

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Denali Borough Sampling Date: 30-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T212_02
 Investigator(s): SLI, EAC Landform (hillside, terrace, hummocks etc.): Swale
 Local relief (concave, convex, none): concave Slope: 0.0 % / 0.0 ° Elevation: 674
 Subregion: Interior Alaska Mountains Lat.: 63.380786657 Long.: -148.909766555 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: small areas of PUBH (may not be visible in aerial). variety of water regimes, but predominantly E.	

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>Andromeda polifolia (IAM)</u>	3	<input checked="" type="checkbox"/>	OBL	Total % Cover of: Multiply by:
2. <u>Betula nana</u>	1	<input checked="" type="checkbox"/>	FAC	OBL Species <u>64.2</u> x 1 = <u>64.2</u>
3. <u>Salix fuscescens</u>	1	<input checked="" type="checkbox"/>	FACW	FACW Species <u>1</u> x 2 = <u>2</u>
4. _____	0	<input type="checkbox"/>	_____	FAC Species <u>1</u> x 3 = <u>3</u>
5. _____	0	<input type="checkbox"/>	_____	FACU Species <u>0</u> x 4 = <u>0</u>
6. _____	0	<input type="checkbox"/>	_____	UPL Species <u>0.1</u> x 5 = <u>0.500</u>
7. _____	0	<input type="checkbox"/>	_____	Column Totals: <u>66.3</u> (A) <u>69.7</u> (B)
8. _____	0	<input type="checkbox"/>	_____	Prevalence Index = B/A = <u>1.051</u>
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>5</u>				
Herb Stratum	50% of Total Cover: <u>2.5</u>	20% of Total Cover: <u>1</u>		Hydrophytic Vegetation Indicators:
1. <u>Eriophorum angustifolium</u>	30	<input checked="" type="checkbox"/>	OBL	<input checked="" type="checkbox"/> Dominance Test is > 50%
2. <u>Carex aquatilis</u>	20	<input checked="" type="checkbox"/>	OBL	<input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0
3. <u>Menyanthes trifoliata</u>	3	<input type="checkbox"/>	OBL	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carex glacialis</u>	0.1	<input type="checkbox"/>	UPL	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Carex tenuiflora</u>	3	<input type="checkbox"/>	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Carex loliacea</u>	0.1	<input type="checkbox"/>	OBL	Plot size (radius, or length x width) <u>10m</u>
7. <u>Carex aquatilis var. dives</u>	5	<input type="checkbox"/>	OBL	% Cover of Wetland Bryophytes (Where applicable) _____
8. <u>Carex magellanica</u>	0.1	<input type="checkbox"/>	OBL	% Bare Ground <u>90</u>
9. _____	0	<input type="checkbox"/>	_____	Total Cover of Bryophytes <u>5</u>
10. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>61.3</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover: <u>30.65</u>	20% of Total Cover: <u>12.26</u>			

Remarks:

SOIL

Sampling Point: **SW13_T212_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		
0-4	10YR	3/3	100					Fibric Organics	
4-22	10YR	3/2	100					Hemic Organics	

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: active layer
 Depth (inches): 22

Hydric Soil Present? Yes No

Remarks:
 saturated throughout profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Other (Explain in Remarks)

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): 4
 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:

Remarks: