

**WETLAND DETERMINATION DATA FORM - Alaska Region**

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 02-Aug-12  
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12\_T53\_02  
 Investigator(s): CTS, EKJ Landform (hillside, terrace, hummocks etc.): Mountainslope  
 Local relief (concave, convex, none): convex Slope: 10.5 % / 6.0 ° Elevation: 761  
 Subregion: Southcentral Alaska Lat.: 62.8068199086 Long.: -149.056589968 Datum: WGS84  
 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 <input checked="" type="radio"/> No <input type="radio"/><br>Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/><br>Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | <b>Is the Sampled Area within a Wetland?</b><br>Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: <u>Sdet on convex slope</u>  |   |

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

|                                    | Absolute % Cover | Dominant Species?                   | Indicator Status |   |
|------------------------------------|------------------|-------------------------------------|------------------|---|
| <b>Tree Stratum</b>                |                  |                                     |                  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br>Percent of dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B) |
| 1. _____                           | 0                | <input type="checkbox"/>            | _____            |   |
| 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>Sapling/Shrub Stratum</b>       |                  |                                     |                  |   |
| 50% of Total Cover:                |                  |                                     | <u>0</u>         |   |
| 20% of Total Cover:                |                  |                                     | <u>0</u>         |   |
| 1. <u>Vaccinium uliginosum</u>     | 50               | <input checked="" type="checkbox"/> | FAC              |   |
| 2. <u>Empetrum nigrum</u>          | 60               | <input checked="" type="checkbox"/> | FAC              |   |
| 3. <u>Betula nana</u>              | 15               | <input type="checkbox"/>            | FAC              |   |
| 4. <u>Vaccinium vitis-idaea</u>    | 1                | <input type="checkbox"/>            | FAC              |   |
| 5. <u>Ledum decumbens</u>          | 5                | <input type="checkbox"/>            | FACW             |   |
| 6. <u>Linnaea borealis</u>         | 1                | <input type="checkbox"/>            | FACU             |   |
| 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>132</u>       |   |
| <b>Herb Stratum</b>                |                  |                                     |                  |   |
| 50% of Total Cover:                |                  |                                     | <u>66</u>        |   |
| 20% of Total Cover:                |                  |                                     | <u>26.4</u>      |   |
| 1. <u>Cornus canadensis</u>        | 5                | <input checked="" type="checkbox"/> | FACU             |   |
| 2. <u>Pedicularis labradorica</u>  | 0.1              | <input type="checkbox"/>            | FACW             |   |
| 3. <u>Calamagrostis canadensis</u> | 0.1              | <input type="checkbox"/>            | FAC              |   |
| 4. <u>Carex bigelowii</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>5.3</u>       |   |
| 50% of Total Cover:                |                  |                                     | <u>2.65</u>      |   |
| 20% of Total Cover:                |                  |                                     | <u>1.06</u>      |   |

**Prevalence Index worksheet:**  
 Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL Species 0 x 1 = 0  
 FACW Species 5.1 x 2 = 10.2  
 FAC Species 126.2 x 3 = 378.6  
 FACU Species 6 x 4 = 24  
 UPL Species 0 x 5 = 0  
 Column Totals: 137.3 (A) 412.8 (B)  
 Prevalence Index = B/A = 3.007

**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) 30  
 % Bare Ground 0  
 Total Cover of Bryophytes 30

**Hydrophytic Vegetation Present?** Yes  No

Remarks: \_\_\_\_\_

**SOIL**

Sampling Point: **SW12\_T53\_02**

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> |            |                                      |
| 0-2            | 10YR          | 2/2   | 80  |                |   |                   |                  | Silt Loam  | 20% roots                            |
| 2-8            | 7.5YR         | 2.5/2 | 100 |                |   |                   |                  | Silt Loam  | few roots                            |
| 8-12           | 7.5YR         | 2.5/3 | 90  |                |   |                   |                  | Sandy Loam | 10% angular gravel                   |
| 12-19          | 10YR          | 3/3   | 90  |                |   |                   |                  | Sandy Loam | 10% coarse angular gravel and cobble |
|                |               |       |     |                |   |                   |                  |            |                                      |
|                |               |       |     |                |   |                   |                  |            |                                      |
|                |               |       |     |                |   |                   |                  |            |                                      |
|                |               |       |     |                |   |                   |                  |            |                                      |

<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:  
no hydric soil indicators

**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