

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Denali Borough Sampling Date: 08-Aug-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T170_01
 Investigator(s): WAD, RWM Landform (hillside, terrace, hummocks etc.): Hillside
 Local relief (concave, convex, none): undulating Slope: % / 11.1 ° Elevation: 831
 Subregion: Interior Alaska Mountains Lat.: 63.4206264018 Long.: -148.649760723 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: mid slope, undulating surface, well drained.	

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)
1. <u>Picea glauca</u>	8	<input checked="" type="checkbox"/>	FACU	
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
Total Cover:		8		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>30</u> x 2 = <u>60</u> FAC Species <u>101.1</u> x 3 = <u>303.3</u> FACU Species <u>14</u> x 4 = <u>56</u> UPL Species <u>5.1</u> x 5 = <u>25.5</u> Column Totals: <u>150.2</u> (A) <u>444.8</u> (B) Prevalence Index = B/A = <u>2.961</u>
Sapling/Shrub Stratum		50% of Total Cover: <u>4</u>	20% of Total Cover: <u>1.6</u>	
1. <u>Betula glandulosa</u>	65	<input checked="" type="checkbox"/>	FAC	
2. <u>Vaccinium uliginosum</u>	35	<input checked="" type="checkbox"/>	FAC	
3. <u>Rhododendron tomentosum</u>	30	<input checked="" type="checkbox"/>	FACW	
4. <u>Diapensia lapponica</u>	5	<input type="checkbox"/>	UPL	
5. <u>Picea glauca</u>	3	<input type="checkbox"/>	FACU	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:		138		
Herb Stratum		50% of Total Cover: <u>69</u>	20% of Total Cover: <u>27.6</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Cornus canadensis</u>	3	<input type="checkbox"/>	FACU	
2. <u>Carex bigelowii</u>	1	<input type="checkbox"/>	FAC	
3. <u>Anthoxanthum monticola ssp. alpinum</u>	0.1	<input type="checkbox"/>	UPL	
4. <u>Calamagrostis canadensis</u>	0.1	<input type="checkbox"/>	FAC	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:		4.2		
50% of Total Cover: <u>2.1</u>		20% of Total Cover: <u>0.84</u>		
Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground _____ Total Cover of Bryophytes <u>35</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				
Remarks: total herb cover <5%, thus no herbs considered dominant.				

SOIL

Sampling Point: SW13_T170_01

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5		100					Fibric Organics	
.5-3	10YR	3/2	100				Fine Sand	
3-7	7.5YR	4/6	100				Fine Sand	
7-16	2.5Y	4/3	100				Sand	

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils:³

Alaska Color Change (TA4)⁴ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
 Alaska Alpine swales (TA5) Other (Explain in Remarks)
 Alaska Redox With 2.5Y Hue

³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present
⁴ Give details of color change in Remarks

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 no hydric soil indicators observed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

Surface Water (A1) Inundation Visible on Aerial Imagery (B7)
 High Water Table (A2) Sparsely Vegetated Concave Surface (B8)
 Saturation (A3) Marl Deposits (B15)
 Water Marks (B1) Hydrogen Sulfide Odor (C1)
 Sediment Deposits (B2) Dry-Season Water Table (C2)
 Drift Deposits (B3) Other (Explain in Remarks)
 Algal Mat or Crust (B4)
 Iron Deposits (B5)
 Surface Soil Cracks (B6)

Secondary Indicators (two or more are required)

Water Stained Leaves (B9)
 Drainage Patterns (B10)
 Oxidized Rhizospheres along Living Roots (C3)
 Presence of Reduced Iron (C4)
 Salt Deposits (C5)
 Stunted or Stressed Plants (D1)
 Geomorphic Position (D2)
 Shallow Aquitard (D3)
 Microtopographic Relief (D4)
 FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 no hydrology indicators observed