

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 18-Aug-15
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW15_T320_01
 Investigator(s): SLI, SCB Landform (hillside, terrace, hummocks etc.): Shoulder slope
 Local relief (concave, convex, none): none Slope: 5.2 % / 3.0 ° Elevation: _____
 Subregion: Cook Inlet Mountains Lat.: _____ Long.: _____ 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>Shoulder slope rolling down to small stream. overall dwarf ericaceous lichen/ericaceous tundra with narrow band of low betnan between this and nearly identical tundra at crest.</u>	

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/>	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum	50% of Total Cover: <u>0</u>	20% of Total Cover: <u>0</u>		Prevalence Index worksheet:
1. <u>Empetrum nigrum</u>	25	<input checked="" type="checkbox"/>	FAC	Total % Cover of: Multiply by:
2. <u>Vaccinium uliginosum</u>	20	<input checked="" type="checkbox"/>	FAC	OBL Species <u>0</u> x 1 = <u>0</u>
3. <u>Loiseleuria procumbens</u>	5	<input type="checkbox"/>	FACU	FACW Species <u>4</u> x 2 = <u>8</u>
4. <u>Salix pulchra</u>	3	<input type="checkbox"/>	FACW	FAC Species <u>53.1</u> x 3 = <u>159.3</u>
5. <u>Spiraea stevenii</u>	1	<input type="checkbox"/>	FACU	FACU Species <u>6.2</u> x 4 = <u>24.8</u>
6. <u>Picea glauca</u>	0.1	<input type="checkbox"/>	FACU	UPL Species <u>1.2</u> x 5 = <u>6.000</u>
7. <u>Arctous ruber</u>	0.1	<input type="checkbox"/>	FAC	Column Totals: <u>64.5</u> (A) <u>198.1</u> (B)
8. <u>Luetkea pectinata</u>	0.1	<input type="checkbox"/>	UPL	Prevalence Index = B/A = <u>3.071</u>
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>54.3</u>				
Herb Stratum	50% of Total Cover: <u>27.15</u>	20% of Total Cover: <u>10.86</u>		Hydrophytic Vegetation Indicators:
1. <u>Festuca altaica</u>	5	<input checked="" type="checkbox"/>	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%
2. <u>Cornus suecica</u>	3	<input checked="" type="checkbox"/>	FAC	<input type="checkbox"/> Prevalence Index is ≤ 3.0
3. <u>Anthoxanthum monticola ssp. alpinum</u>	1	<input type="checkbox"/>	UPL	<input type="checkbox"/> Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
4. <u>Eriophorum vaginatum</u>	1	<input type="checkbox"/>	FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation (Explain)
5. <u>Huperzia selago var. selago</u>	0.1	<input type="checkbox"/>	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Artemisia norvegica ssp. saxatilis</u>	0.1	<input type="checkbox"/>	FACU	
7. _____	0	<input type="checkbox"/>	_____	Plot size (radius, or length x width) <u>10m</u>
8. _____	0	<input type="checkbox"/>	_____	% Cover of Wetland Bryophytes (Where applicable) <u>0</u>
9. _____	0	<input type="checkbox"/>	_____	% Bare Ground <u>1</u>
10. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes <u>0</u>
Total Cover: <u>10.2</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover: <u>5.1</u>	20% of Total Cover: <u>2.04</u>			
Remarks: <u>Carex sp (coll) 0.1</u> <u>30-40% cover of lichens (Cladina, stereocaulon, nephroma, etc)</u>				

SOIL

Sampling Point: SW15_T320_01

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		
0-8	5YR	3/3	70	5YR	2.5/1	30	M	Sandy Loam	interspersed matrices with wavy
8-20	2.5Y	4/3	100					Loam	

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:
 subangular gravels to cobbles (15%) throughout profile. 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> <p>Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): 0</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. soils moist but not saturated.