

**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\_05  
 Investigator(s): SLI, KMK Landform (hillside, terrace, hummocks etc.): Mountainslope  
 Local relief (concave, convex, none): flat Slope: 48.7 % / 26.0 ° Elevation: 1018  
 Subregion: Interior Alaska Mountains Lat.: 63.4282899107 Long.: -148.597391643 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 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>Alnus viridis ssp. crispa</u>	35	<input checked="" type="checkbox"/>	FAC	
2. <u>Spiraea stevenii</u>	15	<input checked="" type="checkbox"/>	FACU	
3. <u>Vaccinium uliginosum</u>	10	<input type="checkbox"/>	FAC	
4. <u>Linnaea borealis</u>	2	<input type="checkbox"/>	FACU	
5. <u>Salix pulchra</u>	15	<input checked="" type="checkbox"/>	FACW	
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>		77		
<b>Herb Stratum</b>				
	50% of Total Cover:	38.5	20% of Total Cover:	15.4
1. <u>Calamagrostis canadensis</u>	5	<input checked="" type="checkbox"/>	FAC	
2. <u>Chamerion angustifolium</u>	3	<input type="checkbox"/>	FACU	
3. <u>Cornus canadensis</u>	2	<input type="checkbox"/>	FACU	
4. <u>Artemisia norvegica</u>	0.1	<input type="checkbox"/>	FACU	
5. <u>Carex magellanica</u>	5	<input checked="" type="checkbox"/>	OBL	
6. <u>Festuca altaica</u>	1	<input type="checkbox"/>	FAC	
7. <u>Rumex occidentalis</u>	1	<input type="checkbox"/>	OBL	
8. <u>Rubus arcticus (IAM)</u>	1	<input type="checkbox"/>	FACU	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>		18.1		
	50% of Total Cover:	9.05	20% of Total Cover:	3.62

**Dominance Test worksheet:**  
 Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)  
 Total Number of Dominant Species Across All Strata: 5 (B)  
 Percent of dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of: Multiply by:  
 OBL Species 6 x 1 = 6  
 FACW Species 15 x 2 = 30  
 FAC Species 51 x 3 = 153  
 FACU Species 23 x 4 = 92  
 UPL Species 0 x 5 = 0  
 Column Totals: 95 (A) 281 (B)  
 Prevalence Index = B/A = 2.958

**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) \_\_\_\_\_  
 % Bare Ground 85  
 Total Cover of Bryophytes 10

**Hydrophytic Vegetation Present?** Yes  No

Remarks: trace artemesia sp, acodel, poa sp.

**SOIL**

Sampling Point: **SW12\_T16\_05**

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>		
0-4							Hemic Organics	w angular gravels
4-10	7.5YR	3/3	50				Silt Loam	50% angular gravels and cobbles

<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: Depth (inches):	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:  
no hydric soil indicators. refusal at 10in, bedrock or boulders

**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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" 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: