

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 06-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T111_05
 Investigator(s): JER Landform (hillside, terrace, hummocks etc.): Knob
 Local relief (concave, convex, none): convex Slope: 1.7 % / 1.0 ° Elevation: 1025
 Subregion: Interior Alaska Mountains Lat.: 62.77000165 Long.: -148.142310023 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: knob w, large sorted circles, center are sdee with rocks at surface, margins are slcbe	

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

<u>Tree Stratum</u>	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>8</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>8</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>Betula nana</u>	15	<input checked="" type="checkbox"/>	FAC	Total % Cover of: Multiply by:
2. <u>Ledum decumbens</u>	20	<input checked="" type="checkbox"/>	FACW	OBL Species <u>0</u> x 1 = <u>0</u>
3. <u>Empetrum nigrum</u>	25	<input checked="" type="checkbox"/>	FAC	FACW Species <u>31</u> x 2 = <u>62</u>
4. <u>Vaccinium uliginosum</u>	15	<input checked="" type="checkbox"/>	FAC	FAC Species <u>91</u> x 3 = <u>273</u>
5. <u>Loiseleuria procumbens</u>	10	<input type="checkbox"/>	FACU	FACU Species <u>26</u> x 4 = <u>104</u>
6. <u>Salix arctica</u>	5	<input type="checkbox"/>	FACU	UPL Species <u>1</u> x 5 = <u>5</u>
7. <u>Vaccinium vitis-idaea</u>	15	<input checked="" type="checkbox"/>	FAC	Column Totals: <u>149</u> (A) <u>444</u> (B)
8. <u>Salix pulchra</u>	10	<input type="checkbox"/>	FACW	Prevalence Index = B/A = <u>2.980</u>
9. <u>Cassiope tetragona</u>	5	<input type="checkbox"/>	FACU	
10. <u>Arctostaphylos alpina</u>	5	<input type="checkbox"/>	FACU	
Total Cover:			<u>125</u>	Hydrophytic Vegetation Indicators:
Herb Stratum	50% of Total Cover: <u>62.5</u>	20% of Total Cover: <u>25</u>		<input checked="" type="checkbox"/> Dominance Test is > 50%
1. <u>Carex bigelowii</u>	5	<input checked="" type="checkbox"/>	FAC	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
2. <u>Carex podocarpa</u>	2	<input type="checkbox"/>	FAC	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. <u>Arnica lessingii</u>	1	<input type="checkbox"/>	UPL	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Bistorta plumosa</u>	1	<input type="checkbox"/>	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Bistorta vivipara</u>	2	<input type="checkbox"/>	FAC	Plot size (radius, or length x width) <u>10m</u>
6. <u>Calamagrostis canadensis</u>	5	<input checked="" type="checkbox"/>	FAC	% Cover of Wetland Bryophytes (Where applicable) _____
7. <u>Festuca altaica</u>	3	<input checked="" type="checkbox"/>	FAC	% Bare Ground <u>5</u>
8. <u>Salix reticulata</u>	2	<input type="checkbox"/>	FAC	Total Cover of Bryophytes <u>45</u>
9. <u>Tofieldia coccinea</u>	2	<input type="checkbox"/>	FAC	
10. <u>Pedicularis langsдорffii</u>	1	<input type="checkbox"/>	FACW	
Total Cover:			<u>24</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover:	<u>12</u>	20% of Total Cover:	<u>4.8</u>	

Remarks: rubcha 1, sedros 1, camlas 0.1 , picgla 1, dacarc 2, pelaph 2, hylspl 20, pticri 10, rholap 1, lichc 5, dryoct 5, hiealp 1, anenar 1

SOIL

Sampling Point: **SW13_T111_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 ¹	Loc ²		
0-1			100					Fibric Organics	
1-14	2.5Y	4/3	85	10YR	4/4	10	C	M	5y 5/2 reduced features and 7.5 yr 3/3 cry
14-20	2.5Y	4/2	100					Coarse Sand	and 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 checked="" type="checkbox"/> Other (Explain in Remarks)
---	--

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"/>
---	---

Remarks:
 no frost. redox features that are about silver dollar sized and cryoturbation! 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 checked="" type="checkbox"/> FAC-neutral Test (D5)
--	--

<p>Field Observations:</p> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 18 Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 14 (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
--	---

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 no wetland hydrology indicators