

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 20-Jun-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T06\_04  
 Investigator(s): SLI, EKJ Landform (hillside, terrace, hummocks etc.): Terrace  
 Local relief (concave, convex, none): hummocky Slope: 3.5 % / 2.0 ° Elevation: 492  
 Subregion: Interior Alaska Mountains Lat.: 62.8278799083 Long.: -148.617639971 Datum: WGS84  
 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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: open picmar along small rise. steep hillside to the SW, small drop to wetter community to the NE. varied thrush calling, ptarmigan sign.	

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

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b>				<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
1. <u>Picea mariana</u>	<u>15</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"/>	_____	
<b>Total Cover:</b> <u>15</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>20</u> x 2 = <u>40</u> FAC Species <u>82</u> x 3 = <u>246</u> FACU Species <u>1</u> x 4 = <u>4</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>103</u> (A) <u>290</u> (B) Prevalence Index = B/A = <u>2.816</u>
<b>Sapling/Shrub Stratum</b> 50% of Total Cover: <u>7.5</u> 20% of Total Cover: <u>3</u>				
1. <u>Salix commutata</u>	<u>1</u>	<input type="checkbox"/>	FAC	
2. <u>Ledum groenlandicum</u>	<u>2</u>	<input type="checkbox"/>	FAC	
3. <u>Vaccinium vitis-idaea</u>	<u>50</u>	<input checked="" type="checkbox"/>	FAC	
4. <u>Empetrum nigrum</u>	<u>2</u>	<input type="checkbox"/>	FAC	
5. <u>Vaccinium uliginosum</u>	<u>25</u>	<input checked="" type="checkbox"/>	FAC	
6. <u>Betula nana</u>	<u>2</u>	<input type="checkbox"/>	FAC	
7. <u>Ledum decumbens</u>	<u>5</u>	<input type="checkbox"/>	FACW	
8. <u>Geocaulon lividum</u>	<u>1</u>	<input type="checkbox"/>	FACU	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>88</u>				
<b>Herb Stratum</b> 50% of Total Cover: <u>44</u> 20% of Total Cover: <u>17.6</u>				
1. _____	<u>0</u>	<input type="checkbox"/>	_____	
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"/>	_____	
6. _____	<u>0</u>	<input type="checkbox"/>	_____	
7. _____	<u>0</u>	<input type="checkbox"/>	_____	
8. _____	<u>0</u>	<input type="checkbox"/>	_____	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>0</u>				
50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u>				

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is > 50%  
 Prevalence Index is ≤ 3.0  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width) 10m  
 % Cover of Wetland Bryophytes (Where applicable) \_\_\_\_\_  
 % Bare Ground 3  
 Total Cover of Bryophytes 90

**Hydrophytic Vegetation Present?** Yes  No

Remarks: 5% lichen cover. Geoliv placed in shrub stratum as herb stratum had less than 5% total cover.

**SOIL**

Sampling Point: **SW12\_T06\_04**

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 <sup>1</sup>		
0-2			100					Fibric Organics
2-5			100					Hemic Organics charcoal at 5inches
5-7	10YR	4/2	60					Sandy Loam 40% charcoal and heavy staining (2.5/10Y)
7-10	5YR	3/3	100					Sandy Loam few charcoal
10-16	10YR	4/6	90					Sandy Loam 10% 2.5Y5/2 in patches and few charcoal

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix <sup>2</sup> 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:<sup>3</sup>**

Alaska Color Change (TA4)<sup>4</sup>  
 Alaska Alpine swales (TA5)  
 Alaska Redox With 2.5Y Hue

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

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

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

**Hydric Soil Present?** Yes  No

Remarks:  
 area has burned in the past - charcoal in profile and highly oxidized upper mineral soils. refusal at 16in (cobbles).

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

**Wetland Hydrology Present?** Yes  No

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

Remarks:  
 animal burrows in hummocks at base of picea trees. no wetland hydrology indicators.