

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Denali Borough Sampling Date: 06-Aug-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T16\_08  
 Investigator(s): SLI, KMK Landform (hillside, terrace, hummocks etc.): Hillside  
 Local relief (concave, convex, none): hummocky Slope: 8.7 % / 5.0 ° Elevation: 805  
 Subregion: Interior Alaska Mountains Lat.: 63.4271215772 Long.: -148.615093308 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: <u>picea woodland - understory alternates between tall alnus and low salix-graminoid communities, plot spans both. on hike from SW12_T16_07 to here, walked through substantial picmar wetland, appeared to be seep at topo break.</u>	

**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. <u>Picea glauca</u>	10	<input checked="" type="checkbox"/>	FACU	Number of Dominant Species That are OBL, FACW, or FAC:	<u>3</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC:	<u>60.0%</u> (A/B)
4. _____	0	<input type="checkbox"/>	_____		
5. _____	0	<input type="checkbox"/>	_____		
<b>Total Cover:</b>			<u>10</u>		
<b>Sapling/Shrub Stratum</b>	50% of Total Cover: <u>5</u>	20% of Total Cover: <u>2</u>			
1. <u>Salix pulchra</u>	20	<input checked="" type="checkbox"/>	FACW	<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>53</u> x 3 = <u>159</u> FACU Species <u>28</u> x 4 = <u>112</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>101</u> (A) <u>311</u> (B) Prevalence Index = B/A = <u>3.079</u>	
2. <u>Alnus viridis ssp. crispa</u>	30	<input checked="" type="checkbox"/>	FAC		
3. <u>Vaccinium uliginosum</u>	10	<input type="checkbox"/>	FAC		
4. <u>Vaccinium vitis-idaea</u>	0.1	<input type="checkbox"/>	FAC		
5. <u>Spiraea stevenii</u>	5	<input type="checkbox"/>	FACU		
6. <u>Picea glauca</u>	3	<input type="checkbox"/>	FACU		
7. <u>Ribes triste</u>	2	<input type="checkbox"/>	FAC		
8. <u>Linnaea borealis</u>	2	<input type="checkbox"/>	FACU		
9. _____	0	<input type="checkbox"/>	_____		
10. _____	0	<input type="checkbox"/>	_____		
<b>Total Cover:</b>			<u>72.1</u>		
<b>Herb Stratum</b>	50% of Total Cover: <u>36.05</u>	20% of Total Cover: <u>14.42</u>			
1. <u>Calamagrostis canadensis</u>	10	<input checked="" type="checkbox"/>	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Cornus canadensis</u>	1	<input type="checkbox"/>	FACU		
3. <u>Lycopodium clavatum</u>	3	<input type="checkbox"/>	FACU		
4. <u>Mertensia paniculata</u>	3	<input type="checkbox"/>	FACU		
5. <u>Aconitum delphinifolium</u>	0.1	<input type="checkbox"/>	FAC		
6. <u>Boykinia richardsonii</u>	11	<input checked="" type="checkbox"/>	_____		
7. <u>Polemonium acutiflorum</u>	1	<input type="checkbox"/>	FAC		
8. <u>Bistorta plumosa</u>	1	<input type="checkbox"/>	FACU		
9. <u>Poa interior</u>	0.1	<input type="checkbox"/>	FAC		
10. <u>Luzula parviflora</u>	0.1	<input type="checkbox"/>	FAC		
<b>Total Cover:</b>			<u>30.3</u>	Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground _____ Total Cover of Bryophytes _____	
50% of Total Cover: <u>15.15</u>	20% of Total Cover: <u>6.06</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>			
Remarks: <u>1% carbig</u>					

**SOIL**

Sampling Point: **SW12\_T16\_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>		
0-2							Fibric Organics	
2-4							Hemic Organics	
4-4.5							Sapric Organics	
4.5-16	7.5YR	3/2	90				Sandy Loam	10% sapric organic lenses

<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 hydric soil indicators

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (any one is sufficient)

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

Algal Mat or Crust (B4)  
 Iron Deposits (B5)  
 Surface Soil Cracks (B6)

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?    Yes     No                       Depth (inches):  
 (includes capillary fringe)

**Wetland Hydrology Present?**    Yes     No

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

Remarks:  
 no wetland hydrology indicators