

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 03-Aug-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T179_02
 Investigator(s): WAD, RWM Landform (hillside, terrace, hummocks etc.): gully
 Local relief (concave, convex, none): hummocky Slope: 17.6 % / 10.0 ° Elevation: 1220
 Subregion: Interior Alaska Mountains Lat.: 63.150779724 Long.: -148.336657524 Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PEM1/SS1E**

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:	

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>3</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>3</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"/>	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species <u>1</u> x 1 = <u>1</u> FACW Species <u>63</u> x 2 = <u>126</u> FAC Species <u>18</u> x 3 = <u>54</u> FACU Species <u>7</u> x 4 = <u>28</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>89</u> (A) <u>209</u> (B) Prevalence Index = B/A = <u>2.348</u>
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>		
1. <u>Salix pulchra</u>	30	<input checked="" type="checkbox"/>	FACW	
2. <u>Vaccinium uliginosum</u>	2	<input type="checkbox"/>	FAC	
3. <u>Salix polaris</u>	1	<input type="checkbox"/>	FACW	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:	<u>33</u>			
Herb Stratum	50% of Total Cover: <u>16.5</u>	20% of Total Cover: <u>6.6</u>		
1. <u>Aconitum delphinifolium</u>	3	<input type="checkbox"/>	FAC	
2. <u>Sanguisorba canadensis</u>	15	<input checked="" type="checkbox"/>	FACW	
3. <u>Sedum rosea</u>	10	<input type="checkbox"/>	FAC	
4. <u>Arctagrostis latifolia</u>	15	<input checked="" type="checkbox"/>	FACW	
5. <u>Carex podocarpa</u>	2	<input type="checkbox"/>	FAC	
6. <u>Luzula arcuata</u>	2	<input type="checkbox"/>	FACU	
7. <u>Artemisia norvegica</u>	5	<input type="checkbox"/>	FACU	
8. <u>Petasites frigidus</u>	2	<input type="checkbox"/>	FACW	
9. <u>Eriophorum angustifolium</u>	1	<input type="checkbox"/>	OBL	
10. <u>Polemonium acutiflorum</u>	1	<input type="checkbox"/>	FAC	
Total Cover:	<u>56</u>			
50% of Total Cover:	<u>28</u>	20% of Total Cover:	<u>11.2</u>	
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is > 50% <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground _____ Total Cover of Bryophytes <u>10</u>				
Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>				

Remarks: luzarc coll., pinvul .1, carmic 1, sweper .1.

SOIL

Sampling Point: SW13_T179_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					Fibric Organics	
2-10	2.5Y	4/1	90	7.5YR	4/4	10	C	PL	organic staining throughout
10-14	10YR	4/2	80	5YR	4/6	20	C	PL	Sand

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 checked="" 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 checked="" type="radio"/> No <input type="radio"/>
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Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" 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)	<p>Secondary Indicators (two or more are required)</p> <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)
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<p>Field Observations:</p> Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 2 Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 8 Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 0	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 drainage feature with active channels and inundated depressions.