

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 22-Jun-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T18_07
 Investigator(s): SLI, EKJ Landform (hillside, terrace, hummocks etc.): Gulch or Gully
 Local relief (concave, convex, none): undulating Slope: 17.6 % / 10.0 ° Elevation: 777
 Subregion: Southcentral Alaska Lat.: 62.8497299083 Long.: -149.210509967 Datum: WGS84
 Soil Map Unit Name: _____ NWI classification: **PSS1B**

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 checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: small intermittent stream flowing through community, above ground portions 2-4in deep, 6-12in wide.	

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Dodecatheon jeffreyi</u>	7	<input checked="" type="checkbox"/>	FACW	Number of Dominant Species That are OBL, FACW, or FAC:	<u>7</u> (A)
2. <u>Pyrola minor</u>	7	<input checked="" type="checkbox"/>	FAC	Total Number of Dominant Species Across All Strata:	<u>7</u> (B)
3. <u>Geranium bicknellii</u>	1	<input type="checkbox"/>	UPL	Percent of dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u> (A/B)
4. <u>Veratrum viride</u>	1	<input type="checkbox"/>	FAC		
5. <u>Luzula arctica ssp. arctica</u>	1	<input type="checkbox"/>	FAC		
Total Cover:			<u>17</u>		
Sapling/Shrub Stratum	50% of Total Cover: <u>8.5</u>	20% of Total Cover: <u>3.4</u>			
1. <u>Salix pulchra</u>	35	<input checked="" type="checkbox"/>	FACW	Prevalence Index worksheet:	
2. <u>Salix commutata</u>	35	<input checked="" type="checkbox"/>	FAC	Total % Cover of:	Multiply by:
3. <u>Alnus incana ssp. tenuifolia</u>	5	<input type="checkbox"/>	UPL	OBL Species <u>0</u>	x 1 = <u>0</u>
4. <u>Empetrum nigrum</u>	1	<input type="checkbox"/>	FAC	FACW Species <u>50</u>	x 2 = <u>100</u>
5. <u>Salix reticulata</u>	3	<input type="checkbox"/>	FAC	FAC Species <u>67</u>	x 3 = <u>201</u>
6. <u>Spiraea stevenii</u>	3	<input type="checkbox"/>	FACU	FACU Species <u>11</u>	x 4 = <u>44</u>
7. <u>Cassiope tetragona</u>	1	<input type="checkbox"/>	FACU	UPL Species <u>6</u>	x 5 = <u>30</u>
8. _____	0	<input type="checkbox"/>	_____	Column Totals: <u>134</u> (A)	<u>375</u> (B)
9. _____	0	<input type="checkbox"/>	_____	Prevalence Index = B/A = <u>2.799</u>	
10. <u>Polemonium acutiflorum</u>	1	<input type="checkbox"/>	FAC		
Total Cover:			<u>84</u>		
Herb Stratum	50% of Total Cover: <u>42</u>	20% of Total Cover: <u>16.8</u>			
1. <u>Streptopus amplexifolius</u>	1	<input type="checkbox"/>	FACU	Hydrophytic Vegetation Indicators:	
2. <u>Calamagrostis canadensis</u>	10	<input checked="" type="checkbox"/>	FAC	<input checked="" type="checkbox"/> Dominance Test is > 50%	
3. <u>Sanguisorba officinalis</u>	3	<input type="checkbox"/>	FACW	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0	
4. <u>Spinulum annotinum</u>	1	<input type="checkbox"/>	FACU	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Listera cordata</u>	1	<input type="checkbox"/>	FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
6. <u>Sedum rosea</u>	3	<input type="checkbox"/>	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
7. <u>Mertensia paniculata</u>	3	<input type="checkbox"/>	FACU	Plot size (radius, or length x width) <u>10m</u>	
8. <u>Anemone richardsonii</u>	5	<input checked="" type="checkbox"/>	FAC	% Cover of Wetland Bryophytes (Where applicable) _____	
9. <u>Equisetum palustre</u>	5	<input checked="" type="checkbox"/>	FACW	% Bare Ground <u>20</u>	
10. <u>Moehringia lateriflora</u>	1	<input type="checkbox"/>	FACU	Total Cover of Bryophytes <u>75</u>	
Total Cover:			<u>33</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	
50% of Total Cover:	<u>16.5</u>	20% of Total Cover:	<u>6.6</u>		

Remarks: species comp similar to SW12_T18_002. trace linbor on tops of moss covered boulders. possibly another pyrola included in % cover for p.minor (larger leaves). additional herbs listed in tree and shrub strata, total cover = 50. unid graminoid 1%. intermittent stream above/below boulders.

SOIL

Sampling Point: **SW12_T18_07**

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		
0-1			100						Fibric Organics
1-2			100						Hemic Organics
2-15	5Y	5/1	60	10YR	4/6	40	C	PL	Sandy Clay few coarse sand to rounded gravels

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 checked="" 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 checked="" type="radio"/> No <input type="radio"/></p>

Remarks:
 old talus field - predominantly moss covered boulders w small areas of thicker mineral soils between. few gleyed pores and oxidized rhizospheres around living roots in upper 12in of mineral soil (<2%).

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</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>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 checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" 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> <p>Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p> <p>Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches):</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/></p>	

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

Remarks:
 site in a small drainage, near intermittent stream.
 alpha alpha dipyrindyl reaction - tested soils in upper 12 in change color to 7.5YR4/3.