## WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project | Borough/City: Matanuska-Susitna Borough | Sampling Date: 01-Aug-12

Applicant/Owner: Alaska Energy Authority | Sampling Point: **SW12_T52_04**

Investigator(s): CTS, EKJ | Landform (hillside, terrace, hummocks etc.): Flat

Local relief (concave, convex, none): flat | Slope: % / 1.3 ° | Elevation: 699

Subregion : Interior Alaska Mountains | Lat.: 62.7911281449 | Long.: -148.534115735 | Datum: NAD83

Soil Map Unit Name: | **NWI classification: PEM1E**

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 ○

Hydric Soil Present? Yes ◉ No ○

Wetland Hydrology Present? Yes ◉ No ○

**Is the Sampled Area within a Wetland?** **Yes** ◉ **No** ○

Remarks: Disjunct strangmoor grading to lakeshore, Trichophorum dominated!

**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 | | |

**Sapling/Shrub Stratum** — 50% of Total Cover: 0 — 20% of Total Cover: 0

| | | | | |
|---|---|---|---|---|
| 1. | Vaccinium uliginosum | 3 | ☑ | FAC |
| 2. | Dasiphora fruticosa | 2 | ☑ | FAC |
| 3. | Rhododendron tomentosum | 2 | ☑ | FACW |
| 4. | Betula nana | 1 | ☐ | FAC |
| 5. | Empetrum nigrum | 1 | ☐ | FAC |
| 6. | Picea mariana | 2 | ☑ | FACW |
| 7. | | 0 | ☐ | |
| 8. | | 0 | ☐ | |
| 9. | | 0 | ☐ | |
| 10. | | 0 | ☐ | |
| **Total Cover:** | | 11 | | |

**Herb Stratum** — 50% of Total Cover: 5.5 — 20% of Total Cover: 2.2

| | | | | |
|---|---|---|---|---|
| 1. | Lycopodium clavatum | 0.1 | ☐ | FACU |
| 2. | Solidago canadensis | 1 | ☐ | UPL |
| 3. | Trichophorum alpinum | 50 | ☑ | OBL |
| 4. | Eriophorum angustifolium | 2 | ☐ | OBL |
| 5. | Pedicularis labradorica | 0.1 | ☐ | FACW |
| 6. | Swertia perennis | 0.1 | ☐ | FACW |
| 7. | | 0 | ☐ | |
| 8. | | 0 | ☐ | |
| 9. | | 0 | ☐ | |
| 10. | | 0 | ☐ | |
| **Total Cover:** | | 53.3 | | |

50% of Total Cover: 26.65 — 20% of Total Cover: 10.66

**Dominance Test worksheet:**

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (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 | 52 | x 1 = | 52 |
| FACW Species | 4.2 | x 2 = | 8.4 |
| FAC Species | 7 | x 3 = | 21 |
| FACU Species | 0.1 | x 4 = | 0.400 |
| UPL Species | 1 | x 5 = | 5 |
| Column Totals: | 64.3 | (A) | 86.8 (B) |

Prevalence Index = B/A = 1.350

**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) 60

% Bare Ground 5

Total Cover of Bryophytes 60

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

Remarks: include 2% picmar trees in shrub layer, as total tree cover <5%

## SOIL

**Sampling Point: SW12_T52_04**

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 % | Redox Features Type [1] | Redox Features Loc [2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | | 100 | | | | | Fibric Organics | |
| 2-17 | | 100 | | | | | Hemic Organics | 20% roots |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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

**Hydric Soil Indicators:**

- [x] 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)

- [x] Surface Water (A1)
- [x] High Water Table (A2)
- [x] 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)
- [x] FAC-neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ◉ | No ○ | Depth (inches): 1 |
| Water Table Present? | Yes ◉ | No ○ | Depth (inches): 5 |
| Saturation Present? (includes capillary fringe) | Yes ◉ | No ○ | Depth (inches): 2 |

**Wetland Hydrology Present?** Yes ◉ No ○

Describe Recorded Data (stream gauge, monitor well, aerial photos, previous inspection) if available:

Remarks: