
Elevation (ft)	113.47
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.897638	3.834252	2.944882	Normal	2	3	6
2020-08-17	1.572047	2.975591	1.905512	Normal	2	2	4
2020-07-18	0.690551	1.661811	1.322835	Normal	2	1	2
Result							Normal Conditions - 12

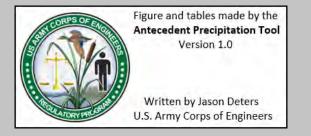


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	26.199	6.609	11.963	11352	90

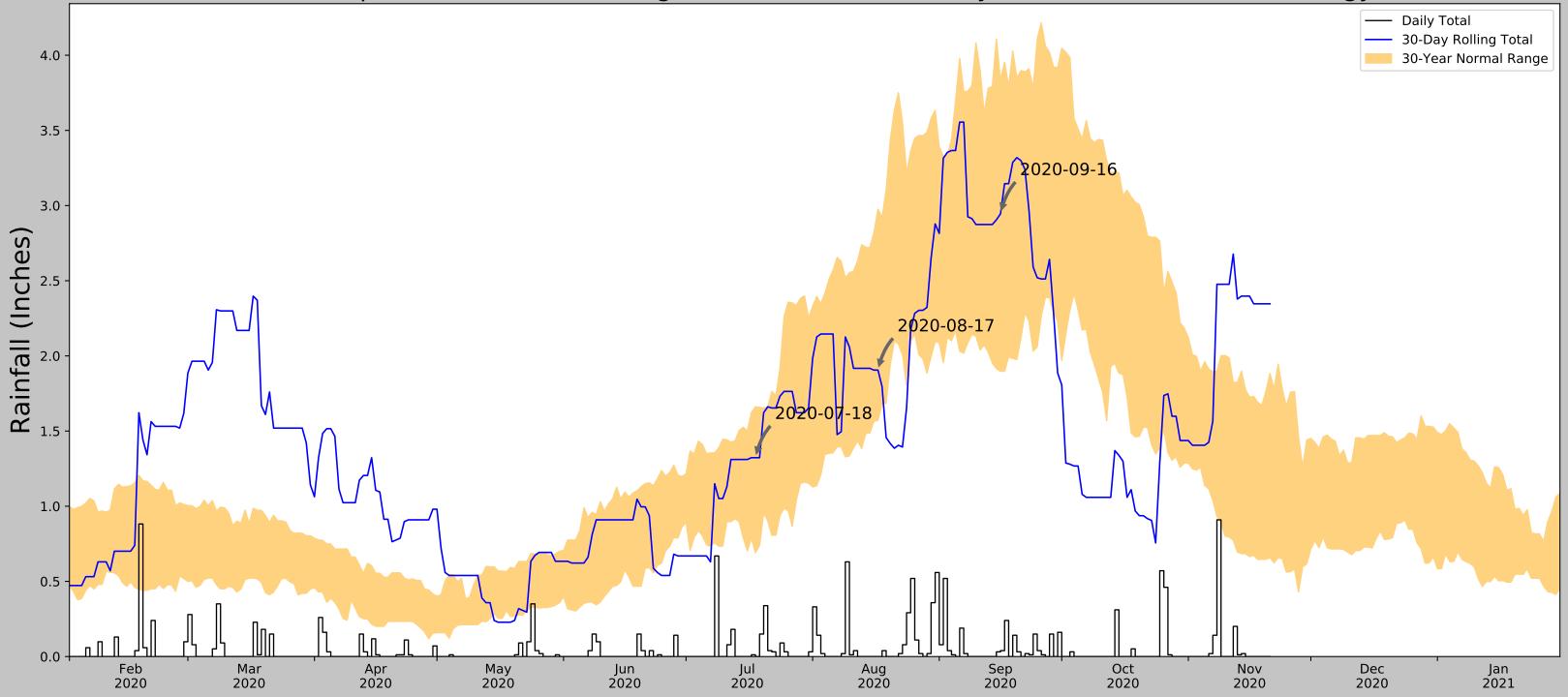


Coordinates	61.554038, -150.693957
Observation Date	2020-09-16
Elevation (ft)	158.03
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.897638	3.834252	2.944882	Normal	2	3	6
2020-08-17	1.572047	2.975591	1.905512	Normal	2	2	4
2020-07-18	0.690551	1.661811	1.322835	Normal	2	1	2
Result							Normal Conditions - 12

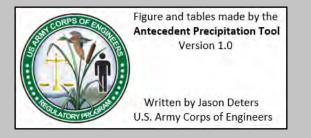


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	34.565	37.951	16.866	11352	90

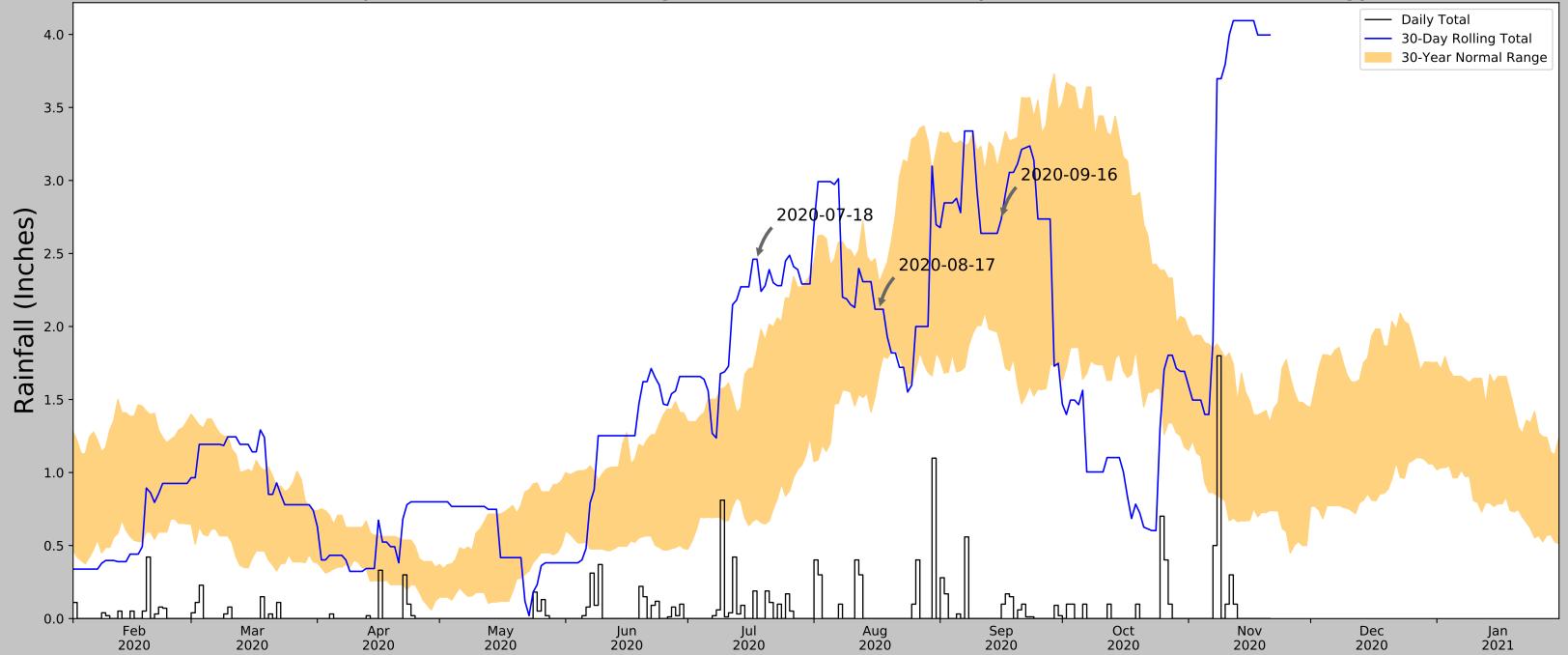


Coordinates	61.583817, -150.791276
Observation Date	2020-09-16
Elevation (ft)	280.91
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.897638	3.834252	2.944882	Normal	2	3	6
2020-08-17	1.572047	2.975591	1.905512	Normal	2	2	4
2020-07-18	0.690551	1.661811	1.322835	Normal	2	1	2
Result							Normal Conditions - 12

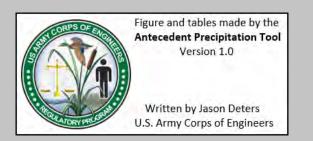


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	38.216	160.831	23.344	11352	90

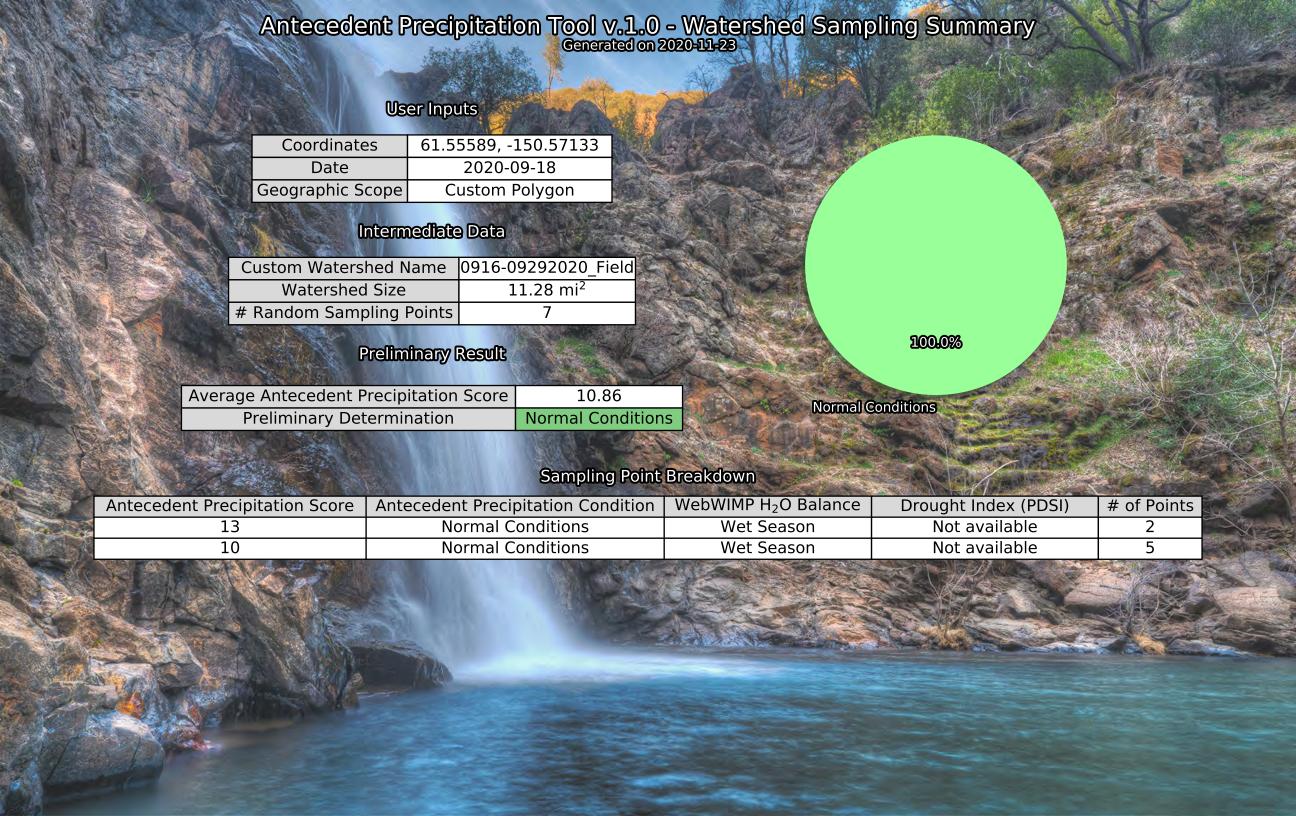


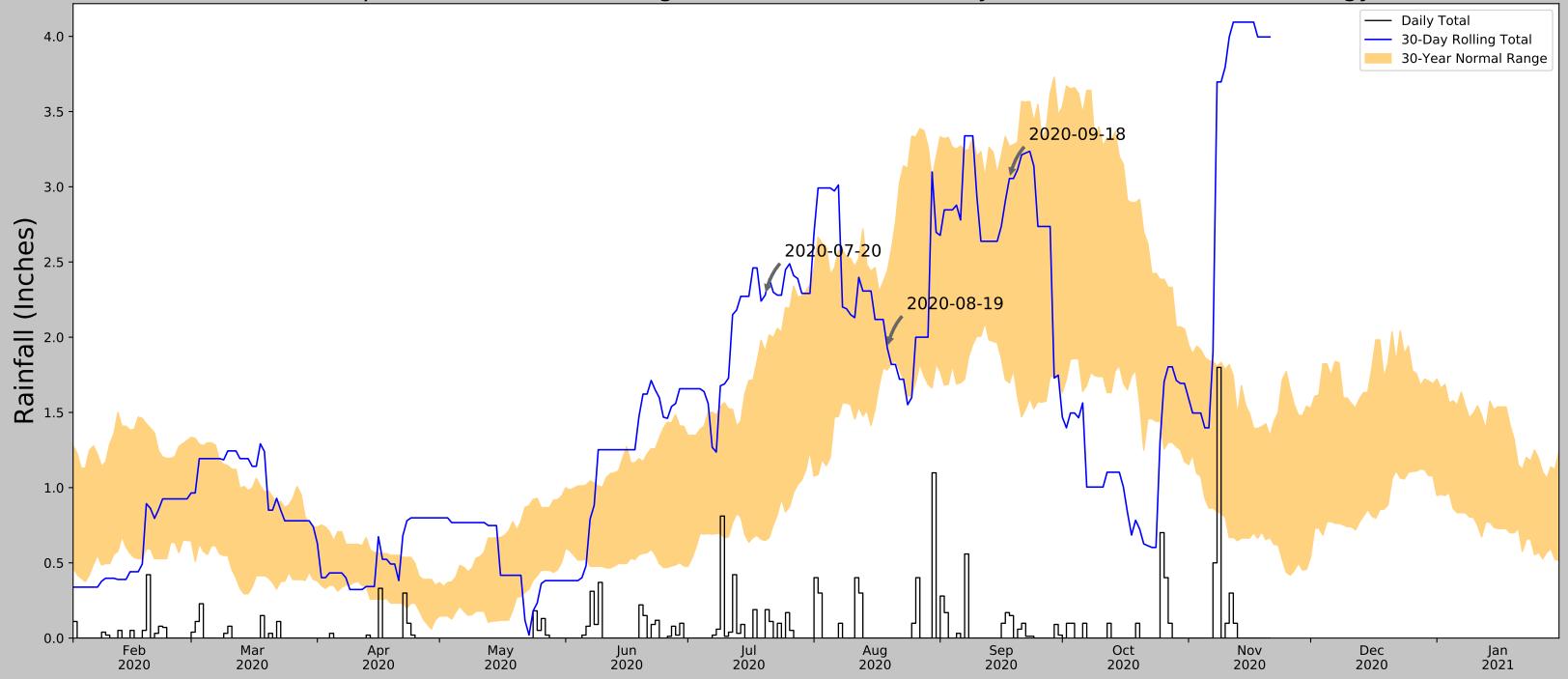
Coordinates	61.618172, -150.90291
Observation Date	2020-09-16
Elevation (ft)	361.04
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-16	1.860236	3.208268	2.736221	Normal	2	3	6
2020-08-17	1.680709	2.301575	2.11811	Normal	2	2	4
2020-07-18	0.682283	1.838189	2.46063	Wet	3	1	3
Result							Normal Conditions - 13



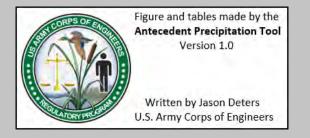
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
FT RICHARDSON WTP	61.2272, -149.6503	470.144	49.432	109.104	27.638	9556	59
Alexander Lake	61.75, -150.89	160.105	9.118	200.935	5.935	351	31
WILLOW 3.6 SE	61.6995, -149.9897	304.134	30.476	56.906	15.448	617	0
WILLOW 4SW	61.7064, -150.1139	212.927	26.585	148.113	15.901	1	0
WHITES CROSSING	61.7067, -149.9978	270.013	30.308	91.027	16.397	720	0
WILLOW HWY CAMP	61.7667, -150.05	229.987	29.77	131.053	17.298	5	0
WILLOW WEST	61.7481, -150.0542	205.053	29.228	155.987	17.712	63	0
SKWENTNA	61.9772, -151.2169	149.934	26.842	211.106	17.745	30	0
Point Mackenzie	61.39, -150.03	250.0	32.81	111.04	18.408	9	0



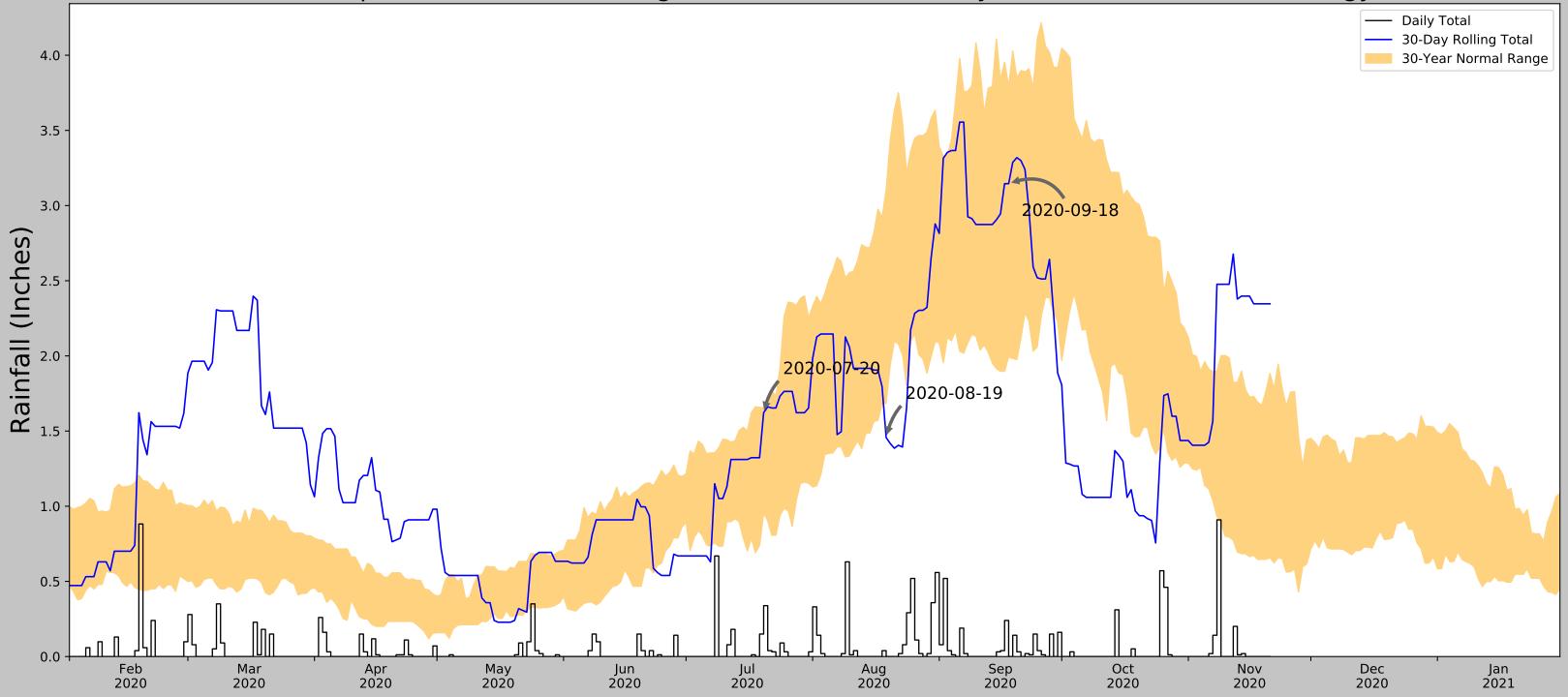


Coordinates	61.55589, -150.57133
Observation Date	2020-09-18
Elevation (ft)	382.86
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.696063	3.268898	3.055118	Normal	2	3	6
2020-08-19	1.782284	2.438583	1.929134	Normal	2	2	4
2020-07-20	0.648425	1.905512	2.279528	Wet	3	1	3
Result							Normal Conditions - 13

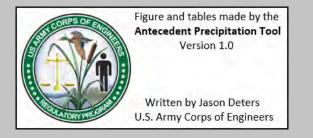


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days (Normal)	Days (Antecedent)
FT RICHARDSON WTP	61.2272, -149.6503	470.144	38.002	87.284	20.418	9556	59
WILLOW 4SW	61.7064, -150.1139	212.927	18.266	169.933	11.324	1	0
WILLOW 3.6 SE	61.6995, -149.9897	304.134	21.521	78.726	11.379	889	0
Alexander Lake	61.75, -150.89	160.105	17.005	222.755	11.44	79	31
WHITES CROSSING	61.7067, -149.9978	270.013	21.519	112.847	12.112	720	0
Point Mackenzie	61.39, -150.03	250.0	21.223	132.86	12.37	107	0

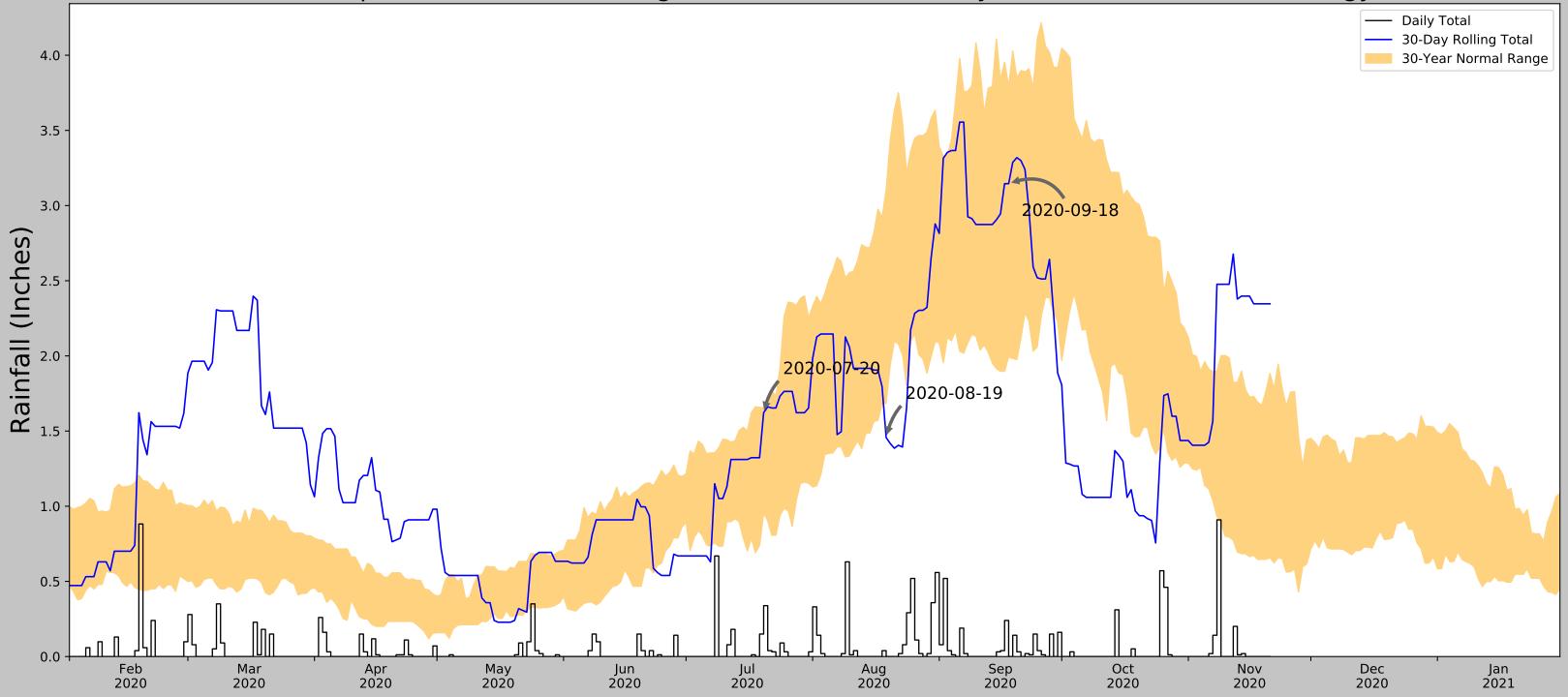


Coordinates	61.482536, -150.20089
Observation Date	2020-09-18
Elevation (ft)	108.6
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.994095	3.792126	3.145669	Normal	2	3	6
2020-08-19	1.684646	3.103543	1.456693	Dry	1	2	2
2020-07-20	0.953937	1.653543	1.622047	Normal	2	1	2
Result							Normal Conditions - 10

