

WETLAND DETERMINATION DATA FORM - Alaska Region

Project/Site: Susitna-Watana Hydroelectric Project Borough/City: Matanuska-Susitna Borough Sampling Date: 26-Jun-12
 Applicant/Owner: Alaska Energy Authority Sampling Point: SW12_T20_11
 Investigator(s): JGK Landform (hillside, terrace, hummocks etc.): Knob
 Local relief (concave, convex, none): convex Slope: 17.6 % / 10.0 ° Elevation: 587
 Subregion: Southcentral Alaska Lat.: 62.7249099085 Long.: -148.828859971 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"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> | Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: |
|---------------------------------|--------------------------------|-------------------------------------|------------------|---|
| 1. <u>Picea mariana</u> | 7 | <input checked="" type="checkbox"/> | FACW | Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | Percent of dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B) |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | |
| Total Cover: <u>7</u> | | | | |
| Sapling/Shrub Stratum | 50% of Total Cover: <u>3.5</u> | 20% of Total Cover: <u>1.4</u> | | Prevalence Index worksheet: |
| 1. <u>Vaccinium uliginosum</u> | 15 | <input checked="" type="checkbox"/> | FAC | Total % Cover of: Multiply by: |
| 2. <u>Vaccinium vitis-idaea</u> | 5 | <input type="checkbox"/> | FAC | OBL Species <u>0</u> x 1 = <u>0</u> |
| 3. <u>Ledum decumbens</u> | 25 | <input checked="" type="checkbox"/> | FACW | FACW Species <u>32</u> x 2 = <u>64</u> |
| 4. <u>Betula glandulosa</u> | 20 | <input checked="" type="checkbox"/> | FAC | FAC Species <u>45</u> x 3 = <u>135</u> |
| 5. <u>Empetrum nigrum</u> | 5 | <input type="checkbox"/> | FAC | FACU Species <u>0</u> x 4 = <u>0</u> |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | UPL Species <u>0</u> x 5 = <u>0</u> |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | Column Totals: <u>77</u> (A) <u>199</u> (B) |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | Prevalence Index = B/A = <u>2.584</u> |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| Total Cover: <u>70</u> | | | | |
| Herb Stratum | 50% of Total Cover: <u>35</u> | 20% of Total Cover: <u>14</u> | | Hydrophytic Vegetation Indicators: |
| 1. _____ | 0 | <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 |
| 3. _____ | 0 | <input type="checkbox"/> | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 4. _____ | 0 | <input type="checkbox"/> | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 5. _____ | 0 | <input type="checkbox"/> | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | Plot size (radius, or length x width) <u>10m</u> |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | % Cover of Wetland Bryophytes (Where applicable) <u>2</u> |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | % Bare Ground <u>2</u> |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | Total Cover of Bryophytes <u>50</u> |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| Total Cover: <u>0</u> | | | | |
| 50% of Total Cover: <u>0</u> | 20% of Total Cover: <u>0</u> | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |

Remarks: tr rubcha picgla lyccla 15% lichen pocket of low ericaceous shrub--surrounded by black spruce woodland

SOIL

Sampling Point: **SW12_T20_11**

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 | | 80 | | | | | Fibric Organics | 20% roots |
| 1-2 | | 80 | | | | | Sapric Organics | w/charcoal 20% |
| 2-4 | 7.5YR | 3/4 | 100 | | | | Fine Sandy Loam | inclusions of oxidized areas |
| 4-7 | 5YR | 2.5/2 | 90 | | | | Coarse Loamy Sand | coarse sand to rounded cobbles (10%) |
| 7-13 | 10R | 2.5/1 | 85 | | | | Very Coarse Loamy Sand | gradation into 5YR 2.5/2--coarse S-rounded |
| 13-17 | 7.5YR | 2.5/3 | 100 | | | | Very Coarse Loamy Sand | |
| | | | | | | | | |
| | | | | | | | | |

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 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 type="radio"/> No <input checked="" type="radio"/> |
|---|---|

Remarks:

HYDROLOGY

| | | |
|--|--|--|
| <p>Wetland Hydrology Indicators:</p> <p><u>Primary Indicators (any one is sufficient)</u></p> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input 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) | <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><u>Secondary Indicators (two or more are required)</u></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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-neutral Test (D5) |
|--|--|--|

| | |
|--|---|
| <p>Field Observations:</p> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): | Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/> |
|--|---|

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

Remarks: