

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 06-Jul-13  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13\_T115\_02  
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Toeslope  
 Local relief (concave, convex, none): hummocky Slope: % / 3.7 ° Elevation: 940  
 Subregion: Interior Alaska Mountains Lat.: 63.0055195089 Long.: -148.30147028 Datum: NAD83  
 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:	

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

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b>				
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>		0		
<b>Sapling/Shrub Stratum</b>				
	50% of Total Cover:	0	20% of Total Cover:	0
1. <u>Betula nana</u>	30	<input checked="" type="checkbox"/>	FAC	
2. <u>Salix pulchra</u>	15	<input type="checkbox"/>	FACW	
3. <u>Empetrum nigrum</u>	25	<input checked="" type="checkbox"/>	FAC	
4. <u>Vaccinium uliginosum</u>	10	<input type="checkbox"/>	FAC	
5. <u>Dasiphora fruticosa</u>	2	<input type="checkbox"/>	FAC	
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>		82		
<b>Herb Stratum</b>				
	50% of Total Cover:	41	20% of Total Cover:	16.4
1. <u>Cornus suecica</u>	20	<input checked="" type="checkbox"/>	FAC	
2. <u>Carex aquatilis</u>	1	<input type="checkbox"/>	OBL	
3. <u>Trichophorum caespitosum</u>	5	<input type="checkbox"/>	OBL	
4. <u>Calamagrostis canadensis</u>	10	<input checked="" type="checkbox"/>	FAC	
5. <u>Rhodiola integrifolia</u>	0.1	<input type="checkbox"/>	FAC	
6. <u>Trientalis europaea</u>	0.1	<input type="checkbox"/>	FACU	
7. <u>Rubus arcticus (IAM)</u>	0.1	<input type="checkbox"/>	FACU	
8. <u>Spinulum annotinum</u>	0.1	<input type="checkbox"/>	FACU	
9. <u>Viola palustris (IAM)</u>	0.1	<input type="checkbox"/>	FAC	
10. <u>Carex podocarpa</u>	0.1	<input type="checkbox"/>	FAC	
<b>Total Cover:</b>		36.6		
	50% of Total Cover:	18.3	20% of Total Cover:	7.32

**Dominance Test worksheet:**  
 Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)  
 Total Number of Dominant Species Across All Strata: 4 (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 6 x 1 = 6  
 FACW Species 15 x 2 = 30  
 FAC Species 97.3 x 3 = 291.9  
 FACU Species 0.3 x 4 = 1.200  
 UPL Species 0 x 5 = 0  
 Column Totals: 118.6 (A) 329.1 (B)  
 Prevalence Index = B/A = 2.775

**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 1  
 Total Cover of Bryophytes 60

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Trace sanoff, lichen (5)  
 Shrubs are in patches - some of the birch is dead - willows have been browsed

**SOIL**

Sampling Point: **SW13\_T115\_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>		
0-2							Fibric Organics	Some silt mixed into bottom
2-5	10YR	4/3					Coarse Sandy Clay Loam	
5-22							Coarse Sandy Loam	With fine gravel and angular cobbles/boulde

<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