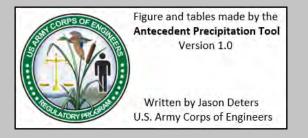


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	22.417	11.479	10.345	11352	90

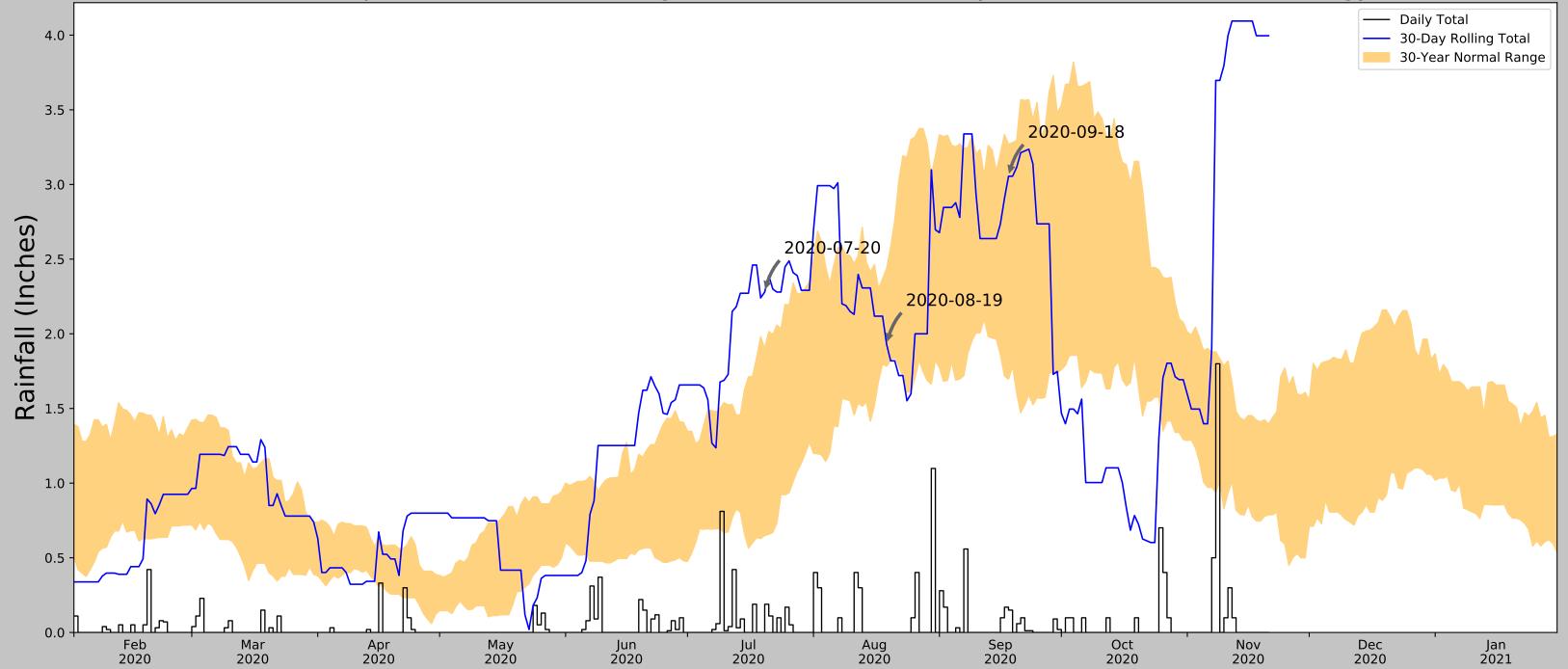


Coordinates	61.596464, -150.823003
Observation Date	2020-09-18
Elevation (ft)	298.85
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.994095	3.792126	3.145669	Normal	2	3	6
2020-08-19	1.684646	3.103543	1.456693	Dry	1	2	2
2020-07-20	0.953937	1.653543	1.622047	Normal	2	1	2
Result							Normal Conditions - 10

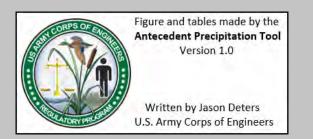


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	39.562	178.771	24.875	11352	90

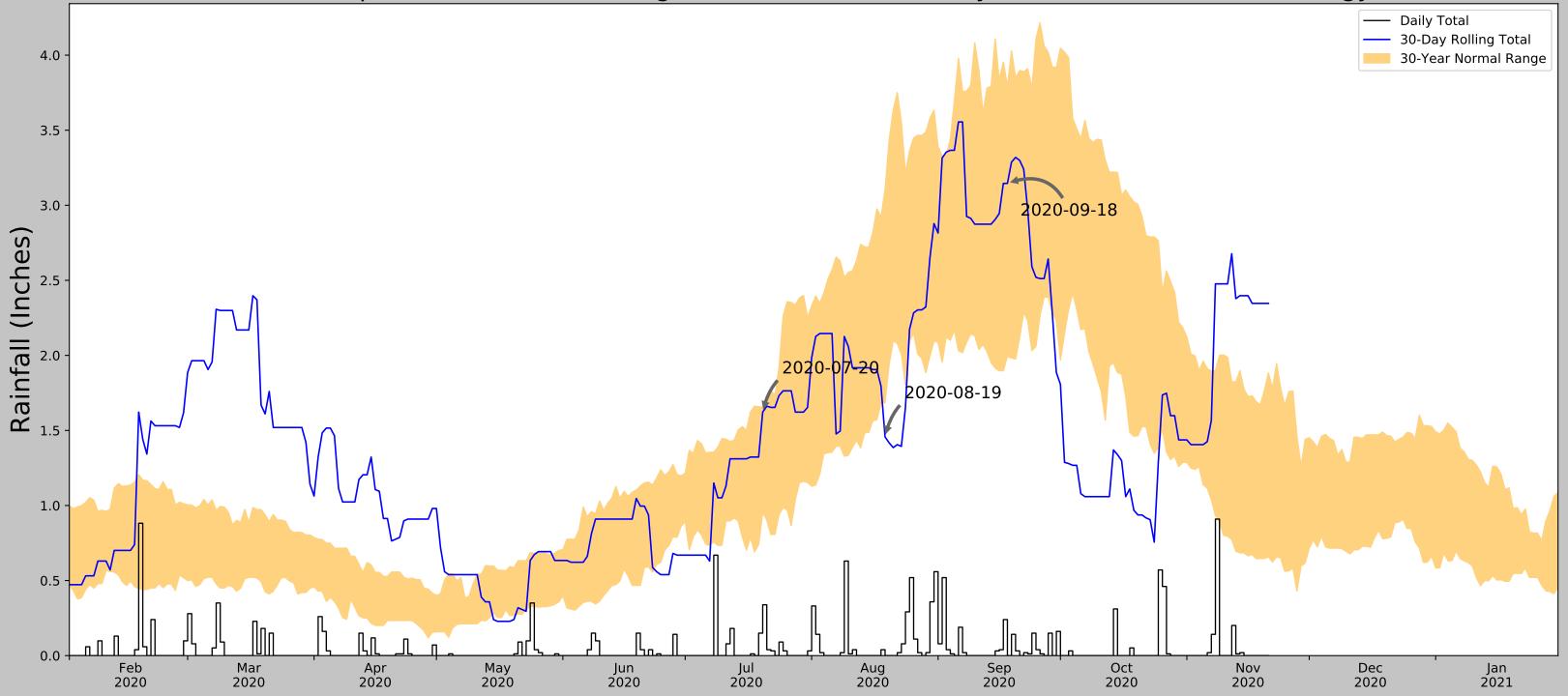


Coordinates	61.634403, -150.949181
Observation Date	2020-09-18
Elevation (ft)	428.55
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.696063	3.268898	3.055118	Normal	2	3	6
2020-08-19	1.782284	2.437402	1.929134	Normal	2	2	4
2020-07-20	0.648425	1.905512	2.279528	Wet	3	1	3
Result							Normal Conditions - 13

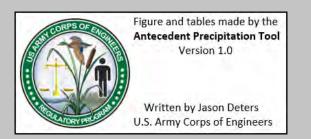


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
FT RICHARDSON WTP	61.2272, -149.6503	470.144	51.316	41.594	25.227	9556	59
Alexander Lake	61.75, -150.89	160.105	8.219	268.445	5.905	351	31
WILLOW 3.6 SE	61.6995, -149.9897	304.134	31.782	124.416	18.256	617	0
SKWENTNA	61.9772, -151.2169	149.934	25.246	278.616	18.395	755	0
WHITES CROSSING	61.7067, -149.9978	270.013	31.591	158.537	19.224	62	0
WILLOW WEST	61.7481, -150.0542	205.053	30.358	223.497	20.446	2	0
Point Mackenzie	61.39, -150.03	250.0	34.681	178.55	21.799	9	0

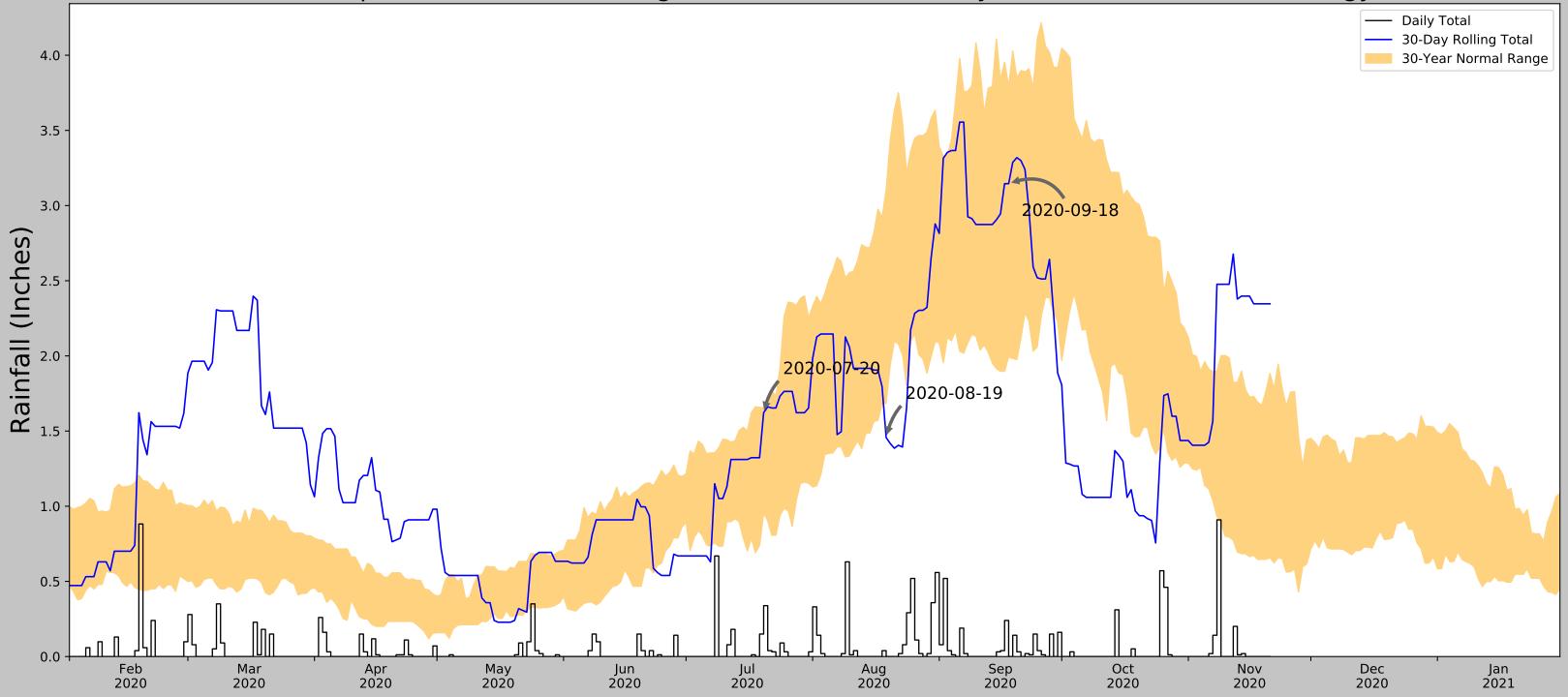


Coordinates	61.55484, -150.720269
Observation Date	2020-09-18
Elevation (ft)	196
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.994095	3.792126	3.145669	Normal	2	3	6
2020-08-19	1.684646	3.103543	1.456693	Dry	1	2	2
2020-07-20	0.953937	1.653543	1.622047	Normal	2	1	2
Result							Normal Conditions - 10

