

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 09-Jul-13  
 Applicant/Owner: Alaska Energy Authority Sampling Point: **SW13 T120\_03**  
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Lowland  
 Local relief (concave, convex, none): hummocky Slope: 3.5 % / 2.0 ° Elevation: 980  
 Subregion: Southcentral Alaska Lat.: 62.701840281 Long.: -149.714923859 Datum: WGS84  
 Soil Map Unit Name: \_\_\_\_\_ **NWI classification: PEM1E**

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: <u>DUNN SITE 1477 SOIL 1478</u>	

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	0	<input type="checkbox"/>	_____
2. _____	0	<input type="checkbox"/>	_____
3. _____	0	<input type="checkbox"/>	_____
4. _____	0	<input type="checkbox"/>	_____
5. _____	0	<input type="checkbox"/>	_____
<b>Total Cover:</b>	<u>0</u>		
<b>Sapling/Shrub Stratum</b>	50% of Total Cover: <u>0</u>	20% of Total Cover: <u>0</u>	
1. <u>Salix reticulata</u>	20	<input checked="" type="checkbox"/>	FAC
2. <u>Empetrum nigrum</u>	2	<input type="checkbox"/>	FAC
3. _____	0	<input type="checkbox"/>	_____
4. _____	0	<input type="checkbox"/>	_____
5. _____	0	<input type="checkbox"/>	_____
6. _____	0	<input type="checkbox"/>	_____
7. _____	0	<input type="checkbox"/>	_____
8. _____	0	<input type="checkbox"/>	_____
9. _____	0	<input type="checkbox"/>	_____
10. _____	0	<input type="checkbox"/>	_____
<b>Total Cover:</b>	<u>22</u>		
<b>Herb Stratum</b>	50% of Total Cover: <u>11</u>	20% of Total Cover: <u>4.4</u>	
1. <u>Eriophorum angustifolium</u>	5	<input type="checkbox"/>	OBL
2. <u>Carex bigelowii</u>	25	<input checked="" type="checkbox"/>	FAC
3. <u>Sanguisorba officinalis</u>	5	<input type="checkbox"/>	FACW
4. <u>Festuca altaica</u>	2	<input type="checkbox"/>	FAC
5. <u>Valeriana capitata</u>	1	<input type="checkbox"/>	FAC
6. <u>Equisetum arvense</u>	5	<input type="checkbox"/>	FAC
7. <u>Carex podocarpa</u>	15	<input checked="" type="checkbox"/>	FAC
8. <u>Dodecatheon frigidum</u>	10	<input type="checkbox"/>	FACW
9. <u>Anemone richardsonii</u>	7	<input type="checkbox"/>	FAC
10. <u>Carex saxatilis</u>	0.1	<input type="checkbox"/>	FACW
<b>Total Cover:</b>	<u>75.1</u>		
	50% of Total Cover: <u>37.55</u>	20% of Total Cover: <u>15.02</u>	

**Dominance Test worksheet:**  
 Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL Species 5 x 1 = 5  
 FACW Species 15.1 x 2 = 30.20  
 FAC Species 77 x 3 = 231  
 FACU Species 0 x 4 = 0  
 UPL Species 0 x 5 = 0  
 Column Totals: 97.1 (A) 266.2 (B)  
 Prevalence Index = B/A = 2.742

**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 20  
 Total Cover of Bryophytes 15

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Tr rumarc pedic solidago salix 5 (coll) bisplu

**SOIL**

Sampling Point: **SW13\_T120\_03**

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>		
0-6		100					Fibric Organics	
6-11	7.5YR	2.5/1	100				Silt Loam	Positive alpha alpha dypiridyl rxn
11-14	10YR	3/3	70	5YR	3/4	30	Silty Clay	

<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 checked="" 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: rock                  Depth (inches): 14</p>	<p><b>Hydric Soil Present?</b>    Yes <input checked="" type="radio"/>    No <input type="radio"/></p>
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Remarks:  
 Positive alpha alpha dypiridyl rxn

**HYDROLOGY**

<p><b>Wetland Hydrology Indicators:</b></p> <p>Primary Indicators (any one is sufficient)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input 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 checked="" 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 checked="" type="radio"/>    No <input type="radio"/>    Depth (inches): 4</p> <p>Water Table Present?    Yes <input checked="" type="radio"/>    No <input type="radio"/>    Depth (inches): 13</p> <p>Saturation Present? (includes capillary fringe)    Yes <input checked="" type="radio"/>    No <input type="radio"/>    Depth (inches): 11</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:  
 Surface water in rock-filled depressions approx. 20% of area. Positive alpha alpha dypiridyl rxn.