WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project | Borough/City: Matanuska-Susitna Borough | Sampling Date: 22-Jun-12

Applicant/Owner: Alaska Energy Authority | Sampling Point: **SW12_T18_02**

Investigator(s): SLI, EKJ | Landform (hillside, terrace, hummocks etc.): Toeslope

Local relief (concave, convex, none): flat | Slope: % / 2.4 ° | Elevation: 804

Subregion : Southcentral Alaska | Lat.: 62.8507582609 | Long.: -149.201555688 | Datum: NAD83

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.		0	☐	
5.		0	☐	
	Total Cover:	7		
	Sapling/Shrub Stratum	50% of Total Cover: 3.5	20% of Total Cover: 1.4	
1.	Salix pulchra	35	☑	FACW
2.	Salix commutata	35	☑	FAC
3.	Alnus viridis	7	☐	FAC
4.	Salix reticulata	3	☐	FAC
5.		0	☐	
6.		0	☐	
7.		0	☐	
8.		0	☐	
9.		0	☐	
10.		0	☐	
	Total Cover:	80		
	Herb Stratum	50% of Total Cover: 40	20% of Total Cover: 16	
1.	Dodecatheon jeffreyi	7	☑	FACW
2.	Sanguisorba officinalis	3	☐	FACW
3.	Pyrola minor	7	☑	FAC
4.	Anemone richardsonii	5	☐	FAC
5.	Polemonium acutiflorum	1	☐	FAC
6.	Equisetum sylvaticum	1	☐	FAC
7.	Equisetum palustre	30	☑	FACW
8.	Viola palustris	7	☑	FACW
9.	Geranium bicknellii	3	☐	UPL
10.	Mertensia paniculata	3	☐	FACU
	Total Cover:	67		
	50% of Total Cover: 33.5	20% of Total Cover: 13.4		

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	x 1 =	0
FACW Species	82	x 2 =	164
FAC Species	59	x 3 =	177
FACU Species	10	x 4 =	40
UPL Species	3	x 5 =	15
Column Totals:	154 (A)		396 (B)

Prevalence Index = B/A = 2.571

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) 10m

% Cover of Wetland Bryophytes (Where applicable)

% Bare Ground 35

Total Cover of Bryophytes 60

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

Remarks: 1% each of Arctagrostis latifolia (id based on last season infloresence), Streptopus amplexifolius, Comarum palustre, Carex aquatilis, Valeriana capitata, and Luzula sp (likely tundricola). trace equisetum fluviatile. no flowers on geranium, unsure of species. bryophytes dominated by liverworts, bare ground includes open water. Additional species in remarks do not change results of dominance test.

SOIL

Sampling Point: SW12_T18_02

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
0-3		100					Fibric Organics	
3-9		100					Hemic Organics	
9-18		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:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one is sufficient)

- [x] 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)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [x] FAC-neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ◉ No ○	Depth (inches):	2
Water Table Present?	Yes ◉ No ○	Depth (inches):	5
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:

wetland at toe of slope. small pools of shallow standing water throughout site.