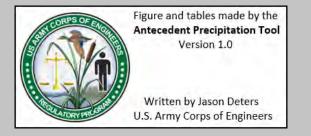


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	35.169	75.921	18.496	11352	90

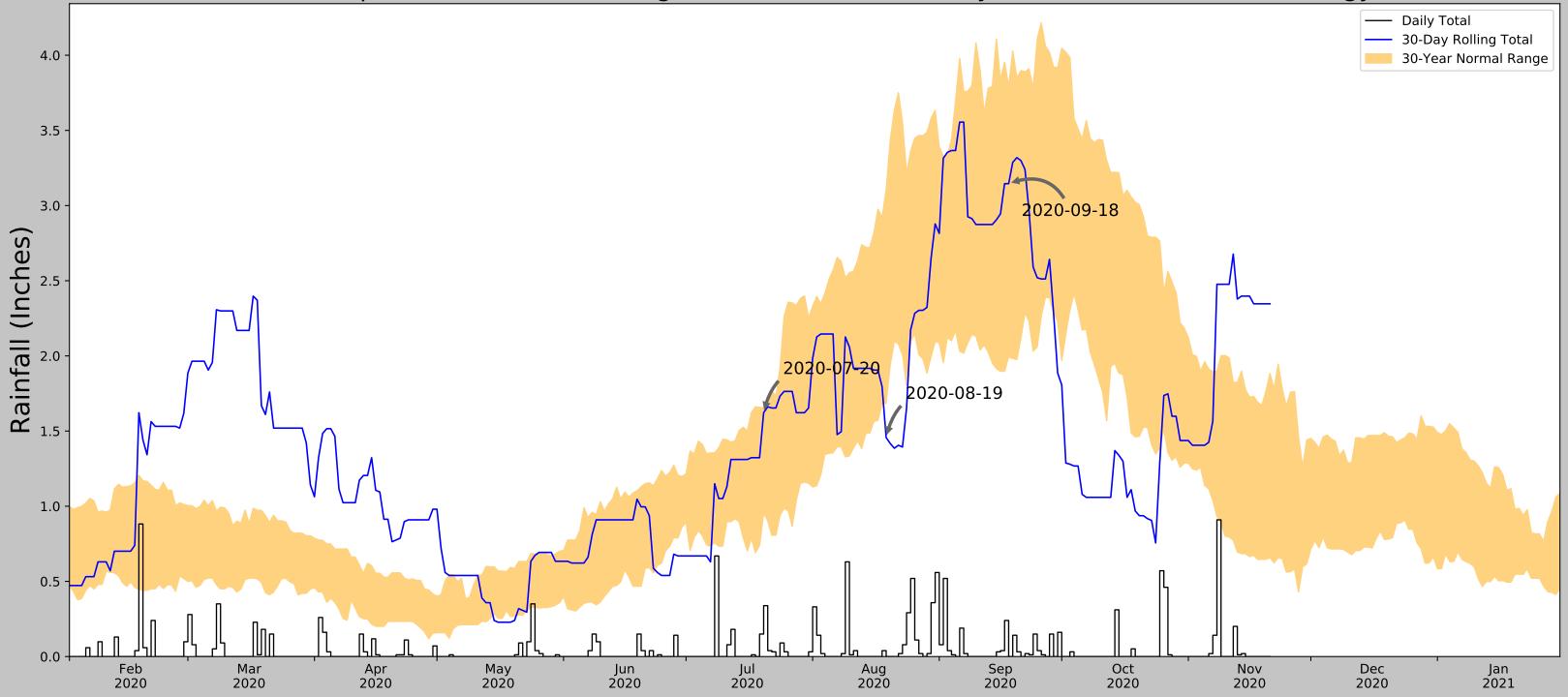


Coordinates	61.490805, -150.369468
Observation Date	2020-09-18
Elevation (ft)	83.74
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.994095	3.792126	3.145669	Normal	2	3	6
2020-08-19	1.684646	3.103543	1.456693	Dry	1	2	2
2020-07-20	0.953937	1.653543	1.622047	Normal	2	1	2
Result							Normal Conditions - 10

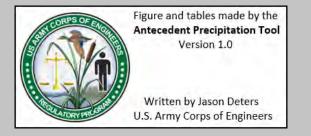


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	24.959	36.339	12.139	11352	90



Coordinates	61.524331, -150.474343
Observation Date	2020-09-18
Elevation (ft)	107.13
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-18	1.994095	3.792126	3.145669	Normal	2	3	6
2020-08-19	1.684646	3.103543	1.456693	Dry	1	2	2
2020-07-20	0.953937	1.653543	1.622047	Normal	2	1	2
Result							Normal Conditions - 10



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	28.67	12.949	13.273	11352	90



User Inputs

Coordinates	61.55589, -150.57133
Date	2020-09-23
Geographic Scope	Custom Polygon

Intermediate Data

Custom Watershed Name	0916-09292020_Field
Watershed Size	11.28 mi ²
# Random Sampling Points	7

Preliminary Result

	Average Antecedent Precipitation Score	9.71
1000	Preliminary Determination	Drier than Normal

Drier than Normal

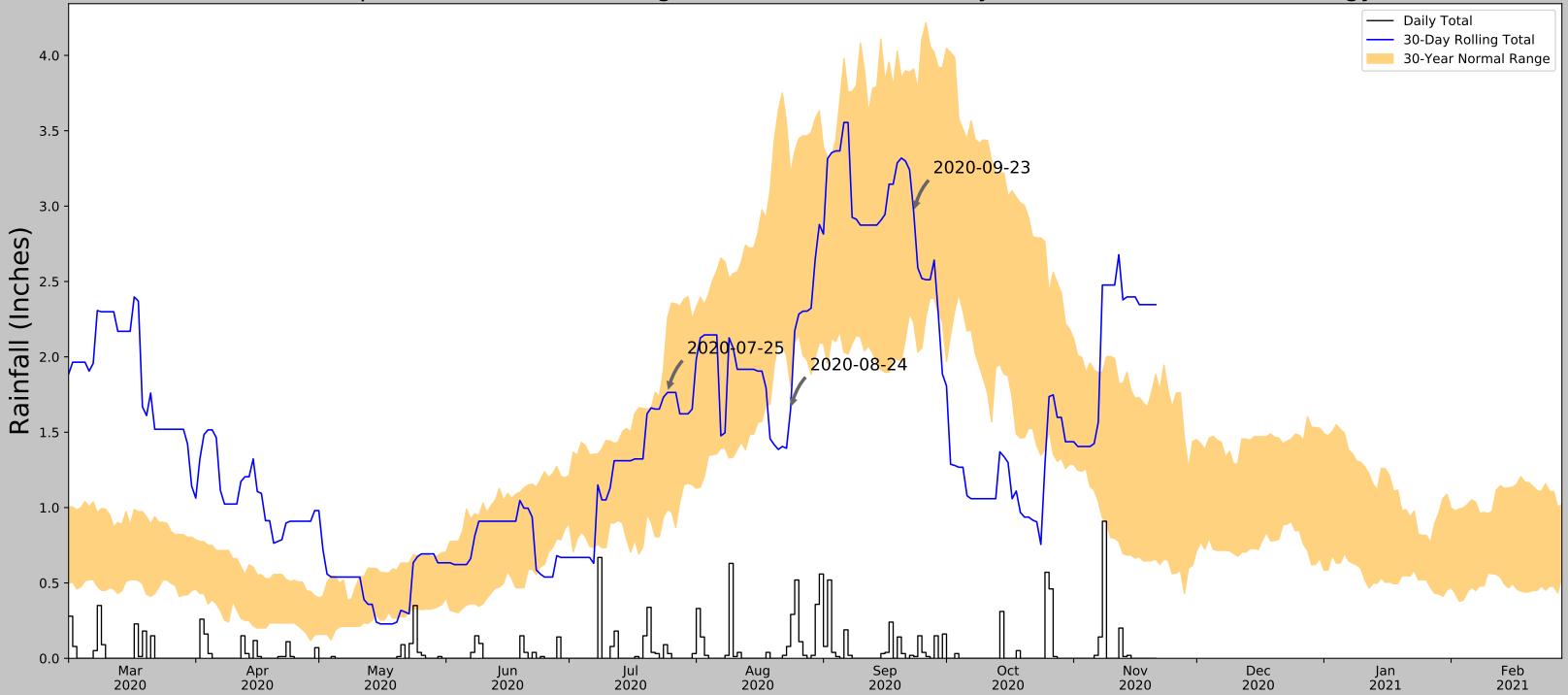
14.0%

86.0%

Normal Conditions

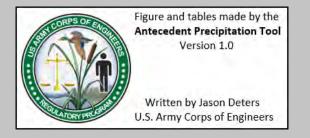
Sampling Point Breakdown

, i	Antecedent Precipitation Score	Antecedent Precipitation Condition	WebWIMP H ₂ O Balance	Drought Index (PDSI)	# of Points
7	10	Normal Conditions	Wet Season	Not available	6
*	8	Drier than Normal	Wet Season	Not available	1

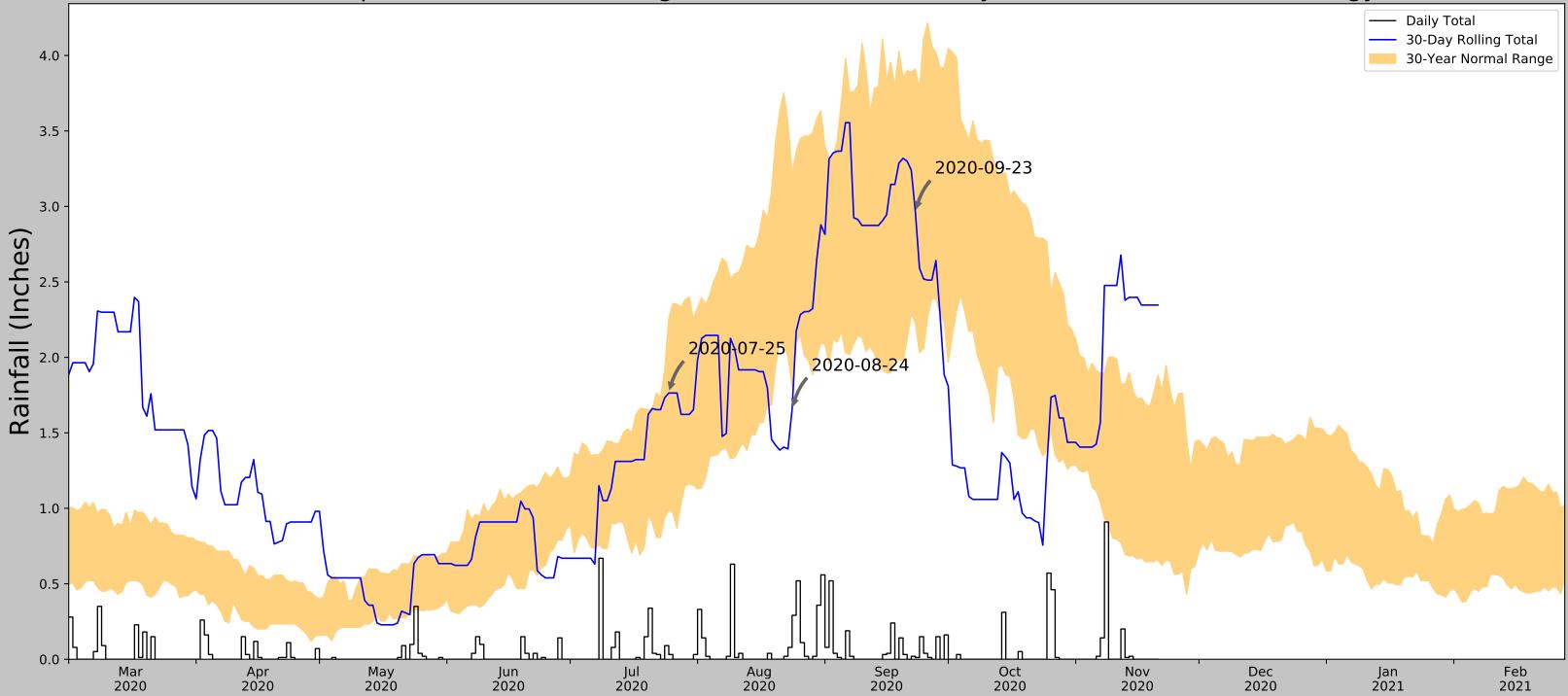


Coordinates	61.55589, -150.57133
Observation Date	2020-09-23
Elevation (ft)	227.84
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

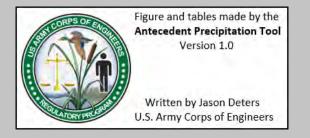


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	32.232	107.761	17.978	11352	90

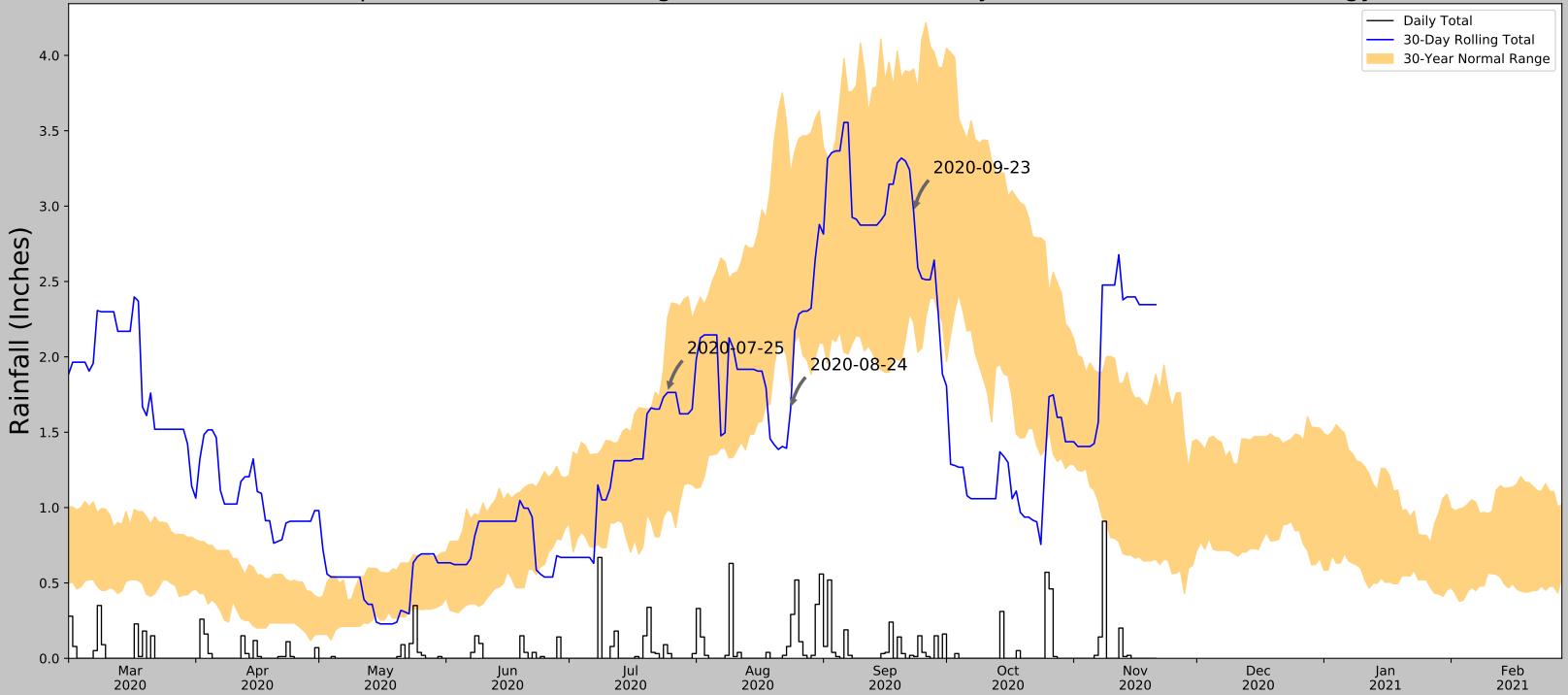


Coordinates	61.491107, -150.24861
Observation Date	2020-09-23
Elevation (ft)	94.12
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

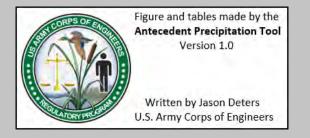


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	23.435	25.959	11.154	11352	90

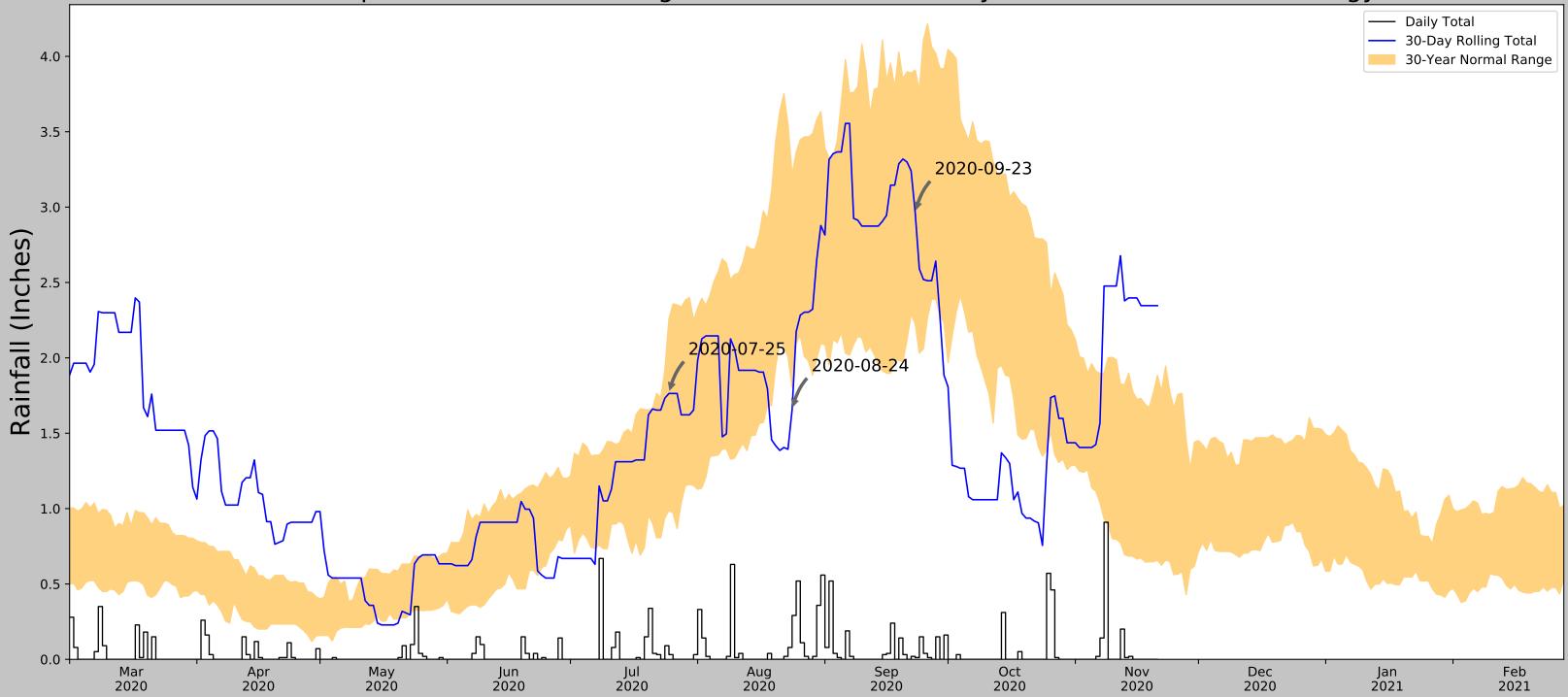


Coordinates	61.491349, -150.362664
Observation Date	2020-09-23
Elevation (ft)	74.55
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

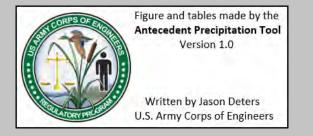


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	24.891	45.529	12.334	11352	90

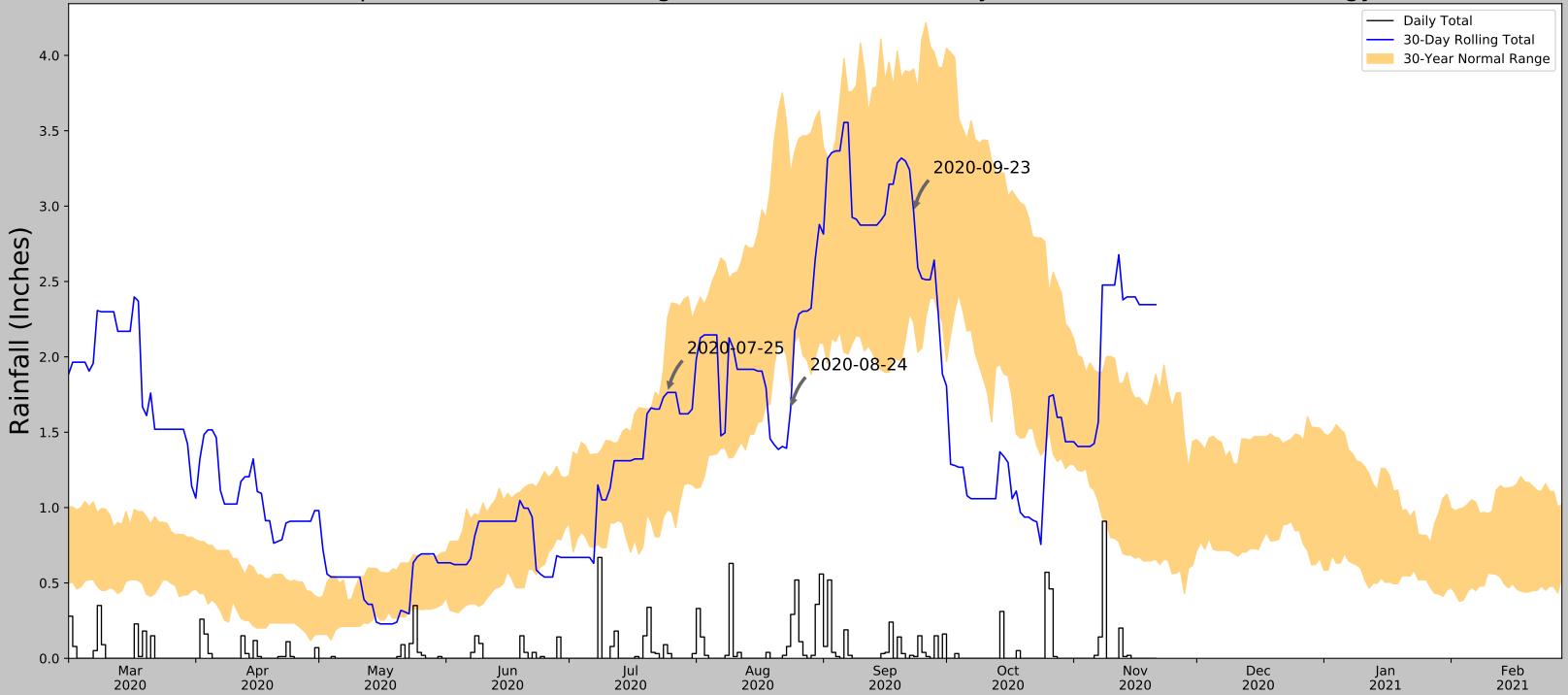


Coordinates	61.58599, -150.806726
Observation Date	2020-09-23
Elevation (ft)	357.14
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

