

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 24-Jun-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T07\_04  
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Hillside  
 Local relief (concave, convex, none): hummocky Slope: 83.9 % / 40.0 ° Elevation: 512  
 Subregion: Interior Alaska Mountains Lat.: 62.8341699086 Long.: -148.258009972 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 type="radio"/> No <input checked="" 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:	

**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>2</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>28.6%</u> (A/B)
1. <u>Picea glauca</u>	<u>30</u>	<input checked="" type="checkbox"/>	FACU	
2. <u>Betula neoalaskana</u>	<u>25</u>	<input checked="" type="checkbox"/>	FACU	
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>55</u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>0</u> x 2 = <u>0</u> FAC Species <u>4</u> x 3 = <u>12</u> FACU Species <u>96</u> x 4 = <u>384</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>396</u> (B) Prevalence Index = B/A = <u>3.960</u>
<b>Sapling/Shrub Stratum</b> 50% of Total Cover: <u>27.5</u> 20% of Total Cover: <u>11</u>				
1. <u>Alnus viridis ssp. crispa</u>	<u>2</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Vaccinium vitis-idaea</u>	<u>2</u>	<input checked="" type="checkbox"/>	FAC	
3. <u>Linnaea borealis</u>	<u>1</u>	<input type="checkbox"/>	FACU	
4. <u>Shepherdia canadensis</u>	<u>2</u>	<input checked="" type="checkbox"/>	FACU	
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>7</u>		
<b>Herb Stratum</b> 50% of Total Cover: <u>3.5</u> 20% of Total Cover: <u>1.4</u>				
1. <u>Cornus canadensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	FACU	
2. <u>Geocaulon lividum</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU	
3. <u>Chamerion angustifolium</u>	<u>1</u>	<input type="checkbox"/>	FACU	
4. <u>Mertensia paniculata</u>	<u>1</u>	<input type="checkbox"/>	FACU	
5. <u>Hedysarum alpinum</u>	<u>1</u>	<input type="checkbox"/>	FACU	
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>38</u>		
50% of Total Cover: <u>19</u> 20% of Total Cover: <u>7.6</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) 0  
 % Bare Ground 0  
 Total Cover of Bryophytes 70

**Hydrophytic Vegetation Present?** Yes  No

Remarks: trace vaculi rosaci unk grass (no flowers) ledgro

**SOIL**

Sampling Point: **SW12\_T07\_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>		
0-3			100				Fibric Organics	30% roots
3-4			100				Hemic Organics	w/ 30% roots
4-6	10YR	4/2	95				Fine Sandy Loam	5% roots with some charcoal.
6-7	7.5YR	4/6	100				Fine Sandy Loam	few roots
7-12	10YR	4/4	100				Fine Sandy Loam	4/4+ and few roots
12-19	10YR	4/6	55				Coarse Loamy Sand	45% rounded gravel

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

<p><b>Hydric Soil Indicators:</b></p> <input type="checkbox"/> Histosol or Histel (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Alaska Gleyed (A13) <input type="checkbox"/> Alaska Redox (A14) <input type="checkbox"/> Alaska Gleyed Pores (A15)	<p><b>Indicators for Problematic Hydric Soils:<sup>3</sup></b></p> <input type="checkbox"/> Alaska Color Change (TA4) <sup>4</sup> <input type="checkbox"/> Alaska Alpine swales (TA5) <input type="checkbox"/> Alaska Redox With 2.5Y Hue <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer <input type="checkbox"/> Other (Explain in Remarks)
<p><sup>3</sup> One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present</p> <p><sup>4</sup> Give details of color change in Remarks</p>	
<p>Restrictive Layer (if present):            Type:            Depth (inches):</p>	<p><b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/></p>
<p>Remarks:            charcoal leads us to believe that this area had a historical fire.</p>	

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p><u>Primary Indicators (any one is sufficient)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary Indicators (two or more are required)</u></p> <input type="checkbox"/> Water Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)
<p><b>Field Observations:</b></p> <p>Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p>	<p><b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/></p>	
<p>Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:</p>		
<p>Remarks:</p>		