

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_03
 Investigator(s): SLI, LMF Landform (hillside, terrace, hummocks etc.): Flat
 Local relief (concave, convex, none): none Slope: 0.0 % / 0.0 ° Elevation: 588
 Subregion: Southcentral Alaska Lat.: 62.7257699088 Long.: -148.822849969 Datum: WGS84
 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.

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|---|--|
| 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: <u>PEM1E wetland w picmar on few small hummocks. N E and W bounds to this community at substantial (5-10ft) rise in elevation to open picmar forest.</u> | |

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>1</u> (A) |
| 2. _____ | 0 | <input type="checkbox"/> | _____ | Total Number of Dominant Species Across All Strata: <u>1</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>0</u> | | | | |
| <u>Sapling/Shrub Stratum</u> | 50% of Total Cover: <u>0</u> | 20% of Total Cover: <u>0</u> | | Prevalence Index worksheet: |
| 1. <u>Picea mariana</u> | 0.1 | <input type="checkbox"/> | FACW | Total % Cover of: Multiply by: |
| 2. <u>Betula nana</u> | 0.1 | <input type="checkbox"/> | FAC | OBL Species <u>50</u> x 1 = <u>50</u> |
| 3. <u>Vaccinium uliginosum</u> | 0.1 | <input type="checkbox"/> | FAC | FACW Species <u>2</u> x 2 = <u>4</u> |
| 4. <u>Andromeda polifolia</u> | 0.1 | <input type="checkbox"/> | FACW | FAC Species <u>0</u> x 3 = <u>0</u> |
| 5. <u>Empetrum nigrum</u> | 0.1 | <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>52</u> (A) <u>54</u> (B) |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | Prevalence Index = B/A = <u>1.038</u> |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| Total Cover: <u>0.5</u> | | | | Hydrophytic Vegetation Indicators: |
| 50% of Total Cover: <u>0.25</u> | 20% of Total Cover: <u>0.1</u> | | | <input checked="" type="checkbox"/> Dominance Test is > 50% |
| <u>Herb Stratum</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 |
| 1. <u>Drosera rotundifolia</u> | 5 | <input type="checkbox"/> | OBL | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 2. <u>Carex aquatilis</u> | 2 | <input type="checkbox"/> | OBL | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) |
| 3. <u>Trichophorum caespitosum</u> | 40 | <input checked="" type="checkbox"/> | OBL | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 4. <u>Rubus chamaemorus</u> | 2 | <input type="checkbox"/> | FACW | |
| 5. <u>Carex rariflora</u> | 3 | <input type="checkbox"/> | OBL | Plot size (radius, or length x width) <u>10m</u> |
| 6. _____ | 0 | <input type="checkbox"/> | _____ | % Cover of Wetland Bryophytes (Where applicable) _____ |
| 7. _____ | 0 | <input type="checkbox"/> | _____ | % Bare Ground <u>10</u> |
| 8. _____ | 0 | <input type="checkbox"/> | _____ | Total Cover of Bryophytes <u>85</u> |
| 9. _____ | 0 | <input type="checkbox"/> | _____ | |
| 10. _____ | 0 | <input type="checkbox"/> | _____ | |
| Total Cover: <u>52</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> |
| 50% of Total Cover: <u>26</u> | 20% of Total Cover: <u>10.4</u> | | | |

Remarks: floating sphagnum mat with what feels like a cryptobio crust. Listed shrubs are trace.

SOIL

Sampling Point: **SW12_T20_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 | | |
| 0-16 | | 100 | | | | | Hemic Organics | |
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¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix ² Location: PL=Pore Lining. RC=Root Channel. M=Matrix

| | |
|---|---|
| Hydric Soil Indicators: <input checked="" type="checkbox"/> Histosol or Histel (A1) <input type="checkbox"/> Histic Epipedon (A2) <input checked="" 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) | Indicators for Problematic Hydric Soils:³ <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 checked="" type="radio"/> No <input type="radio"/> |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: Primary Indicators (any one is sufficient) | Secondary Indicators (two or more are required) |
| <input checked="" 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) | <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) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Other (Explain in Remarks) | |

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|--|---|
| Field Observations: Surface Water Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 2 Water Table Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 0 Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): 0 | 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:
 water table at/slightly above ground surface, many small shallow areas intermixed w saturated organic soils.