

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Denali Borough Sampling Date: 30-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T147_06
 Investigator(s): CTS, AMD Landform (hillside, terrace, hummocks etc.): Flat
 Local relief (concave, convex, none): flat Slope: 1.0 % / 0.6 ° Elevation: 669
 Subregion: Interior Alaska Mountains Lat.: 63.372046 Long.: -148.940816 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"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Fnwws with low [and tall!] Betnan understory</u>	

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
1. <u>Picea glauca</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU	
2. _____	<u>0</u>	<input type="checkbox"/>	_____	
3. _____	<u>0</u>	<input type="checkbox"/>	_____	
4. _____	<u>0</u>	<input type="checkbox"/>	_____	
5. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>15</u>				Prevalence Index worksheet: Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>36</u> x 2 = <u>72</u> FAC Species <u>145.1</u> x 3 = <u>435.3</u> FACU Species <u>16.1</u> x 4 = <u>64.40</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>197.2</u> (A) <u>571.7</u> (B) Prevalence Index = B/A = <u>2.899</u>
Sapling/Shrub Stratum		50% of Total Cover: <u>7.5</u>	20% of Total Cover: <u>3</u>	
1. <u>Betula nana</u>	<u>65</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Vaccinium uliginosum</u>	<u>60</u>	<input checked="" type="checkbox"/>	FAC	
3. <u>Empetrum nigrum</u>	<u>15</u>	<input type="checkbox"/>	FAC	
4. <u>Vaccinium vitis-idaea</u>	<u>5</u>	<input type="checkbox"/>	FAC	
5. <u>Ledum decumbens</u>	<u>35</u>	<input type="checkbox"/>	FACW	
6. <u>Salix pulchra</u>	<u>1</u>	<input type="checkbox"/>	FACW	
7. _____	<u>0</u>	<input type="checkbox"/>	_____	
8. _____	<u>0</u>	<input type="checkbox"/>	_____	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>181</u>				
Herb Stratum		50% of Total Cover: <u>90.5</u>	20% of Total Cover: <u>36.2</u>	
1. <u>Carex bigelowii</u>	<u>0.1</u>	<input type="checkbox"/>	FAC	
2. <u>Cornus canadensis</u>	<u>1</u>	<input checked="" type="checkbox"/>	FACU	
3. <u>Bistorta plumosa</u>	<u>0.1</u>	<input type="checkbox"/>	FACU	
4. _____	<u>0</u>	<input type="checkbox"/>	_____	
5. _____	<u>0</u>	<input type="checkbox"/>	_____	
6. _____	<u>0</u>	<input type="checkbox"/>	_____	
7. _____	<u>0</u>	<input type="checkbox"/>	_____	
8. _____	<u>0</u>	<input type="checkbox"/>	_____	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover: <u>1.2</u>				
		50% of Total Cover: <u>0.6</u>	20% of Total Cover: <u>0.24</u>	
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground <u>3</u> Total Cover of Bryophytes <u>10</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				
Remarks: <u>Lichen = 2</u>				

SOIL

Sampling Point: **SW13_T147_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 ¹	Loc ²		
0-4		100					Fibric Organics	
4-12	10YR	3/3	100				Sandy Loam	
12-20	10YR	3/3	100				Loamy Sand	

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

<p>Hydric Soil Indicators:</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>Indicators for Problematic Hydric Soils:³</p> <input type="checkbox"/> Alaska Color Change (TA4) ⁴ <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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³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present
⁴ Give details of color change in Remarks

Restrictive Layer (if present): Type: Depth (inches):	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
no hydric soil indicators

HYDROLOGY

<p>Wetland Hydrology Indicators:</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 type="checkbox"/> FAC-neutral Test (D5)
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<p>Field Observations:</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)	Wetland Hydrology Present? 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:
No hydrology indicators