WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project | Borough/City: Matanuska-Susitna Borough | Sampling Date: 21-Aug-15

Applicant/Owner: Alaska Energy Authority | Sampling Point: **SW15_T302_11**

Investigator(s): GVF | Landform (hillside, terrace, hummocks etc.): Channel (abandoned)

Local relief (concave, convex, none): flat | Slope: 0.0 % / 0.0 ° | Elevation:

Subregion : Interior Alaska Mountains | Lat.: | Long.: | Datum: WGS84

Soil Map Unit Name: | **NWI classification: PSS1C**

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 within a Wetland?** **Yes ◉ No ○**
Hydric Soil Present?	Yes ◉ No ○	
Wetland Hydrology Present?	Yes ◉ No ○	

Remarks: Early successional riverine community likely flooded early in growing season.

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

	Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			☐	
2.			☐	
3.			☐	
4.			☐	
5.			☐	
	Total Cover:	0		
	Sapling/Shrub Stratum	50% of Total Cover: 0	20% of Total Cover: 0	
1.	Populus balsamifera	15	☑	FACU
2.	Salix alaxensis	10	☑	FAC
3.	Salix niphoclada	10	☑	UPL
4.	Salix myrtillifolia	5	☐	FACW
5.	Dasiphora fruticosa	3	☐	FAC
6.	Salix arbusculoides	2	☐	FACW
7.		0	☐	
8.		0	☐	
9.		0	☐	
10.		0	☐	
	Total Cover:	45		
	Herb Stratum	50% of Total Cover: 22.5	20% of Total Cover: 9	
1.	Hedysarum alpinum	5	☑	FACU
2.	Equisetum arvense	5	☑	FAC
3.	Eurybia sibirica	5	☑	FAC
4.	Artemisia tilesii	3	☑	FACU
5.	Calamagrostis stricta ssp. inexpansa	3	☑	FACW
6.	Chamaenerion angustifolium	3	☑	FACU
7.	Potentilla anserina	3	☑	FACW
8.	Astragalus polaris	3	☑	FAC
9.	Anthoxanthum monticola ssp. alpinum	1	☐	UPL
10.	Equisetum variegatum	1	☐	FACW
	Total Cover:	32		
	50% of Total Cover: 16	20% of Total Cover: 6.4		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 54.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	x 1 =	0
FACW Species	14	x 2 =	28
FAC Species	26	x 3 =	78
FACU Species	26	x 4 =	104
UPL Species	11	x 5 =	55
Column Totals:	77 (A)		265 (B)

Prevalence Index = B/A = 3.442

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 55

Total Cover of Bryophytes 10

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

Remarks: salmyr refers to salix pseudomyrsinites (syn)

SOIL

Sampling Point: SW15_T302_11

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 %	Type [1]	Loc [2]	Texture	Remarks
0-17	2.5Y 4/2	100					Fine Sand	

[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:
sandy, fluvaquent soils.

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: