WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project   Borough/City: Matanuska-Susitna Borough   Sampling Date: 07-Aug-13

Applicant/Owner: Alaska Energy Authority   Sampling Point: **SW13_T142_06**

Investigator(s): WAD, RWM   Landform (hillside, terrace, hummocks etc.): drainage feature

Local relief (concave, convex, none): concave   Slope: ___ % / 1.0 °   Elevation: 119

Subregion: Interior Alaska Mountains   Lat.: 63.0946861513   Long.: -148.292552949   Datum: NAD83

Soil Map Unit Name: _____   NWI classification: PEM1/SS1E

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: banks of small stream, adjacent to two small permanently flooded ponds.

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

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	0	☐	___
2. _____	0	☐	___
3. _____	0	☐	___
4. _____	0	☐	___
5. _____	0	☐	___
Total Cover:	0		

50% of Total Cover: 0   20% of Total Cover: 0

Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix pulchra	30	☑	FACW
2. Salix fuscescens	4	☐	FACW
3. _____	0	☐	___
4. _____	0	☐	___
5. _____	0	☐	___
6. _____	0	☐	___
7. _____	0	☐	___
8. _____	0	☐	___
9. _____	0	☐	___
10. _____	0	☐	___
Total Cover:	34		

50% of Total Cover: 17   20% of Total Cover: 6.8

Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Carex aquatilis	45	☑	OBL
2. Comarum palustre	25	☑	OBL
3. Arctagrostis latifolia	5	☐	FACW
4. _____	0	☐	___
5. _____	0	☐	___
6. _____	0	☐	___
7. _____	0	☐	___
8. _____	0	☐	___
9. _____	0	☐	___
10. _____	0	☐	___
Total Cover:	75		

50% of Total Cover: 37.5   20% of Total Cover: 15

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL Species	70	x 1 =	70
FACW Species	39	x 2 =	78
FAC Species	0	x 3 =	0
FACU Species	0	x 4 =	0
UPL Species	0	x 5 =	0
Column Totals:	109 (A)		148 (B)

Prevalence Index = B/A = 1.358

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 _____

Total Cover of Bryophytes 5

Hydrophytic Vegetation Present?   Yes ⦿   No ○

Remarks: dead willow stems

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			100					Fibric Organics	
3-6			100					Hemic Organics	
6-8			100					Sapric Organics	
8-11	2.5Y	3/1	100					Sand	with roots and organics
11-16	10YR	3/2	100					Silt Loam	

[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):	1
Water Table Present?	Yes ⦿ No ◯	Depth (inches):	9
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: