

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 29-Aug-15
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW15_T344_03
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Toeslope
 Local relief (concave, convex, none): hummocky Slope: 8.7 % / 5.0 ° Elevation: _____
 Subregion: Interior Alaska Mountains Lat.: _____ Long.: _____ Datum: WGS84
 Soil Map Unit Name: _____ **NWI classification: PSS1B**

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: Probably are upland inclusions evidenced by the presence of arctic ground squirrel nest nearby.	

VEGETATION -Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>75.0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
Total Cover:		<u>0</u>		Prevalence Index worksheet: Total % Cover of: Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>9</u> x 2 = <u>18</u> FAC Species <u>91</u> x 3 = <u>273</u> FACU Species <u>15</u> x 4 = <u>60</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>351</u> (B) Prevalence Index = B/A = <u>3.052</u>
Sapling/Shrub Stratum				
50% of Total Cover:		<u>0</u>	20% of Total Cover: <u>0</u>	
1. <u>Vaccinium uliginosum</u>	<u>45</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Arctous alpinus</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU	
3. <u>Betula nana</u>	<u>15</u>	<input checked="" type="checkbox"/>	FAC	
4. <u>Vaccinium vitis-idaea</u>	<u>10</u>	<input type="checkbox"/>	FAC	
5. <u>Salix pulchra</u>	<u>5</u>	<input type="checkbox"/>	FACW	
6. <u>Empetrum nigrum</u>	<u>5</u>	<input type="checkbox"/>	FAC	
7. <u>Rhododendron tomentosum</u>	<u>2</u>	<input type="checkbox"/>	FACW	
8. <u>Salix reticulata</u>	<u>1</u>	<input type="checkbox"/>	FAC	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	FAC	
Total Cover:		<u>98</u>		
Herb Stratum				
50% of Total Cover:		<u>49</u>	20% of Total Cover: <u>19.6</u>	
1. <u>Carex bigelowii</u>	<u>15</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Petasites frigidus</u>	<u>1</u>	<input type="checkbox"/>	FACW	
3. <u>Rubus chamaemorus</u>	<u>1</u>	<input type="checkbox"/>	FACW	
4. _____	<u>0</u>	<input type="checkbox"/>	_____	
5. _____	<u>0</u>	<input type="checkbox"/>	_____	
6. _____	<u>0</u>	<input type="checkbox"/>	_____	
7. _____	<u>0</u>	<input type="checkbox"/>	_____	
8. _____	<u>0</u>	<input type="checkbox"/>	_____	
9. _____	<u>0</u>	<input type="checkbox"/>	_____	
10. _____	<u>0</u>	<input type="checkbox"/>	_____	
Total Cover:		<u>17</u>		
50% of Total Cover:		<u>8.5</u>	20% of Total Cover: <u>3.4</u>	

Hydrophytic Vegetation Indicators:
 Dominance Test is > 50%
 Prevalence Index is ≤ 3.0
 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation (Explain)
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width) 10m
 % Cover of Wetland Bryophytes (Where applicable) _____
 % Bare Ground 15
 Total Cover of Bryophytes 30

Hydrophytic Vegetation Present? Yes No

Remarks: Bare ground is frost boils & game trails. 10% lichen cover.

SOIL

Sampling Point: **SW15_T344_03**

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			
0-1							Mucky Peat		
1-3	5Y	4/2	70	10YR	4/6	30	C	PL	Sandy Clay Loam
3-4									Fine Sand
4-8	10G	4/1	75	10YR	5/8	25	C	PL	Sandy Clay Loam
8-12	10Y	4/3	95	10YR	4/6	5	C	PL	Sandy Clay 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 Gleyed Without Hue 5Y or Redder Underlying Layer
 Alaska Alpine swales (TA5)
 Alaska Redox With 2.5Y Hue 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:
 Couldn't dig past 12 in because soil pit kept filling in (thixotropic soil).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

<input 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)

<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 checked="" type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> FAC-neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches):

Water Table Present? Yes No Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 1

Wetland Hydrology Present? Yes No

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

Remarks:
 D3--sandy clay loam. D4--hummocks.