

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 26-Jun-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T20_01
 Investigator(s): SLI, LMF Landform (hillside, terrace, hummocks etc.): Lowland
 Local relief (concave, convex, none): hummocky Slope: 0.0 % / 0.0 ° Elevation: 583
 Subregion: Southcentral Alaska Lat.: 62.7245799084 Long.: -148.82642997 Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PEM1E**

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>10</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>10</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>	0.1	<input type="checkbox"/>	FAC	Total % Cover of: Multiply by:
2. <u>Ledum decumbens</u>	3	<input checked="" type="checkbox"/>	FACW	OBL Species <u>36</u> x 1 = <u>36</u>
3. <u>Andromeda polifolia</u>	1	<input type="checkbox"/>	FACW	FACW Species <u>12</u> x 2 = <u>24</u>
4. <u>Vaccinium uliginosum</u>	1	<input type="checkbox"/>	FAC	FAC Species <u>14</u> x 3 = <u>42</u>
5. <u>Myrica gale</u>	5	<input checked="" type="checkbox"/>	OBL	FACU Species <u>1</u> x 4 = <u>4</u>
6. <u>Dasiphora fruticosa</u>	5	<input checked="" type="checkbox"/>	FAC	UPL Species <u>0</u> x 5 = <u>0</u>
7. <u>Empetrum nigrum</u>	3	<input checked="" type="checkbox"/>	FAC	Column Totals: <u>63</u> (A) <u>106</u> (B)
8. <u>Picea mariana</u>	3	<input checked="" type="checkbox"/>	FACW	Prevalence Index = B/A = <u>1.683</u>
9. <u>Vaccinium oxycoccos</u>	1	<input type="checkbox"/>	OBL	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:			<u>22.1</u>	Hydrophytic Vegetation Indicators:
Herb Stratum	50% of Total Cover: <u>11.05</u>	20% of Total Cover: <u>4.42</u>		<input checked="" type="checkbox"/> Dominance Test is > 50%
1. <u>Drosera rotundifolia</u>	0.1	<input type="checkbox"/>	OBL	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
2. <u>Trichophorum caespitosum</u>	15	<input checked="" type="checkbox"/>	OBL	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. <u>Eriophorum angustifolium</u>	5	<input checked="" type="checkbox"/>	OBL	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Trientalis europaea</u>	1	<input type="checkbox"/>	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Carex rariflora</u>	5	<input checked="" type="checkbox"/>	OBL	Plot size (radius, or length x width) <u>10m</u>
6. <u>Carex pluriflora</u>	5	<input checked="" type="checkbox"/>	OBL	% Cover of Wetland Bryophytes (Where applicable) _____
7. <u>Pinguicula villosa</u>	0.1	<input type="checkbox"/>	OBL	% Bare Ground <u>0</u>
8. <u>Calamagrostis canadensis</u>	3	<input type="checkbox"/>	FAC	Total Cover of Bryophytes <u>95</u>
9. <u>Rubus chamaemorus</u>	5	<input checked="" type="checkbox"/>	FACW	
10. <u>Viola renifolia</u>	2	<input type="checkbox"/>	FAC	
Total Cover:			<u>41.2</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover:	<u>20.6</u>	20% of Total Cover:	<u>8.24</u>	
Remarks: <u>trace pinvil, drorot, and pedicularis sp.</u>				

SOIL

Sampling Point: SW12_T20_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		

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

Hydric Soil Indicators:

- Histosol or Histel (A1)
- Histic Epipedon (A2)
- Hydrogen Sulfide (A4)
- Thick Dark Surface (A12)
- Alaska Gleyed (A13)
- Alaska Redox (A14)
- Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils:³

- Alaska Color Change (TA4)⁴
- Alaska Alpine swales (TA5)
- Alaska Redox With 2.5Y Hue
- Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- 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 No

Remarks:

no soil pit due to standing water throughout site. assume hydric soils due to hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input checked="" 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) | |

Secondary Indicators (two or more are required)

- Water Stained Leaves (B9)
- Drainage Patterns (B10)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Salt Deposits (C5)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): 2

Water Table Present? Yes No Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

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

saturated hummocks, standing water between hummocks.

Remarks: