

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 05-Aug-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T34_04
 Investigator(s): SLI, KMK Landform (hillside, terrace, hummocks etc.): Bench
 Local relief (concave, convex, none): concave Slope: % / 13.1 ° Elevation: 120
 Subregion: Southcentral Alaska Lat.: 62.8958915142 Long.: -148.68933066 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"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: species-rich bench adjacent to spring. spring captured by SW12_T34_V03. spring runs along southern bound of community, water drops below ground surface before shoulder of slope to reappear at next small bench (ca 50m downslope).	

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

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				
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"/>	_____	
Total Cover:		0		
Sapling/Shrub Stratum	50% of Total Cover: 0	20% of Total Cover: 0		
1. <u>Harrimanella stelleriana</u>	15	<input checked="" type="checkbox"/>	FACW	
2. <u>Salix rotundifolia</u>	10	<input checked="" type="checkbox"/>	FAC	
3. <u>Luetkea pectinata</u>	10	<input checked="" type="checkbox"/>	UPL	
4. <u>Vaccinium uliginosum</u>	10	<input checked="" type="checkbox"/>	FAC	
5. <u>Empetrum nigrum</u>	5	<input type="checkbox"/>	FAC	
6. <u>Salix reticulata</u>	5	<input type="checkbox"/>	FAC	
7. <u>Salix polaris</u>	5	<input type="checkbox"/>	FACW	
8. <u>Cassiope tetragona</u>	2	<input type="checkbox"/>	FACU	
9. <u>Vaccinium vitis-idaea</u>	1	<input type="checkbox"/>	FACU	
10. _____	0	<input type="checkbox"/>	FACU	
Total Cover:		63		
Herb Stratum	50% of Total Cover: 31.5	20% of Total Cover: 12.6		
1. <u>Sanguisorba canadensis</u>	7	<input checked="" type="checkbox"/>	FACW	
2. <u>Carex microchaeta</u>	5	<input checked="" type="checkbox"/>	FAC	
3. <u>Festuca altaica</u>	5	<input checked="" type="checkbox"/>	FAC	
4. <u>Artemisia norvegica</u>	3	<input checked="" type="checkbox"/>	FACU	
5. <u>Antennaria rosea</u>	3	<input checked="" type="checkbox"/>	UPL	
6. <u>Anemone narcissiflora</u>	3	<input checked="" type="checkbox"/>	FACU	
7. <u>Veronica wormskjoldii</u>	3	<input checked="" type="checkbox"/>	FAC	
8. <u>Leptarrhena pyrolifolia</u>	3	<input checked="" type="checkbox"/>	FACW	
9. <u>Poa alpina</u>	3	<input checked="" type="checkbox"/>	FACU	
10. <u>Trisetum spicatum</u>	2	<input type="checkbox"/>	FAC	
Total Cover:		37		
	50% of Total Cover: 18.5	20% of Total Cover: 7.4		

Dominance Test worksheet:
 Number of Dominant Species That are OBL, FACW, or FAC: 8 (A)
 Total Number of Dominant Species Across All Strata: 13 (B)
 Percent of dominant Species That Are OBL, FACW, or FAC: 61.5% (A/B)

Prevalence Index worksheet:
 Total % Cover of: Multiply by:
 OBL Species 0 x 1 = 0
 FACW Species 30 x 2 = 60
 FAC Species 45 x 3 = 135
 FACU Species 12 x 4 = 48
 UPL Species 13 x 5 = 65
 Column Totals: 100 (A) 308 (B)
 Prevalence Index = B/A = 3.080

Hydrophytic Vegetation Indicators:
 Dominance Test is > 50%
 Prevalence Index is ≤ 3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width) 5m
 % Cover of Wetland Bryophytes (Where applicable) _____
 % Bare Ground 2
 Total Cover of Bryophytes 30

Hydrophytic Vegetation Present? Yes No

Remarks: additional herbs, 2% luzula wahlengergii. 1% each carex nigricans, aster alpinus, spinulum annotinum, bistorta vivipara, rhodiola integrifolia. trace viola sp, pyrola minor. no flower on anemone, unsure of sp.

SOIL

Sampling Point: **SW12_T34_04**

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-.5							Fibric Organics	
.5-1.5							Hemic Organics	
1.5-9	7.5YR	3/4	100				Silt Loam	
9-9.5							Sapric Organics	
9.5-18	7.5YR	3/4	60				Sandy Loam	40% angular gravels and cobbles

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)
<p>³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present</p> <p>⁴ Give details of color change in Remarks</p>	
<p>Restrictive Layer (if present): Type: Depth (inches):</p>	<p>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
<p>Remarks: no hydric soil indicators</p>	

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"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks)	<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> <p>Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 15</p> <p>Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 15</p>	<p>Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/></p>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
no wetland hydrology indicators