WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project   Borough/City: Matanuska-Susitna Borough   Sampling Date: 30-Jul-12

Applicant/Owner: Alaska Energy Authority   Sampling Point: **SW12_T49_04**

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

Local relief (concave, convex, none): hummocky   Slope: % / 3.0 °   Elevation: 708

Subregion: Interior Alaska Mountains   Lat.: 62.8150031313   Long.: -148.425357388   Datum: NAD83

Soil Map Unit Name: NWI classification: Upland

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 ◯	**Is the Sampled Area**	
Hydric Soil Present?	Yes ⦿ No ◯	**within a Wetland?**	Yes ◯ No ⦿
Wetland Hydrology Present?	Yes ◯ No ⦿		

Remarks: animal sign not in tablet - rub marks on picgla shrub

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	10	☑	FACU
2.	0	☐	
3.	0	☐	
4.	0	☐	
5.	0	☐	
Total Cover:	10		
50% of Total Cover: 5	20% of Total Cover: 2		

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula nana	20	☑	FAC
2. Vaccinium uliginosum	10	☑	FAC
3. Empetrum nigrum	10	☑	FAC
4. Rhododendron tomentosum	7	☐	FACW
5. Vaccinium vitis-idaea	5	☐	FAC
6. Salix pulchra	5	☐	FACW
7. Betula glandulosa	5	☐	FAC
8. Picea glauca	2	☐	FACU
9. Spiraea stevenii	1	☐	FACU
10.	0	☐	FACU
Total Cover:	65		
50% of Total Cover: 32.5	20% of Total Cover: 13		

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Carex bigelowii	5	☑	FAC
2. Petasites frigidus	1	☐	FACW
3.	0	☐	
4.	0	☐	
5.	0	☐	
6.	0	☐	
7.	0	☐	
8.	0	☐	
9.	0	☐	
10.	0	☐	
Total Cover:	6		
50% of Total Cover: 3	20% of Total Cover: 1.2		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	x 1 =	0
FACW Species	13	x 2 =	26
FAC Species	55	x 3 =	165
FACU Species	13	x 4 =	52
UPL Species	0	x 5 =	0
Column Totals:	81 (A)		243 (B)

Prevalence Index = B/A = 3.000

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: 5

Total Cover of Bryophytes: 80

Hydrophytic Vegetation Present?   Yes ⦿   No ◯

Remarks: trace rubcha

SOIL

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3							Fibric Organics	
3-4							Hemic Organics	
4-10	2.5Y 4/2	60					Coarse Sandy Loam	35% gravels, 5% cobbles
10-18	5Y 4/2	70	7.5YR 4/4	10	C	PL	Silt Loam	20% fine gravel

[1] Type: 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:
  Depth (inches):

Hydric Soil Present?   Yes ⦿   No ○

Remarks:

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):

Water Table Present?   Yes ○   No ⦿   Depth (inches):

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

Wetland Hydrology Present?   Yes ○   No ⦿

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

Remarks:
no wetland hydrology indicators