

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 10-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T184_01
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Shoulder slope
 Local relief (concave, convex, none): hummocky Slope: 8.7 % / 5.0 ° Elevation: 688
 Subregion: Interior Alaska Mountains Lat.: 62.851258159 Long.: -148.568057537 Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PSS1/3B**

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 checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>DUNN SITE 1488 SOIL 1489</u>	

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>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1. <u>Picea mariana</u>	<u>7</u>	<input checked="" type="checkbox"/>	FACW	
2. _____	<u>0</u>	<input type="checkbox"/>	_____	
3. _____	<u>0</u>	<input type="checkbox"/>	_____	
4. _____	<u>0</u>	<input type="checkbox"/>	_____	
5. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>7</u>				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>52.2</u> x 2 = <u>104.4</u> FAC Species <u>115.2</u> x 3 = <u>345.6</u> FACU Species <u>0</u> x 4 = <u>0</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>167.4</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>2.688</u>
Sapling/Shrub Stratum 50% of Total Cover: <u>3.5</u> 20% of Total Cover: <u>1.4</u>				
1. <u>Vaccinium uliginosum</u>	<u>40</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Vaccinium vitis-idaea</u>	<u>5</u>	<input type="checkbox"/>	FAC	
3. <u>Empetrum nigrum</u>	<u>10</u>	<input type="checkbox"/>	FAC	
4. <u>Betula nana</u>	<u>3</u>	<input type="checkbox"/>	FAC	
5. <u>Ledum decumbens</u>	<u>20</u>	<input checked="" type="checkbox"/>	FACW	
6. <u>Arctostaphylos rubra</u>	<u>5</u>	<input type="checkbox"/>	FAC	
7. <u>Salix pulchra</u>	<u>5</u>	<input type="checkbox"/>	FACW	
8. <u>Picea mariana</u>	<u>5</u>	<input type="checkbox"/>	FACW	
9. <u>Ledum groenlandicum</u>	<u>7</u>	<input type="checkbox"/>	FAC	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>100</u>				
Herb Stratum 50% of Total Cover: <u>50</u> 20% of Total Cover: <u>20</u>				
1. <u>Equisetum arvense</u>	<u>35</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Carex bigelowii</u>	<u>10</u>	<input type="checkbox"/>	FAC	
3. <u>Rubus chamaemorus</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACW	
4. <u>Cornus suecica</u>	<u>0.1</u>	<input type="checkbox"/>	FAC	
5. <u>Pedicularis labradorica</u>	<u>0.1</u>	<input type="checkbox"/>	FACW	
6. <u>Petasites frigidus</u>	<u>0.1</u>	<input type="checkbox"/>	FACW	
7. <u>Valeriana capitata</u>	<u>0.1</u>	<input type="checkbox"/>	FAC	
8. _____	<u>0</u>	<input type="checkbox"/>	_____	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>60.4</u>				
50% of Total Cover: <u>30.2</u> 20% of Total Cover: <u>12.08</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.				
Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) <u>30</u> % Bare Ground <u>0</u> Total Cover of Bryophytes <u>60</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				
Remarks: <u>5% lichen</u>				

SOIL

Sampling Point: **SW13_T184_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							Fibric Organics	
5-10							Hemic Organics	

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

³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present

⁴ Give details of color change in Remarks

Restrictive Layer (if present):
 Type: Rock
 Depth (inches): 10

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

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

Secondary Indicators (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): 1

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

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

Remarks:
 Scattered wet depressions