

**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\_02  
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Terrace  
 Local relief (concave, convex, none): hummocky Slope: 0.0 % / 0.0 ° Elevation: 501  
 Subregion: Interior Alaska Mountains Lat.: 62.8309699085 Long.: -148.259719972 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>5</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>40.0%</u> (A/B)
1. <u>Picea glauca</u>	<u>35</u>	<input checked="" type="checkbox"/>	FACU	
2. _____	<u>0</u>	<input type="checkbox"/>	_____	
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>35</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>50</u> x 3 = <u>150</u> FACU Species <u>53</u> x 4 = <u>212</u> UPL Species <u>25</u> x 5 = <u>125</u> Column Totals: <u>128</u> (A) <u>487</u> (B) Prevalence Index = B/A = <u>3.805</u>
<b>Sapling/Shrub Stratum</b> 50% of Total Cover: <u>17.5</u> 20% of Total Cover: <u>7</u>				
1. <u>Alnus incana ssp. tenuifolia</u>	<u>25</u>	<input checked="" type="checkbox"/>	UPL	
2. <u>Salix bebbiana</u>	<u>10</u>	<input checked="" type="checkbox"/>	FAC	
3. _____	<u>0</u>	<input type="checkbox"/>	_____	
4. _____	<u>0</u>	<input type="checkbox"/>	_____	
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>35</u>				
<b>Herb Stratum</b> 50% of Total Cover: <u>17.5</u> 20% of Total Cover: <u>7</u>				
1. <u>Cornus canadensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU	
2. <u>Equisetum arvense</u>	<u>35</u>	<input checked="" type="checkbox"/>	FAC	
3. <u>Calamagrostis canadensis</u>	<u>5</u>	<input type="checkbox"/>	FAC	
4. <u>Mertensia paniculata</u>	<u>1</u>	<input type="checkbox"/>	FACU	
5. <u>Rubus arcticus (IAM)</u>	<u>2</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>58</u>				
50% of Total Cover: <u>29</u> 20% of Total Cover: <u>11.6</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 65

**Hydrophytic Vegetation Present?** Yes  No

Remarks: trace chaang, arttil, alder & willow seedlings, poptri, pyrsec, plaobt lots of litter and woody debris

**SOIL**

**Sampling Point: SW12\_T07\_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>				
0-3		70					Fibric Organics	w high sand content and 30% roots		
3-4	2.5Y	4/2	100				Silt Loam	some organics and 3% roots		
4-6		100					Fibric Organics	w/ high silt content		
6-10	2.5Y	3/2	90	10YR	4/4	3	C	PL	Fine Loamy Sand	layers of organics and sand
10-15	2.5Y	3/2	60	10YR	3/6	40	C	PL	Silt Loam	also reduction around root channels.

<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)
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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

Restrictive Layer (if present): Type: ice Depth (inches): 15	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:  
 looks like there is a history of overbank flooding.

**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"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<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 checked="" 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> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Water Table Present?      Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Saturation Present?        Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks: