

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Denali Borough Sampling Date: 07-Aug-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: **SW13_T165_04**
 Investigator(s): CTS, AMD Landform (hillside, terrace, hummocks etc.): Flat
 Local relief (concave, convex, none): flat Slope: 1.7 % / 1.0 ° Elevation: 667
 Subregion: Interior Alaska Mountains Lat.: 63.387875915 Long.: -148.508416891 Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PEM1/SS1B**

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>5</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>5</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>Salix pulchra</u>	10	<input checked="" type="checkbox"/>	FACW	Total % Cover of: Multiply by:
2. <u>Salix barclayi</u>	15	<input checked="" type="checkbox"/>	FAC	OBL Species <u>31</u> x 1 = <u>31</u>
3. <u>Salix richardsonii</u>	10	<input checked="" type="checkbox"/>	FACW	FACW Species <u>40</u> x 2 = <u>80</u>
4. <u>Dasiphora fruticosa</u>	5	<input type="checkbox"/>	FAC	FAC Species <u>32</u> x 3 = <u>96</u>
5. <u>Vaccinium uliginosum</u>	5	<input type="checkbox"/>	FAC	FACU Species <u>0</u> x 4 = <u>0</u>
6. <u>Vaccinium vitis-idaea</u>	1	<input type="checkbox"/>	FAC	UPL Species <u>0</u> x 5 = <u>0</u>
7. _____	0	<input type="checkbox"/>	_____	Column Totals: <u>103</u> (A) <u>207</u> (B)
8. _____	0	<input type="checkbox"/>	_____	Prevalence Index = B/A = <u>2.010</u>
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:			<u>46</u>	Hydrophytic Vegetation Indicators:
Herb Stratum	50% of Total Cover: <u>23</u>	20% of Total Cover: <u>9.2</u>		<input checked="" type="checkbox"/> Dominance Test is > 50%
1. <u>Carex saxatilis</u>	20	<input checked="" type="checkbox"/>	FACW	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
2. <u>Carex aquatilis</u>	30	<input checked="" type="checkbox"/>	OBL	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
3. <u>Equisetum arvense</u>	3	<input type="checkbox"/>	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
4. <u>Calamagrostis canadensis</u>	2	<input type="checkbox"/>	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Valeriana capitata</u>	1	<input type="checkbox"/>	FAC	Plot size (radius, or length x width) <u>10m</u>
6. <u>Equisetum fluviatile</u>	1	<input type="checkbox"/>	OBL	% Cover of Wetland Bryophytes (Where applicable) _____
7. _____	0	<input type="checkbox"/>	_____	% Bare Ground _____
8. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes _____
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover:			<u>57</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover:	<u>28.5</u>	20% of Total Cover:	<u>11.4</u>	
Remarks:				

SOIL

Sampling Point: SW13_T165_04

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		
0-5		100					Hemic Organics	
5-18	5GY	4/1	100				Sandy Clay Loam	
18-20	5Y	4/2	100				Sandy Loam	

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: sandy clay loam
 Depth (inches): 5

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

Surface Water (A1) Inundation Visible on Aerial Imagery (B7)
 High Water Table (A2) Sparsely Vegetated Concave Surface (B8)
 Saturation (A3) Marl Deposits (B15)
 Water Marks (B1) Hydrogen Sulfide Odor (C1)
 Sediment Deposits (B2) Dry-Season Water Table (C2)
 Drift Deposits (B3) Other (Explain in Remarks)
 Algal Mat or Crust (B4)
 Iron Deposits (B5)
 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):
 Water Table Present? Yes No Depth (inches):
 Saturation Present? Yes No Depth (inches): 10

Wetland Hydrology Present? Yes No

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

Remarks: