

**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\_T05\_01  
 Investigator(s): CTS, EKJ Landform (hillside, terrace, hummocks etc.): Channel (abandoned)  
 Local relief (concave, convex, none): flat Slope: 0.0 % / 0.0 ° Elevation: 529  
 Subregion: Interior Alaska Mountains Lat.: 62.7799899084 Long.: -147.923669974 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 <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<p align="center"><b>Is the Sampled Area within a Wetland?</b></p> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Vegetated river bar/island</u>	

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

<u>Tree Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. _____	0	<input type="checkbox"/>	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)
2. _____	0	<input type="checkbox"/>	_____	
3. _____	0	<input type="checkbox"/>	_____	
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>			<u>0</u>	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL Species <u>0</u> x 1 = <u>0</u> FACW Species <u>0</u> x 2 = <u>0</u> FAC Species <u>20.2</u> x 3 = <u>60.60</u> FACU Species <u>84.1</u> x 4 = <u>336.4</u> UPL Species <u>0</u> x 5 = <u>0</u> Column Totals: <u>104.3</u> (A) <u>397</u> (B) Prevalence Index = B/A = <u>3.806</u>
<b>Sapling/Shrub Stratum</b>	50% of Total Cover: <u>0</u>	20% of Total Cover: <u>0</u>		
1. <u>Populus balsamifera</u>	70	<input checked="" type="checkbox"/>	FACU	
2. <u>Salix alaxensis</u>	15	<input type="checkbox"/>	FAC	
3. <u>Salix glauca</u>	3	<input type="checkbox"/>	FAC	
4. <u>Dasiphora fruticosa</u>	0.1	<input type="checkbox"/>	FAC	
5. _____	0	<input type="checkbox"/>	_____	
6. _____	0	<input type="checkbox"/>	_____	
7. _____	0	<input type="checkbox"/>	_____	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>			<u>88.1</u>	
<b>Herb Stratum</b>	50% of Total Cover: <u>44.05</u>	20% of Total Cover: <u>17.62</u>		
1. <u>Artemisia tilesii</u>	1	<input type="checkbox"/>	FACU	
2. <u>Hedysarum alpinum</u>	10	<input checked="" type="checkbox"/>	FACU	
3. <u>Chamerion angustifolium</u>	2	<input type="checkbox"/>	FACU	
4. <u>Solidago canadensis</u>	0.1	<input type="checkbox"/>	FACU	
5. <u>Lupinus nootkatensis</u>	1	<input type="checkbox"/>	FACU	
6. <u>Castilleja caudata</u>	0.1	<input type="checkbox"/>	FAC	
7. <u>Astragalus alpinus</u>	2	<input type="checkbox"/>	FAC	
8. _____	0	<input type="checkbox"/>	_____	
9. _____	0	<input type="checkbox"/>	_____	
10. _____	0	<input type="checkbox"/>	_____	
<b>Total Cover:</b>			<u>16.2</u>	
50% of Total Cover:	<u>8.1</u>	20% of Total Cover:	<u>3.24</u>	

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is > 50%  
 Prevalence Index is ≤ 3.0  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup> 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) 0  
 % Bare Ground 0  
 Total Cover of Bryophytes 0

**Hydrophytic Vegetation Present?** Yes  No

Remarks: riverine gravel bar with early successional FACU species. assume hydrophytic vegetation based on geomorphic position, fluvaquent soils.

**SOIL**

Sampling Point: **SW12\_T05\_01**

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

Depth (inches)	Matrix			Redox Features				Texture	Remarks
	Color (moist)	%	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y	4/2	93					Fine Sand	7% roots
6-8	5Y	5/2	93					Fine Sand	7% roots
8-15	2.5Y	4/2	90	10YR	4/6	10	C	M	layers of fine sand and sand interbedded als
15-16	2.5Y	4/2	100					Sand	0% roots

<sup>1</sup>Type: C=Concentration. D=Depletion. RM=Reduced Matrix <sup>2</sup> 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:<sup>3</sup>**

- Alaska Color Change (TA4)<sup>4</sup>
- Alaska Alpine swales (TA5)
- Alaska Redox With 2.5Y Hue
- Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- Other (Explain in Remarks)

<sup>3</sup> One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present

<sup>4</sup> Give details of color change in Remarks

Restrictive Layer (if present):

Type:  
Depth (inches):

**Hydric Soil Present?** Yes  No

**Remarks:**

\*globs of organics and roots, 5% roots  
overall, few well rounded large gravel throughout matrix. insufficient soil color for redox development, assume hydric 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:**

no wetland hydrology indicators