

**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\_08  
 Investigator(s): SLI, EKJ Landform (hillside, terrace, hummocks etc.): Lowland  
 Local relief (concave, convex, none): hummocky Slope: 0.0 % / 0.0 ° Elevation: 454  
 Subregion: Interior Alaska Mountains Lat.: 62.8243399088 Long.: -148.624569971 Datum: WGS84  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: PSS4E

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"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>picmar forested wetland w trees and shrubs on well developed hummocks, water between hummocks.</u>	

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Picea mariana</u>	15	<input checked="" type="checkbox"/>	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>85.7%</u> (A/B)
2. <u>Picea glauca</u>	5	<input checked="" type="checkbox"/>	FACU	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>20</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>40</u> x 2 = <u>80</u> FAC Species <u>27</u> x 3 = <u>81</u> FACU Species <u>18</u> x 4 = <u>72</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>85</u> (A) <u>233</u> (B) Prevalence Index = B/A = <u>2.741</u>
<b>Sapling/Shrub Stratum</b>	50% of Total Cover: <u>10</u>	20% of Total Cover: <u>4</u>		
1. <u>Picea mariana</u>	15	<input checked="" type="checkbox"/>	FACW	
2. <u>Vaccinium uliginosum</u>	7	<input checked="" type="checkbox"/>	FAC	
3. <u>Vaccinium vitis-idaea</u>	7	<input checked="" type="checkbox"/>	FAC	
4. <u>Betula nana</u>	3	<input type="checkbox"/>	FAC	
5. <u>Salix pulchra</u>	5	<input type="checkbox"/>	FACW	
6. <u>Linnaea borealis</u>	3	<input type="checkbox"/>	FACU	
7. <u>Rosa acicularis</u>	3	<input type="checkbox"/>	FACU	
8. <u>Viburnum edule</u>	2	<input type="checkbox"/>	FACU	
9. <u>Picea glauca</u>	5	<input type="checkbox"/>	FACU	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>50</u>				
<b>Herb Stratum</b>	50% of Total Cover: <u>25</u>	20% of Total Cover: <u>10</u>		
1. <u>Equisetum sylvaticum</u>	5	<input checked="" type="checkbox"/>	FAC	
2. <u>Arctagrostis latifolia</u>	2	<input type="checkbox"/>	FACW	
3. <u>Rumex arcticus</u>	2	<input type="checkbox"/>	FAC	
4. <u>Rubus chamaemorus</u>	3	<input checked="" type="checkbox"/>	FACW	
5. <u>Cornus suecica</u>	2	<input type="checkbox"/>	FAC	
6. <u>Rubus arcticus ssp. acaulis</u>	1	<input type="checkbox"/>	FAC	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>15</u>				
50% of Total Cover: <u>7.5</u>	20% of Total Cover: <u>3</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 7  
 Total Cover of Bryophytes 90

**Hydrophytic Vegetation Present?** Yes  No

Remarks: arclat id based on last season inflorescence. many dead down trees and snags. facu veg growing on well developed hummocks.

**SOIL**

**Sampling Point: SW12\_T06\_08**

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>	Loc <sup>2</sup>		

<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:  
no soil pit due to standing water throughout site. assume hydric soils due to hydrophytic vegetation and primary hydrology indicators.

**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): 4  
 Water Table Present?    Yes     No     Depth (inches): 0  
 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:  
surface water throughout site, avg 4in deep. water in hollows btwn hummocks, fine substrates, tannin colored water.