

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 30-Jul-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T05\_06  
 Investigator(s): CTS, EKJ Landform (hillside, terrace, hummocks etc.): Flat  
 Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 ° Elevation: 549  
 Subregion: Interior Alaska Mountains Lat.: 62.780229908 Long.: -147.903079975 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 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>Salix barclayi</u>	20	<input checked="" type="checkbox"/>	FAC	
2. <u>Dasiphora fruticosa</u>	15	<input checked="" type="checkbox"/>	FAC	
3. <u>Betula neoalaskana</u>	5	<input type="checkbox"/>	FACU	
4. <u>Myrica gale</u>	15	<input checked="" type="checkbox"/>	OBL	
5. <u>Betula glandulosa</u>	2	<input type="checkbox"/>	FAC	
6. <u>Vaccinium uliginosum</u>	1	<input type="checkbox"/>	FAC	
7. <u>Ledum groenlandicum</u>	0.1	<input type="checkbox"/>	FAC	
8. <u>Rosa acicularis</u>	0.1	<input type="checkbox"/>	FACU	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>		58.2		
	50% of Total Cover:	29.1	20% of Total Cover:	11.64
<b>Herb Stratum</b>				
1. <u>Parnassia palustris</u>	0.1	<input type="checkbox"/>	FACW	
2. <u>Hedysarum alpinum</u>	2	<input checked="" type="checkbox"/>	FACU	
3. <u>Arctagrostis latifolia</u>	0.1	<input type="checkbox"/>	FACW	
4. <u>Eurybia sibirica</u>	0.1	<input type="checkbox"/>	FAC	
5. <u>Galium boreale</u>	0.1	<input type="checkbox"/>	FACU	
6. <u>Artemisia tilesii</u>	0.1	<input type="checkbox"/>	FACU	
7. <u>Equisetum pratense</u>	0.1	<input type="checkbox"/>	FACW	
8. <u>Mertensia paniculata</u>	0.1	<input type="checkbox"/>	FACU	
9. <u>Valeriana capitata</u>	0.1	<input type="checkbox"/>	FAC	
10. <u>Sanguisorba canadensis</u>	0.1	<input type="checkbox"/>	FACW	
<b>Total Cover:</b>		2.9		
	50% of Total Cover:	1.45	20% of Total Cover:	0.58

**Dominance Test worksheet:**  
 Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 4 (B)  
 Percent of dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: Multiply by:  
 OBL Species 15 x 1 = 15  
 FACW Species 0.4 x 2 = 0.800  
 FAC Species 38.3 x 3 = 114.9  
 FACU Species 7.4 x 4 = 29.6  
 UPL Species 0 x 5 = 0  
 Column Totals: 61.1 (A) 160.3 (B)  
 Prevalence Index = B/A = 2.624

**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 0

**Hydrophytic Vegetation Present?** Yes  No

Remarks:

**SOIL**

Sampling Point: SW12\_T05\_06

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	w mineral sand
2-3	2.5Y	5/1	50	10YR	5/8	50	C	PL	Loamy Sand
3-4								Fibric Organics	w mineral sand
4-14	5Y	4/1	30	10YR	4/6	70	C	PL	Loamy Sand depletion along roots

<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:  
 4-14in: including 2% oxidized rhizospheres around living roots.

**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: