

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 23-Jun-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T10_03
 Investigator(s): SLI, LMF Landform (hillside, terrace, hummocks etc.): Alluvial fan
 Local relief (concave, convex, none): rolling Slope: 0.0 % / 0.0 ° Elevation: 228
 Subregion: Southcentral Alaska Lat.: 62.7847399089 Long.: -149.661859966 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 checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: no hydric soil indicators. large portions of site flooded, with salix in standing water, fully submerged geumac, calcan, and chalcat. high water event, veg community and soils suggest that this is typically much more dry.	

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

<u>Tree Stratum</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	0	<input type="checkbox"/>	_____	Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	0	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. _____	0	<input type="checkbox"/>	_____	Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)
4. _____	0	<input type="checkbox"/>	_____	
5. _____	0	<input type="checkbox"/>	_____	
Total Cover: <u>0</u>				
Sapling/Shrub Stratum	50% of Total Cover: <u>0</u>	20% of Total Cover: <u>0</u>		Prevalence Index worksheet:
1. <u>Rubus idaeus</u>	1	<input type="checkbox"/>	FACU	Total % Cover of: Multiply by:
2. <u>Alnus incana ssp. tenuifolia</u>	7	<input type="checkbox"/>	UPL	OBL Species <u>1</u> x 1 = <u>1</u>
3. <u>Salix glauca</u>	15	<input checked="" type="checkbox"/>	FAC	FACW Species <u>4</u> x 2 = <u>8</u>
4. <u>Salix lasiandra</u>	0.1	<input type="checkbox"/>	FACW	FAC Species <u>40</u> x 3 = <u>120</u>
5. <u>Populus balsamifera</u>	10	<input checked="" type="checkbox"/>	FACU	FACU Species <u>27</u> x 4 = <u>108</u>
6. <u>Salix alaxensis</u>	5	<input type="checkbox"/>	FAC	UPL Species <u>8</u> x 5 = <u>40</u>
7. <u>Salix richardsonii</u>	3	<input type="checkbox"/>	FACW	Column Totals: <u>80</u> (A) <u>277</u> (B)
8. <u>Galium triflorum</u>	1	<input type="checkbox"/>	FAC	Prevalence Index = B/A = <u>3.463</u>
9. <u>Lupinus arcticus</u>	1	<input type="checkbox"/>	FACU	
10. <u>Juncus arcticus</u>	1	<input type="checkbox"/>	OBL	
Total Cover: <u>44.1</u>				
Herb Stratum	50% of Total Cover: <u>22.05</u>	20% of Total Cover: <u>8.82</u>		Hydrophytic Vegetation Indicators:
1. <u>Chamerion latifolium</u>	10	<input checked="" type="checkbox"/>	FAC	<input type="checkbox"/> Dominance Test is > 50%
2. <u>Artemisia tilesii</u>	3	<input type="checkbox"/>	FACU	<input type="checkbox"/> Prevalence Index is ≤ 3.0
3. <u>Calamagrostis canadensis</u>	7	<input checked="" type="checkbox"/>	FAC	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Carex spectabilis</u>	1	<input type="checkbox"/>	FACW	<input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u>Geum macrophyllum</u>	2	<input type="checkbox"/>	FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. <u>Taraxacum officinale</u>	5	<input checked="" type="checkbox"/>	FACU	Plot size (radius, or length x width) <u>10m</u>
7. <u>Mertensia paniculata</u>	5	<input checked="" type="checkbox"/>	FACU	% Cover of Wetland Bryophytes (Where applicable) _____
8. <u>Hedysarum boreale</u>	1	<input type="checkbox"/>	UPL	% Bare Ground <u>95</u>
9. <u>Achillea millefolium</u>	1	<input type="checkbox"/>	FACU	Total Cover of Bryophytes _____
10. <u>Equisetum scirpoides</u>	1	<input type="checkbox"/>	FACU	
Total Cover: <u>36</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
50% of Total Cover: <u>18</u>	20% of Total Cover: <u>7.2</u>			

Remarks: Problematic hydrophytic vegetation, site is likely transitioning to upland and gets flooded on a greater than yearly seasonal basis, colonizing with primarily FACU colonizers, using problematic veg consistent with other vegetated riverbar plots with similar photosig.

SOIL

Sampling Point: **SW12_T10_03**

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 ¹	Loc ²		
0-4	2.5Y	3/1	100				Sandy Clay	
4-15			60				Sand	coarse sand and 40% coarse gravel

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol or Histel (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Alaska Gleyed (A13) <input type="checkbox"/> Alaska Redox (A14) <input type="checkbox"/> Alaska Gleyed Pores (A15)	<p>Indicators for Problematic Hydric Soils:³</p> <input type="checkbox"/> Alaska Color Change (TA4) ⁴ <input type="checkbox"/> Alaska Alpine swales (TA5) <input type="checkbox"/> Alaska Redox With 2.5Y Hue <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer <input checked="" type="checkbox"/> Other (Explain in Remarks)
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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 <input checked="" type="radio"/> No <input type="radio"/>
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Remarks:
 no hydric soil indicators but indicators of seasonal flooding, assume hydric, fluvaquent soils

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6)	<p>Secondary Indicators (two or more are required)</p> <input type="checkbox"/> Water Stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-neutral Test (D5)
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<p>Field Observations:</p> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 15 Saturation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 13 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
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Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks:
 adjacent to susitna river. Flooding at this site would primarily occur from small upstream tributary. Located on branch off main permanently flooded channel and flood frequency may be dropping.