

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 30-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T156_02
 Investigator(s): BAB Landform (hillside, terrace, hummocks etc.): Bluff
 Local relief (concave, convex, none): hummocky Slope: % / 22.5 ° Elevation: 110
 Subregion: Interior Alaska Mountains Lat.: 63.2942654943 Long.: -148.367343696 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: <u>steep bluff adjacent to seasonal drainage</u>	

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>Empetrum nigrum</u>	15	<input checked="" type="checkbox"/>	FAC	
2. <u>Linnaea borealis</u>	8	<input checked="" type="checkbox"/>	FACU	
3. <u>Vaccinium uliginosum</u>	8	<input checked="" type="checkbox"/>	FAC	
4. <u>Salix reticulata</u>	5	<input type="checkbox"/>	FAC	
5. <u>Vaccinium vitis-idaea</u>	5	<input type="checkbox"/>	FAC	
6. <u>Cassiope tetragona</u>	2	<input type="checkbox"/>	FACU	
7. <u>Betula nana</u>	2	<input type="checkbox"/>	FAC	
8. <u>Salix pulchra</u>	2	<input type="checkbox"/>	FACW	
9. <u>Salix rotundifolia</u>	0.1	<input type="checkbox"/>	FAC	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:		47.1		
Herb Stratum	50% of Total Cover: 23.55	20% of Total Cover: 9.42		
1. <u>Festuca altaica</u>	20	<input checked="" type="checkbox"/>	FAC	
2. <u>Geranium erianthum</u>	15	<input checked="" type="checkbox"/>	FACU	
3. <u>Chamaenerion angustifolium</u>	10	<input type="checkbox"/>	FACU	
4. <u>Anemone richardsonii</u>	8	<input type="checkbox"/>	FAC	
5. <u>Sanguisorba canadensis</u>	5	<input type="checkbox"/>	FACW	
6. <u>Chamaenerion latifolium</u>	1	<input type="checkbox"/>	FAC	
7. <u>Viola palustris (IAM)</u>	0.1	<input type="checkbox"/>	FAC	
8. <u>Gentiana glauca</u>	0.1	<input type="checkbox"/>	FAC	
9. <u>Cerastium beerianum</u>	0.1	<input type="checkbox"/>	FAC	
10. <u>Arctagrostis latifolia</u>	0.1	<input type="checkbox"/>	FACW	
Total Cover:		59.4		
50% of Total Cover:	29.7	20% of Total Cover:	11.88	

Dominance Test worksheet:
 Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 5 (B)
 Percent of dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:
 Total % Cover of: Multiply by:
 OBL Species 0 x 1 = 0
 FACW Species 7.1 x 2 = 14.2
 FAC Species ### x 3 = 193.2
 FACU Species 35 x 4 = 140
 UPL Species 0 x 5 = 0
 Column Totals: 106.5 (A) 347.4 (B)
 Prevalence Index = B/A = 3.262

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) 10m
 % Cover of Wetland Bryophytes (Where applicable) _____
 % Bare Ground _____
 Total Cover of Bryophytes 2

Hydrophytic Vegetation Present? Yes No

Remarks: Rubarc 5%

SOIL

Sampling Point: SW13_T156_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 ¹	Loc ²		
0-2		100					Hemic Organics	
2-4	10YR	3/2	100				Loamy Sand	subangular to subrounded gravel
4-19		100					Sand	subangular to subrounded gravel

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

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

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</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>Secondary Indicators (two or more are required)</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): Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</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 observed