

**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\_09  
 Investigator(s): SLI, KMK Landform (hillside, terrace, hummocks etc.): Toeslope  
 Local relief (concave, convex, none): concave Slope: 0.0 % / 3.0 ° Elevation: 657  
 Subregion: Interior Alaska Mountains Lat.: 63.4276565777 Long.: -148.623126639 Datum: WGS84  
 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: toeslope wetland, no indication that this floods from the Nenana	

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

<u>Tree Stratum</u>	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>4</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
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>		<b>Prevalence Index worksheet:</b>
1. <u>Salix pulchra</u>	40	<input checked="" type="checkbox"/>	FACW	Total % Cover of: Multiply by:
2. <u>Dasiphora fruticosa</u>	15	<input type="checkbox"/>	FAC	OBL Species <u>43</u> x 1 = <u>43</u>
3. <u>Betula neoalaskana</u>	1	<input type="checkbox"/>	FACU	FACW Species <u>51</u> x 2 = <u>102</u>
4. <u>Picea glauca</u>	2	<input type="checkbox"/>	FACU	FAC Species <u>54</u> x 3 = <u>162</u>
5. <u>Salix commutata</u>	20	<input checked="" type="checkbox"/>	FAC	FACU Species <u>3</u> x 4 = <u>12</u>
6. <u>Salix pseudomonticola</u>	1	<input type="checkbox"/>	FAC	UPL Species <u>0</u> x 5 = <u>0</u>
7. <u>Salix alaxensis</u>	3	<input type="checkbox"/>	FAC	Column Totals: <u>151</u> (A) <u>319</u> (B)
8. <u>Betula glandulosa</u>	0.1	<input type="checkbox"/>	FAC	Prevalence Index = B/A = <u>2.113</u>
9. <u>Vaccinium uliginosum</u>	0.1	<input type="checkbox"/>	FAC	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>			<u>82.2</u>	<b>Hydrophytic Vegetation Indicators:</b>
<b>Herb Stratum</b>	50% of Total Cover: <u>41.1</u>	20% of Total Cover: <u>16.44</u>		<input checked="" type="checkbox"/> Dominance Test is > 50%
1. <u>Carex aquatilis</u>	20	<input checked="" type="checkbox"/>	OBL	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
2. <u>Carex rotundata</u>	20	<input checked="" type="checkbox"/>	OBL	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
3. <u>Parnassia palustris</u>	1	<input type="checkbox"/>	FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
4. <u>Comarum palustre</u>	2	<input type="checkbox"/>	OBL	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Rumex acetosa</u>	5	<input type="checkbox"/>	FAC	Plot size (radius, or length x width) <u>5m</u>
6. <u>Calamagrostis canadensis</u>	10	<input type="checkbox"/>	FAC	% Cover of Wetland Bryophytes (Where applicable) _____
7. <u>Equisetum pratense</u>	10	<input type="checkbox"/>	FACW	% Bare Ground <u>40</u>
8. <u>Juncus arcticus</u>	1	<input type="checkbox"/>	OBL	Total Cover of Bryophytes <u>50</u>
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>			<u>69</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover:	<u>34.5</u>	20% of Total Cover:	<u>13.8</u>	

Remarks: trace sweeper, viola sp. Rumace placeholder for unknown rumex species.

**SOIL**

Sampling Point: **SW12\_T16\_09**

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>		
0-5								Fibric Organics	
5-6								Hemic Organics	
6-6.5	10YR	4/2	100					Sandy Loam	
6.5-10	10YR	3/2	100%					Silt Loam	highly perturbed, buried organic lenses
10-13	5Y	4/1	80	10YR	4/4	20	C	PL	buried organics
13-16	5Y	4/1	70	10YR	4/3	30	C	PL	

<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:

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (any one is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Other (Explain in Remarks)

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

**Wetland Hydrology Present?** Yes  No

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

Remarks:

toeslope wetland in Susitna floodplain with algal crust in game trail and low points.