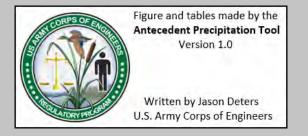


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	38.667	237.061	26.567	11352	90

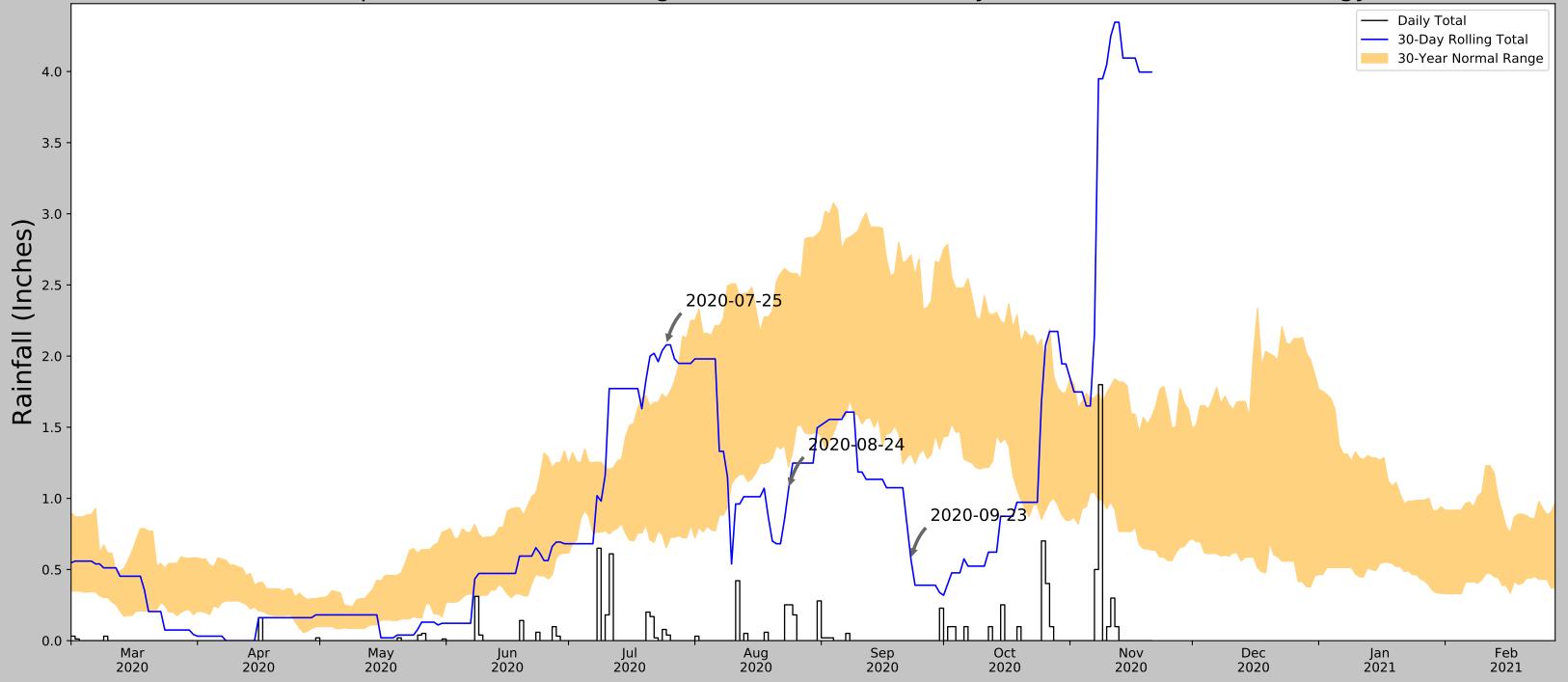


Coordinates	61.550448, -150.715999
Observation Date	2020-09-23
Elevation (ft)	229.3
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10

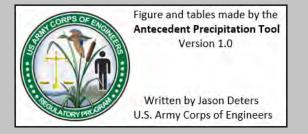


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	34.848	109.221	19.488	11352	90

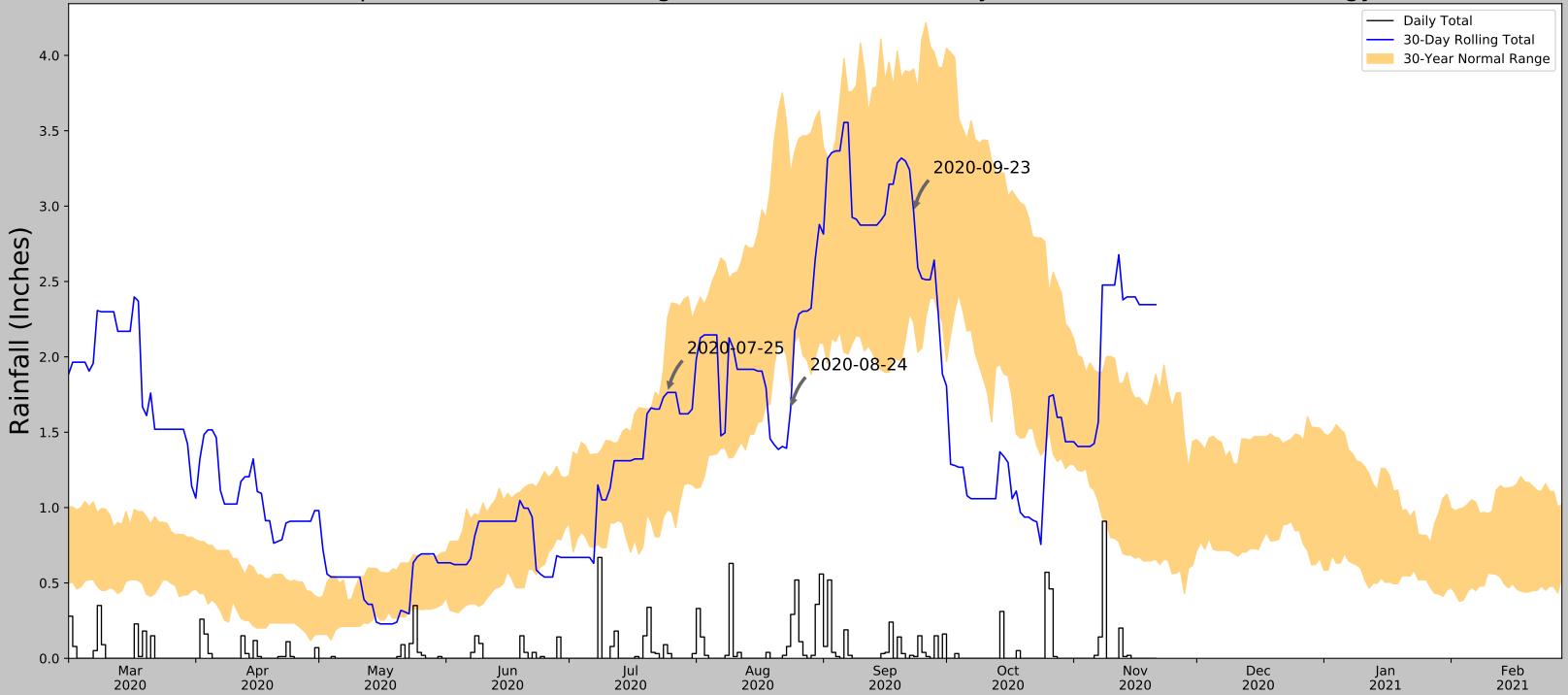


Coordinates	61.636211, -150.956091
Observation Date	2020-09-23
Elevation (ft)	441.54
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	1.315748	2.711811	0.570866	Dry	1	3	3
2020-08-24	1.219685	2.588583	1.066929	Dry	1	2	2
2020-07-25	0.652756	1.705118	2.07874	Wet	3	1	3
Result							Drier than Normal - 8

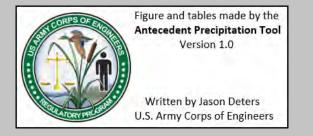


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
EAGLE RVR 5 SE	61.2967, -149.44	498.032	55.261	56.492	27.989	10444	90
Alexander Lake	61.75, -150.89	160.105	8.155	281.435	5.965	12	0
SKWENTNA	61.9772, -151.2169	149.934	25.051	291.606	18.578	865	0
WHITES CROSSING	61.7067, -149.9978	270.013	31.794	171.527	19.761	30	0
Point Mackenzie	61.39, -150.03	250.0	34.94	191.54	22.415	1	0

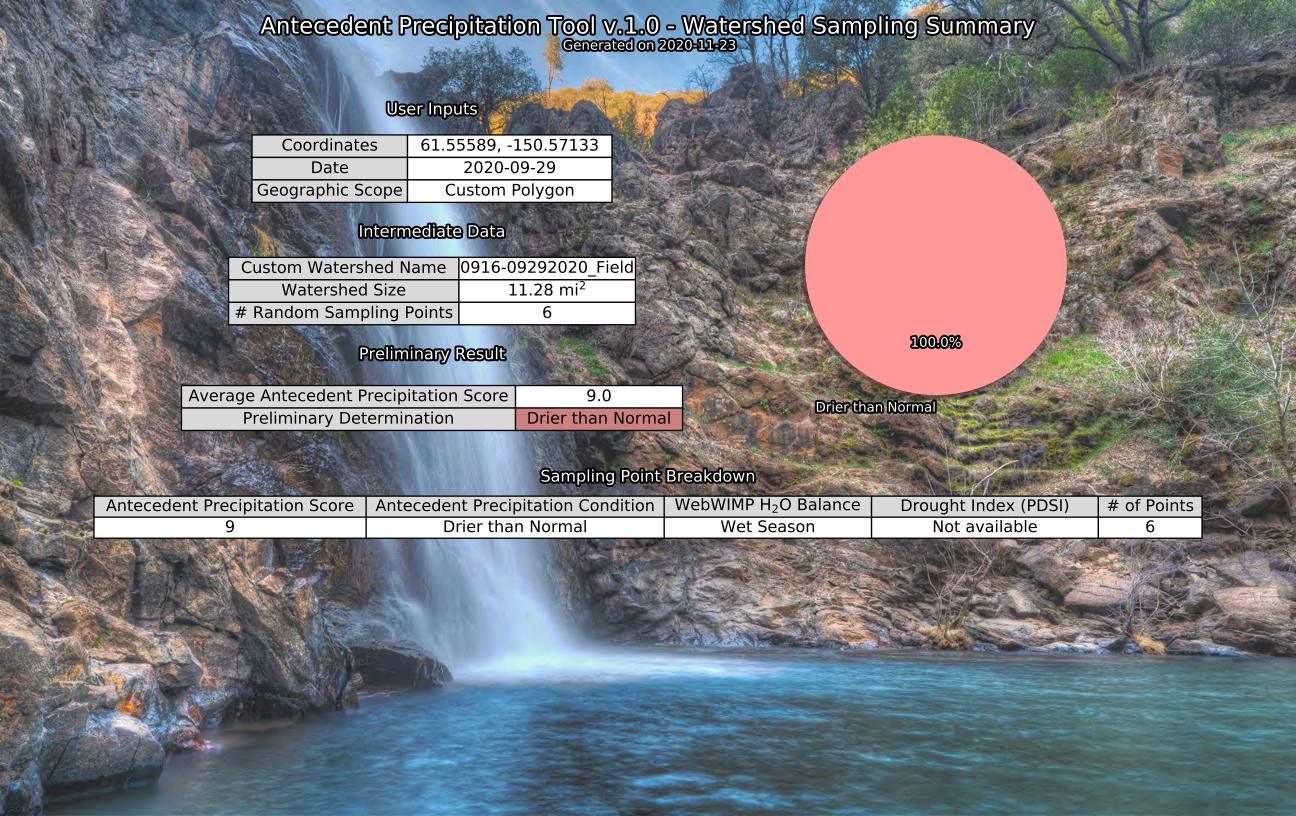


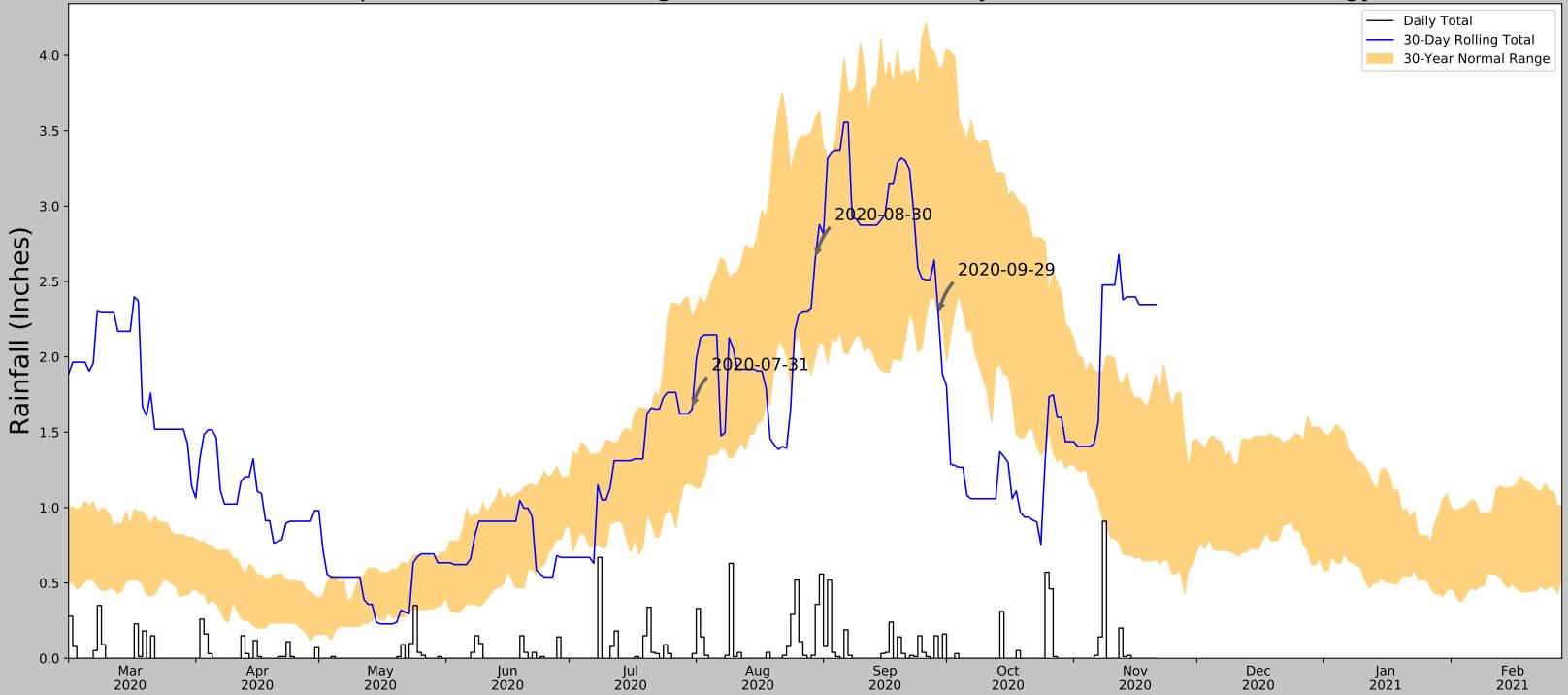
Coordinates	61.515751, -150.46797
Observation Date	2020-09-23
Elevation (ft)	101.95
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-23	2.226772	3.909449	2.96063	Normal	2	3	6
2020-08-24	1.805512	3.214961	1.653543	Dry	1	2	2
2020-07-25	0.986221	2.258661	1.76378	Normal	2	1	2
Result							Normal Conditions - 10



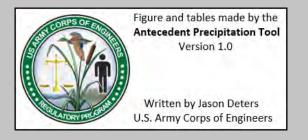
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	28.054	18.129	13.133	11352	90



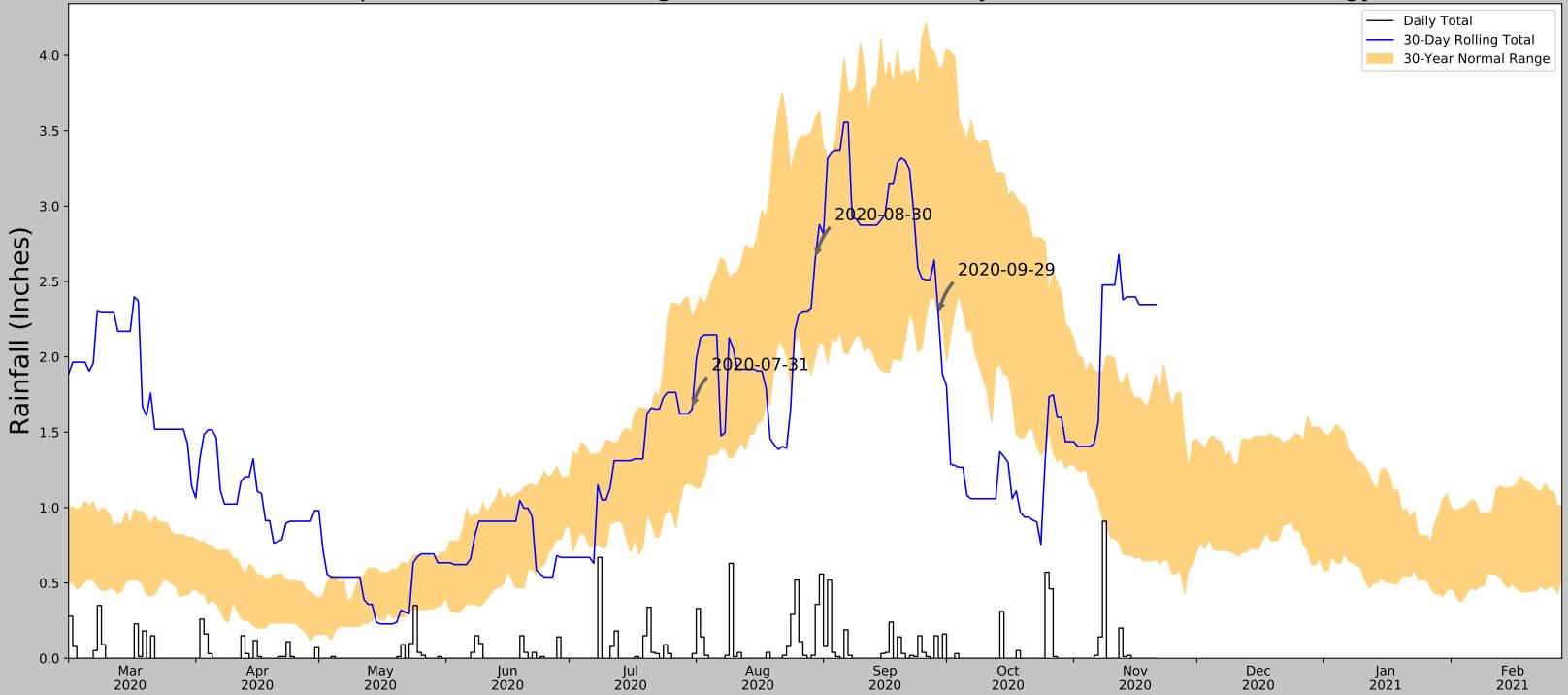


Coordinates	61.55589, -150.57133
Observation Date	2020-09-29
Elevation (ft)	275.32
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9

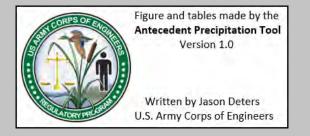


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	32.232	155.241	19.508	11352	90

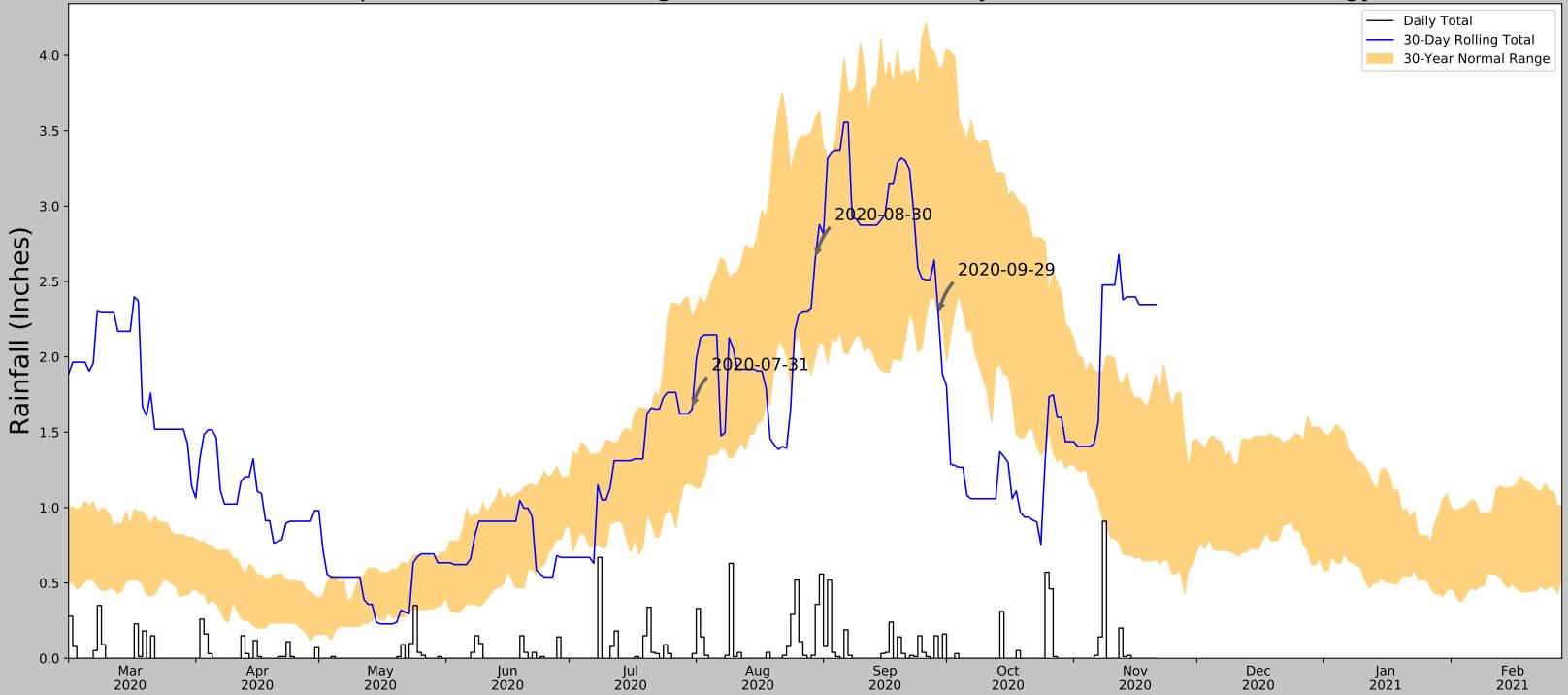


Coordinates	61.618851, -150.909453
Observation Date	2020-09-29
Elevation (ft)	385.92
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9

