

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 05-Jul-13  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13\_T129\_02  
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Mountainslope  
 Local relief (concave, convex, none): gggbv Slope: % / 7.2 ° Elevation: 864  
 Subregion: Southcentral Alaska Lat.: 62.8417588472 Long.: -149.010876298 Datum: NAD83  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: PSS1B

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:	

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>		
1. _____	0	<input type="checkbox"/>	_____	Number of Dominant Species That are OBL, FACW, or FAC:	<u>2</u> (A)	
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)	
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC:	<u>66.7%</u> (A/B)	
4. _____	0	<input type="checkbox"/>	_____			
5. _____	0	<input type="checkbox"/>	_____			
<b>Total Cover:</b> <u>0</u>						
Sapling/Shrub Stratum	50% of Total Cover: <u>0</u>		20% of Total Cover: <u>0</u>		<b>Prevalence Index worksheet:</b>	
1. <u>Arctous ruber</u>	10	<input type="checkbox"/>	FAC	Total % Cover of:	Multiply by:	
2. <u>Salix reticulata</u>	10	<input type="checkbox"/>	FAC	OBL Species <u>0</u>	x 1 = <u>0</u>	
3. <u>Dryas ajanensis</u>	20	<input checked="" type="checkbox"/>	UPL	FACW Species <u>0.1</u>	x 2 = <u>0.200</u>	
4. <u>Betula nana</u>	5	<input type="checkbox"/>	FAC	FAC Species <u>66</u>	x 3 = <u>198</u>	
5. <u>Vaccinium uliginosum</u>	15	<input checked="" type="checkbox"/>	FAC	FACU Species <u>0.2</u>	x 4 = <u>0.800</u>	
6. <u>Vaccinium vitis-idaea</u>	2	<input type="checkbox"/>	FAC	UPL Species <u>20.1</u>	x 5 = <u>100.5</u>	
7. <u>Empetrum nigrum</u>	1	<input type="checkbox"/>	FAC	Column Totals: <u>86.4</u> (A)	<u>299.5</u> (B)	
8. <u>Salix pseudomonticola</u>	1	<input type="checkbox"/>	FAC	Prevalence Index = B/A = <u>3.466</u>		
9. <u>Cassiope tetragona</u>	0.1	<input type="checkbox"/>	FACU			
10. _____	0	<input type="checkbox"/>	_____			
<b>Total Cover:</b> <u>64.1</u>						
50% of Total Cover: <u>32.05</u>		20% of Total Cover: <u>12.82</u>		<b>Hydrophytic Vegetation Indicators:</b>		
1. <u>Carex bigelowii</u>	20	<input checked="" type="checkbox"/>	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%		
2. <u>Tofieldia pusilla</u>	2	<input type="checkbox"/>	FAC	<input type="checkbox"/> Prevalence Index is ≤ 3.0		
3. <u>Bistorta plumosa</u>	0.1	<input type="checkbox"/>	FACU	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
4. <u>Astragalus umbellatus</u>	0.1	<input type="checkbox"/>	UPL	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
5. <u>Pedicularis labradorica</u>	0.1	<input type="checkbox"/>	FACW	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
6. _____	0	<input type="checkbox"/>	_____	Plot size (radius, or length x width)	<u>10m</u>	
7. _____	0	<input type="checkbox"/>	_____	% Cover of Wetland Bryophytes (Where applicable)	<u>2</u>	
8. _____	0	<input type="checkbox"/>	_____	% Bare Ground	<u>10</u>	
9. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes	<u>30</u>	
10. _____	0	<input type="checkbox"/>	_____			
<b>Total Cover:</b> <u>22.3</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>		
50% of Total Cover: <u>11.15</u>		20% of Total Cover: <u>4.46</u>				

Remarks: LICHEN 20

**SOIL**

Sampling Point: SW13\_T129\_02

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>		
0-2							Fibric Organics	
2-3							Hemic Organics	
3-10	7.5YR	3/2					Gravelly Silt Loam	color change 10 YR 3/3

<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 checked="" 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)
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<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

<p>Restrictive Layer (if present):                  Type: Frozen                  Depth (inches): 16</p>	<p><b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Remarks:

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" 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>Secondary Indicators (two or more are required)</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)
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<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 checked="" type="radio"/> No <input type="radio"/> Depth (inches): 5</p> <p>Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 3</p>	<p><b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/></p>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks: