

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 20-Jun-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T06_02
 Investigator(s): SLI, EKJ Landform (hillside, terrace, hummocks etc.): Hillside
 Local relief (concave, convex, none): none Slope: 70.0 % / 35.0 ° Elevation: 504
 Subregion: Interior Alaska Mountains Lat.: 62.8308299085 Long.: -148.60946997 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 type="radio"/> No <input checked="" 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 slope, SSE (140) aspect. tall robust trees, few dead and down w evidence of burn.</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. <u>Picea glauca</u>	15	<input checked="" type="checkbox"/>	FACU	Number of Dominant Species That are OBL, FACW, or FAC:	<u>3</u> (A)
2. <u>Betula neoalaskana</u>	20	<input checked="" type="checkbox"/>	FACU	Total Number of Dominant Species Across All Strata:	<u>6</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC:	<u>50.0%</u> (A/B)
4. _____	0	<input type="checkbox"/>	_____		
5. _____	0	<input type="checkbox"/>	_____		
Total Cover:			<u>35</u>		
Sapling/Shrub Stratum	50% of Total Cover: <u>17.5</u>	20% of Total Cover: <u>7</u>		Prevalence Index worksheet:	
1. <u>Shepherdia canadensis</u>	2	<input type="checkbox"/>	FACU	Total % Cover of:	Multiply by:
2. <u>Vaccinium vitis-idaea</u>	15	<input checked="" type="checkbox"/>	FAC	OBL Species <u>0</u>	x 1 = <u>0</u>
3. <u>Ledum groenlandicum</u>	3	<input type="checkbox"/>	FAC	FACW Species <u>0</u>	x 2 = <u>0</u>
4. <u>Linnaea borealis</u>	5	<input type="checkbox"/>	FACU	FAC Species <u>61</u>	x 3 = <u>183</u>
5. <u>Rosa acicularis</u>	3	<input type="checkbox"/>	FACU	FACU Species <u>50</u>	x 4 = <u>200</u>
6. <u>Juniperus communis</u>	7	<input type="checkbox"/>	UPL	UPL Species <u>7</u>	x 5 = <u>35</u>
7. <u>Vaccinium uliginosum</u>	35	<input checked="" type="checkbox"/>	FAC	Column Totals: <u>118</u> (A)	<u>418</u> (B)
8. <u>Alnus viridis ssp. crispa</u>	2	<input type="checkbox"/>	FAC	Prevalence Index = B/A = <u>3.542</u>	
9. <u>Viburnum edule</u>	1	<input type="checkbox"/>	FACU		
10. <u>Empetrum nigrum</u>	3	<input type="checkbox"/>	FAC		
Total Cover:			<u>76</u>		
Herb Stratum	50% of Total Cover: <u>38</u>	20% of Total Cover: <u>15.2</u>		Hydrophytic Vegetation Indicators:	
1. <u>Chamerion angustifolium</u>	1	<input type="checkbox"/>	FACU	<input 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>Geocaulon lividum</u>	3	<input checked="" type="checkbox"/>	FACU	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____	0	<input type="checkbox"/>	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____	0	<input type="checkbox"/>	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
6. _____	0	<input type="checkbox"/>	_____	Plot size (radius, or length x width)	<u>10m</u>
7. _____	0	<input type="checkbox"/>	_____	% Cover of Wetland Bryophytes (Where applicable)	_____
8. _____	0	<input type="checkbox"/>	_____	% Bare Ground	<u>10</u>
9. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes	<u>85</u>
10. _____	0	<input type="checkbox"/>	_____	Hydrophytic Vegetation Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Total Cover:			<u>7</u>		
50% of Total Cover:	<u>3.5</u>	20% of Total Cover:	<u>1.4</u>		

Remarks: shrub layer includes 5% betneo, 1% picgla, for a total cover of 82% in the shrub layer.

SOIL

Sampling Point: **SW12_T06_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		
0-3			100					Fibric Organics	w roots and woody inclusions
3-4	2.5Y	5/2	90					Loamy Sand	10% organic inclusions and roots
4-20	10YR	3/6	70	2.5Y	4/4	30	M	Sandy Loam	small bits of charcoal & few subrounded gra

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

Restrictive Layer (if present): Type: Depth (inches):	Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Remarks:
 4-20 cont: matrix 2.5Y 4/4 occurs in bands and waves.
 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> 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? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 see SW12_T06_V01 for intermittent stream in adjacent alder thicket. no indications wetland hydrology along this slope.