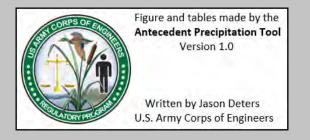


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	42.627	265.841	30.514	11352	90

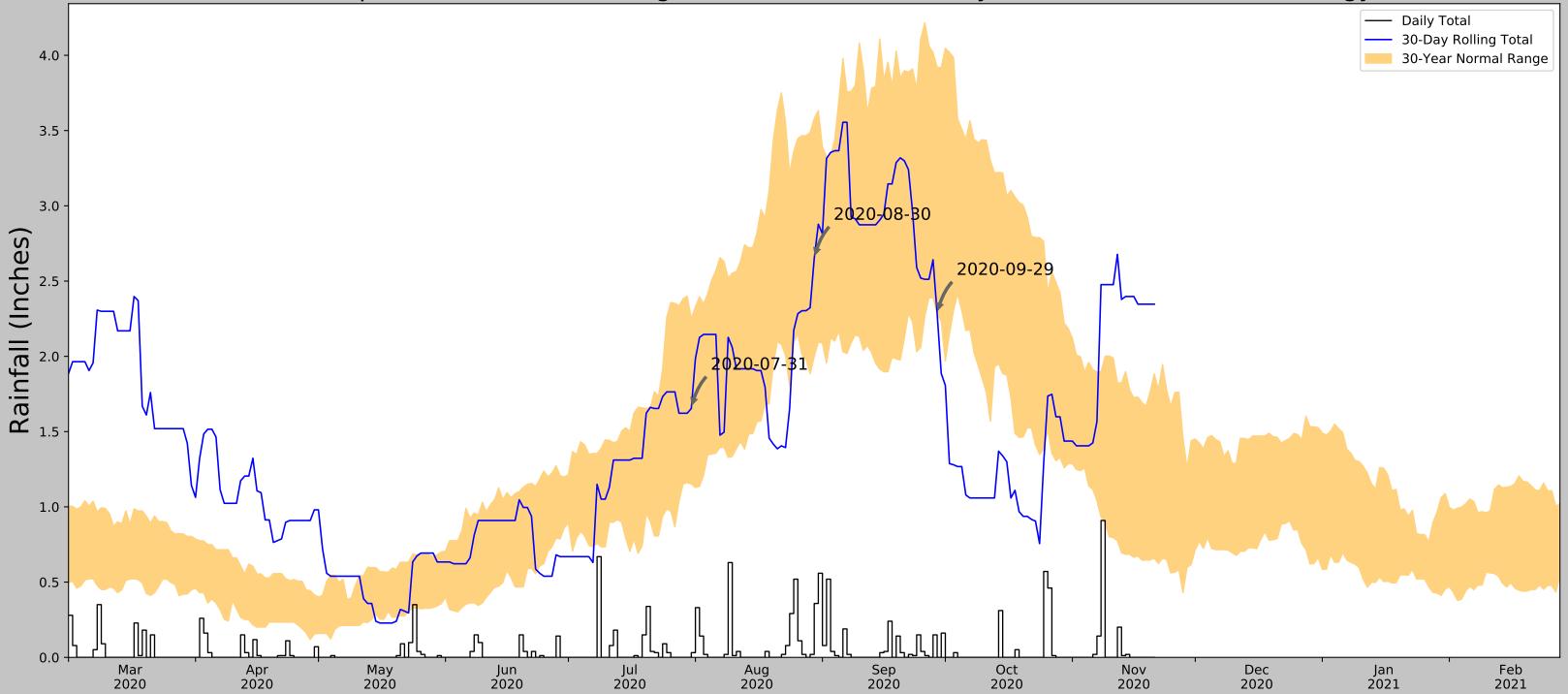


Coordinates	61.551894, -150.711119
Observation Date	2020-09-29
Elevation (ft)	193.64
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9

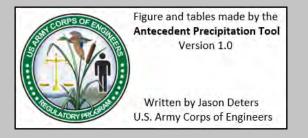


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	34.818	73.561	18.229	11352	90

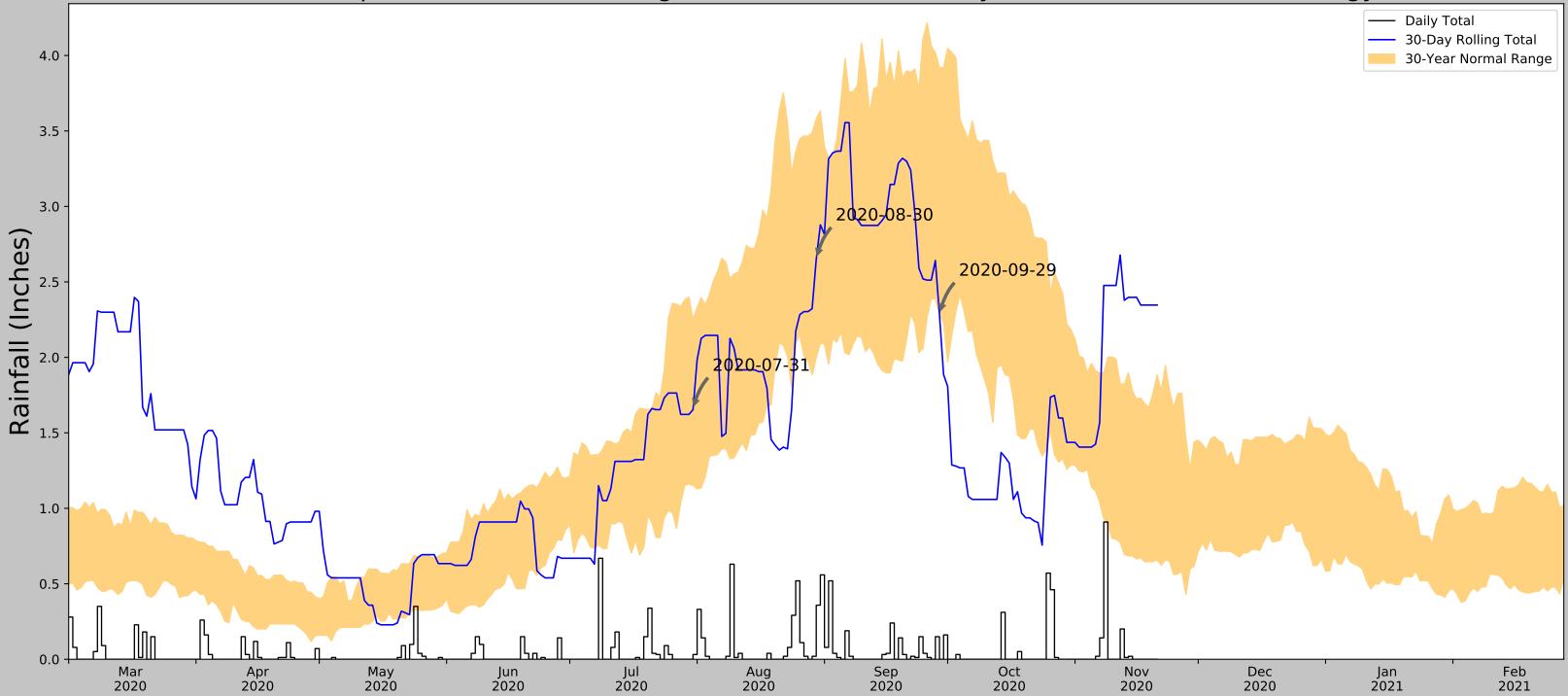


Coordinates	61.493788, -150.301212
Observation Date	2020-09-29
Elevation (ft)	86.65
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9

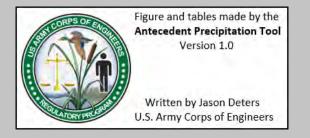


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	24.208	33.429	11.703	11352	90

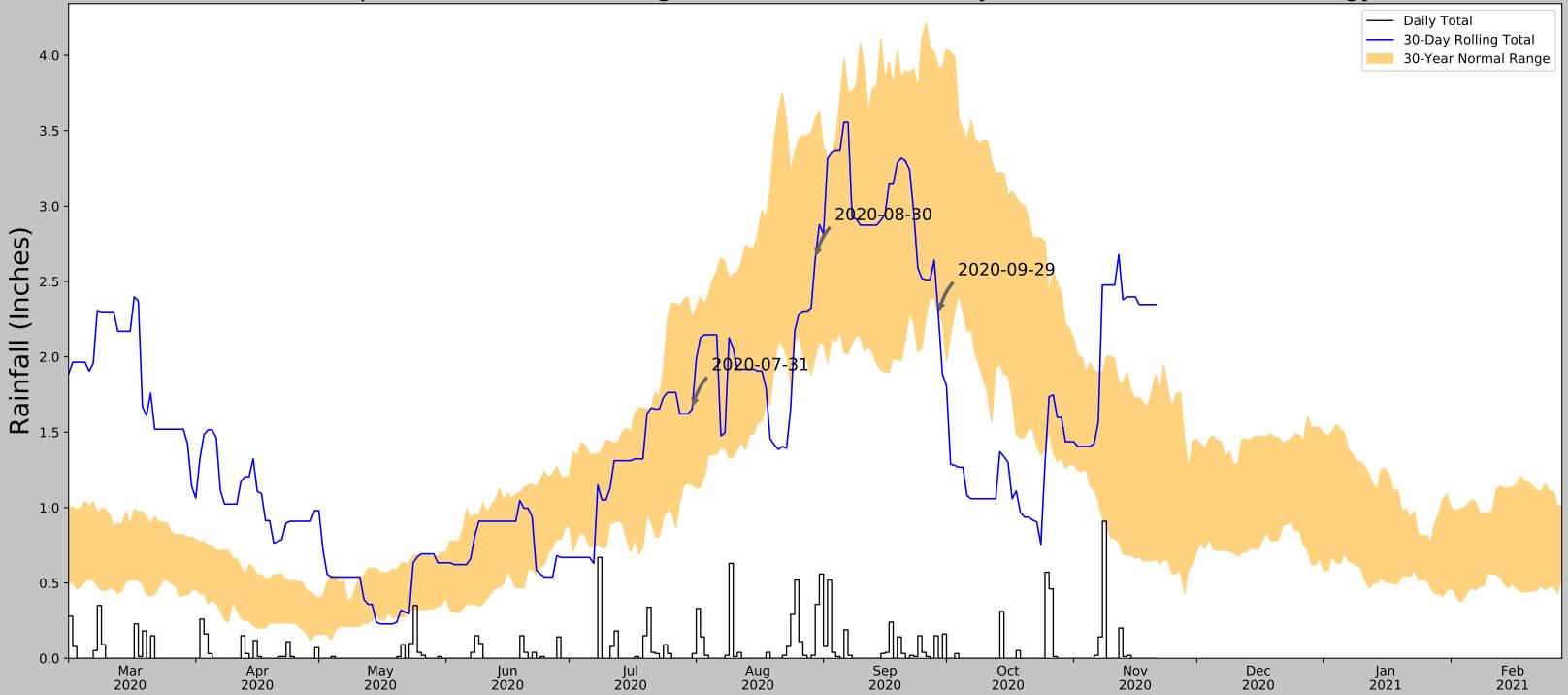


Coordinates	61.50212, -150.437902
Observation Date	2020-09-29
Elevation (ft)	99.75
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9

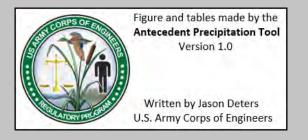


Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	26.736	20.329	12.575	11352	90



Coordinates	61.587018, -150.803005
Observation Date	2020-09-29
Elevation (ft)	271.47
Drought Index (PDSI)	Not available
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-09-29	2.285433	3.920866	2.283465	Dry	1	3	3
2020-08-30	1.996457	3.579134	2.649606	Normal	2	2	4
2020-07-31	1.152756	2.250394	1.653543	Normal	2	1	2
Result							Drier than Normal - 9



Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days (Normal)	Days (Antecedent)
ANCHORAGE INTL AP	61.1689, -150.0278	120.079	38.638	151.391	23.237	11352	90