

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 10-Jul-13
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW13_T135_07
 Investigator(s): JER Landform (hillside, terrace, hummocks etc.): Flat
 Local relief (concave, convex, none): _____ Slope: % / 1.3 ° Elevation: 101
 Subregion: Southcentral Alaska Lat.: 62.8925548789 Long.: -148.914700389 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PSS4B

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 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 type="radio"/> No <input checked="" type="radio"/> |
| Remarks: relief is soil covered rocky mounds and pits, drained basin? soils collapsing in pit | |

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

| | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------------|------------------|---|
| Tree Stratum | | | | Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of dominant Species That Are OBL, FACW, or FAC: <u>50.0%</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"/> | _____ | |
| Total Cover: <u>0</u> | | | | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL Species <u>1</u> x 1 = <u>1</u> FACW Species <u>19</u> x 2 = <u>38</u> FAC Species <u>59.1</u> x 3 = <u>177.3</u> FACU Species <u>21</u> x 4 = <u>84</u> UPL Species <u>8.1</u> x 5 = <u>40.50</u> Column Totals: <u>108.2</u> (A) <u>340.8</u> (B) Prevalence Index = B/A = <u>3.150</u> |
| Sapling/Shrub Stratum 50% of Total Cover: <u>0</u> 20% of Total Cover: <u>0</u> | | | | |
| 1. <u>Empetrum nigrum</u> | 35 | <input checked="" type="checkbox"/> | FAC | |
| 2. <u>Cassiope tetragona</u> | 10 | <input checked="" type="checkbox"/> | FACU | |
| 3. <u>Salix rotundifolia</u> | 8 | <input type="checkbox"/> | FAC | |
| 4. <u>Salix fuscescens</u> | 8 | <input type="checkbox"/> | FACW | |
| 5. <u>Salix pulchra</u> | 5 | <input type="checkbox"/> | FACW | |
| 6. <u>Loiseleuria procumbens</u> | 5 | <input type="checkbox"/> | FACU | |
| 7. <u>Rhododendron tomentosum</u> | 5 | <input type="checkbox"/> | FACW | |
| 8. <u>Spiraea stevenii</u> | 3 | <input type="checkbox"/> | FACU | |
| 9. <u>Betula nana</u> | 3 | <input type="checkbox"/> | FAC | |
| 10. <u>Diapensia lapponica</u> | 2 | <input type="checkbox"/> | FACU | |
| Total Cover: <u>84</u> | | | | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is > 50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| Herb Stratum 50% of Total Cover: <u>42</u> 20% of Total Cover: <u>16.8</u> | | | | |
| 1. <u>Carex bigelowii</u> | 12 | <input checked="" type="checkbox"/> | FAC | |
| 2. <u>Anthoxanthum monticola ssp. alpinum</u> | 5 | <input checked="" type="checkbox"/> | UPL | |
| 3. <u>Artemisia norvegica</u> | 2 | <input type="checkbox"/> | FACU | |
| 4. <u>Festuca altaica</u> | 1 | <input type="checkbox"/> | FAC | |
| 5. <u>Eriophorum angustifolium</u> | 1 | <input type="checkbox"/> | OBL | |
| 6. <u>Carex membranacea</u> | 1 | <input type="checkbox"/> | FACW | |
| 7. <u>Anemone narcissiflora</u> | 1 | <input type="checkbox"/> | FACU | |
| 8. <u>Huperzia selago</u> | 1 | <input type="checkbox"/> | UPL | |
| 9. <u>Tofieldia coccinea</u> | 0.1 | <input type="checkbox"/> | FAC | |
| 10. <u>Arnica lessingii</u> | 0.1 | <input type="checkbox"/> | UPL | |
| Total Cover: <u>24.2</u> | | | | Plot size (radius, or length x width) <u>10m</u> % Cover of Wetland Bryophytes (Where applicable) _____ % Bare Ground <u>2</u> Total Cover of Bryophytes <u>15</u> |
| 50% of Total Cover: <u>12.1</u> 20% of Total Cover: <u>4.84</u> | | | | |
| Remarks: fruticose lichen 60, water 5, camlas 0.1, lyccla 1, fesalt 1, picgla 0.1, andpol 2, vaculi 3. | | | | Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> |

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

SOIL

Sampling Point: **SW13_T135_07**

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 | | |
| 0-1 | | | 100 | | | | | Fibric Organics | |
| 1-15 | 10Y | 4/1 | 85 | 7.5YR | 4/6 | 15 | C | PL | Sandy Loam lots of 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 checked="" 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 checked="" type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer <input type="checkbox"/> 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 <input checked="" type="radio"/> No <input type="radio"/> |
|---|---|

Remarks:
lots of frost boils. ended up digging in one otherwise would have hit cobbles.

HYDROLOGY

| | |
|---|---|
| <p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (any one is sufficient)</p> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <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"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks) |
|---|---|

| | |
|--|---|
| <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): 6 Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 1 | Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
|--|---|

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

Remarks: