

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 03-Aug-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T37\_05  
 Investigator(s): CTS, EKJ Landform (hillside, terrace, hummocks etc.): Mountainslope  
 Local relief (concave, convex, none): convex Slope: 10.5 % / 6.0 ° Elevation: 354  
 Subregion: Southcentral Alaska Lat.: 62.809649909 Long.: -149.556599965 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>6</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
1. <u>Picea glauca</u>	<u>15</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>40</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>56</u> x 3 = <u>168</u> FACU Species <u>218</u> x 4 = <u>872</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>274</u> (A) <u>1040</u> (B) Prevalence Index = B/A = <u>3.796</u>
<b>Sapling/Shrub Stratum</b>		50% of Total Cover: <u>20</u>	20% of Total Cover: <u>8</u>	
1. <u>Alnus viridis ssp. sinuata</u>	<u>5</u>	<input type="checkbox"/>	FAC	
2. <u>Vaccinium ovalifolium</u>	<u>15</u>	<input checked="" type="checkbox"/>	FAC	
3. <u>Sorbus sitchensis</u>	<u>2</u>	<input type="checkbox"/>	FACU	
4. <u>Menziesia ferruginea</u>	<u>1</u>	<input type="checkbox"/>	FACU	
5. <u>Betula neoalaskana</u>	<u>2</u>	<input type="checkbox"/>	FACU	
6. <u>Rubus pedatus</u>	<u>30</u>	<input checked="" type="checkbox"/>	FAC	
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>55</u>				
<b>Herb Stratum</b>		50% of Total Cover: <u>27.5</u>	20% of Total Cover: <u>11</u>	<b>Hydrophytic Vegetation Indicators:</b> <input 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.
1. <u>Dryopteris expansa</u>	<u>70</u>	<input checked="" type="checkbox"/>	FACU	
2. <u>Cornus canadensis</u>	<u>80</u>	<input checked="" type="checkbox"/>	FACU	
3. <u>Spinulum annotinum</u>	<u>20</u>	<input type="checkbox"/>	FACU	
4. <u>Streptopus amplexifolius</u>	<u>1</u>	<input type="checkbox"/>	FACU	
5. <u>Chamerion angustifolium</u>	<u>1</u>	<input type="checkbox"/>	FACU	
6. <u>Calamagrostis canadensis</u>	<u>5</u>	<input type="checkbox"/>	FAC	
7. <u>Trientalis europaea</u>	<u>1</u>	<input type="checkbox"/>	FACU	
8. <u>Equisetum sylvaticum</u>	<u>1</u>	<input type="checkbox"/>	FAC	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
<b>Total Cover:</b> <u>179</u>				
		50% of Total Cover: <u>89.5</u>	20% of Total Cover: <u>35.8</u>	Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) <u>0</u> % Bare Ground <u>1</u> Total Cover of Bryophytes <u>0</u>  <b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks:				

**SOIL**

Sampling Point: **SW12\_T37\_05**

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>		
0-1		100					Fibric Organics	
1-4	7.5YR	2.5/2	80				Loamy Sand	20% roots
4-7	10YR	6/2	100				Loamy Sand	
7-9	5YR	2.5/2	100%				Loamy Sand	few rounded gravel and roots
9-14	5YR	2.5/2	100%				Sandy Loam	few rounded gravel and roots
14-16	5YR	2.5/2	100%				Sandy Loam	few rounded gravel and roots
16-18	7.5R	2.5/3	100%				Sandy Loam	few rounded gravel and roots
18-20	7.5YR	3/4	90				Silt Loam	10% angular gravel

<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 Gleyed Without Hue 5Y or Redder Underlying Layer  
 Alaska Alpine swales (TA5)       Other (Explain in Remarks)  
 Alaska Redox With 2.5Y Hue

<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