WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project | Borough/City: Matanuska-Susitna Borough | Sampling Date: 02-Aug-12

Applicant/Owner: Alaska Energy Authority | Sampling Point: **SW12_T54_08**

Investigator(s): SLI, KMK | Landform (hillside, terrace, hummocks etc.): Hillside

Local relief (concave, convex, none): flat | Slope: 5.2 % / 3.0 ° | Elevation: 767

Subregion : Southcentral Alaska | Lat.: 62.833798245 | Long.: -149.14587164 | 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 ◉ No ○ Hydric Soil Present? Yes ◉ No ○ Wetland Hydrology Present? Yes ◉ No ○	**Is the Sampled Area within a Wetland?** **Yes ◉ No ○**

Remarks:

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

	Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.	Picea glauca	7	☑	FACU
2.		0	☐	
3.		0	☐	
4.	Streptopus amplexifolius	3	☑	FACU
5.	Luzula parviflora	1	☐	FAC
	Total Cover:	11		

50% of Total Cover: 5.5 | 20% of Total Cover: 2.2

	Sapling/Shrub Stratum			
1.	Salix pulchra	70	☑	FACW
2.	Salix barclayi	10	☐	FAC
3.	Achillea millefolium	1	☐	FACU
4.	Arctagrostis latifolia	5	☐	FACW
5.	Valeriana sitchensis	1	☐	FAC
6.	Geranium erianthum	3	☐	FACU
7.	Listera cordata	1	☐	FACU
8.	Moneses uniflora	2	☐	FACU
9.	Pyrola asarifolia	1	☐	FACU
10.	Veratrum viride	2	☐	FAC
	Total Cover:	96		

50% of Total Cover: 48 | 20% of Total Cover: 19.2

	Herb Stratum			
1.	Chamerion angustifolium	3	☐	FACU
2.	Swertia perennis	2	☐	FACW
3.	Rubus chamaemorus	3	☐	FACW
4.	Cornus canadensis	5	☑	FACU
5.	Equisetum pratense	10	☑	FACW
6.	Aconitum delphinifolium	3	☐	FAC
7.	Arnica latifolia	7	☑	FAC
8.	Lycopodium clavatum	3	☐	FACU
9.	Mertensia paniculata	5	☑	FACU
10.	Viola adunca	5	☑	FAC
	Total Cover:	46		

50% of Total Cover: 23 | 20% of Total Cover: 9.2

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	x 1 =	0
FACW Species	90	x 2 =	180
FAC Species	29	x 3 =	87
FACU Species	34	x 4 =	136
UPL Species	0	x 5 =	0
Column Totals:	153 (A)		403 (B)

Prevalence Index = B/A = 2.634

Hydrophytic Vegetation Indicators:

- ☐ Dominance Test is > 50%
- ☑ Prevalence Index is ≤3.0
- ☐ Morphological Adaptations [1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 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) 5m

% Cover of Wetland Bryophytes (Where applicable)

% Bare Ground 2

Total Cover of Bryophytes 95

Hydrophytic Vegetation Present? **Yes ◉ No ○**

Remarks: collected poa, arnica, valeriana. willows have lost most of their leaves to insects. no flowers on viola, lvs similar to v.adunca. Additional herbs listed in tree layer.

SOIL

Sampling Point: SW12_T54_08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2		100					Fibric Organics	
2-5		100					Hemic Organics	
5-16		100					Sapric Organics	

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

Hydric Soil Indicators:

- [x] 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:
refusal at 16in due to cobbles

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

- [ ] Surface Water (A1)
- [x] High Water Table (A2)
- [x] 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):
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:
soil pit with water table at surface. Surface water in small R2 stream flowing through photo signature