WETLAND DETERMINATION DATA FORM - Alaska Region

| Project/Site: Susitna-Watana Hydroelectric Project | Borough/City: Matanuska-Susitna Borough Sampling Date: 03-Aug-12 | | | | | |
|--|--|--|--|--|--|--|
| Applicant/Owner: Alaska Energy Authority | Sampling Point:SW12_T38_06 | | | | | |
| Investigator(s): SLI, KMK | Landform (hillside, terrace, hummocks etc.): Hillside | | | | | |
| Local relief (concave, convex, none): flat | Slope: 44.5 % / 24.0 ° Elevation: 510 | | | | | |
| Subregion : Southcentral Alaska Lat.: | 62.8354282448 Long.: -149.513638303 Datum: WGS84 | | | | | |
| Soil Map Unit Name: | NWI classification: Upland | | | | | |
| | ar? Yes ● No ○ (If no, explain in Remarks.) htty disturbed? Are "Normal Circumstances" present? Yes ● No ○ problematic? (If needed, explain any answers in Remarks.) | | | | | |
| SUMMARY OF FINDINGS - Attach site map showing sa | mpling 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 \bigcirc No \textcircled{ullet} | | | | | |

Remarks: ESE aspect (140deg), veg reminiscent of kenai peninsula. One black bear den observed on this hillside W of this plot, in betula throw mound.

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

| | | ۸hc | olute | Dominant | Indicator | Dominance Test worksheet: | | |
|-----------------------------------|---|------|-----------------|-----------------|---------------------------------|--|--|--|
| Tre | e Stratum | | over | Species? | Status | Number of Dominant Species | | |
| 1. | Betula neoalaskana | | 30 | \checkmark | FACU | That are OBL, FACW, or FAC: <u>1</u> (A) | | |
| 2. | Picea glauca | _ | 20 | \checkmark | FACU | Total Number of Dominant Species Across All Strata: 6 (B) | | |
| 3. | Betula papyrifera var. kenaica | | 5 | | UPL | Percent of dominant Species | | |
| 4. | | | 0 | | | That Are OBL, FACW, or FAC: <u>16.7%</u> (A/B) | | |
| 5. | | | 0 | | | Prevalence Index worksheet: | | |
| | Total Cover | r: | 55 | | | Total % Cover of: Multiply by: | | |
| Sap | ling/Shrub Stratum 50% of Total Cover: | 27.5 | 20% | of Total Cover: | 11 | OBL Species $0 \times 1 = 0$ | | |
| 1. | Picea glauca | | 15 | \checkmark | FACU | FACW Species 0 x 2 = 0 | | |
| 2. | Vaccinium ovalifolium | | 30 | \checkmark | FAC | FAC Species x 3 = | | |
| 3. | Rubus pedatus | | 10 | | FAC | FACU Species <u>110</u> x 4 = <u>440</u> | | |
| 4. | Linnaea borealis | | 2 | | FACU | UPL Species _ 5 _ x 5 = _ 25 _ | | |
| 5. | Sorbus scopulina | | 2 | | FACU | Column Totals: 160 (A) 600 (B) | | |
| 6. | | | 0 | | | | | |
| | | | 0 | | | Prevalence Index = B/A =3.750_ | | |
| | | | 0 | | | Hydrophytic Vegetation Indicators: | | |
| | | | 0 | | | Dominance Test is > 50% | | |
| | | | 0 | | | Prevalence Index is ≤ 3.0 | | |
| | Total Cover | | 59 | | | Morphological Adaptations ¹ (Provide supporting data in | | |
| Her | b Stratum 50% of Total Cover: | 29.5 | of Total Cover: | 11.8 | Remarks or on a separate sheet) | | | |
| 1. | Calamagrostis canadensis | | 5 | | FAC | Problematic Hydrophytic Vegetation ¹ (Explain) | | |
| 2. | Spinulum annotinum | | 1 | | FACU | ¹ Indicators of hydric soil and wetland hydrology must | | |
| 3. | Streptopus amplexifolius | | 1 | | FACU | be present, unless disturbed or problematic. | | |
| 4. | Cornus canadensis | | 1 | | FACU | Plot size (radius, or length x width) <u>10m</u> | | |
| 5. | Gymnocarpium dryopteris | | 25 | \checkmark | FACU | % Cover of Wetland Bryophytes | | |
| 6. | Dryopteris expansa | | 10 | \checkmark | FACU | (Where applicable) | | |
| 7. | Chamerion angustifolium | | 3 | | FACU | % Bare Ground | | |
| 8. | | | 0 | | | Total Cover of Bryophytes | | |
| | | | 0 | | | | | |
| | | | 0 | | | Hydrophytic | | |
| Total Cover: <u>46</u> Vegetation | | | | | | | | |
| | 50% of Total Cover: | 23 | 20% | of Total Cover: | 9.2 | Present? Yes No 🔍 | | |
| Rem | arks: betken drk reddish bark cordate base lvs. | | | | | | | |

| SOIL | | | | | | | | | Sampling | Point: SW12 | _T38_06 |
|---|----------------------------|--------------|---------------|--------------|-----------------------|-------------|-------------------|---------------------------|-----------------------------|----------------------|---------------------|
| Profile Description | on: (Describe to | • | needed to doc | ument the in | | | | cators) | | | |
| Depth (inches) | Matrix | | | | | lox Featu | | . 7 | - Tautura | | |
| (inches) 0-4 | Color (moist) | | % | Color (n | noist) | _% | Type ¹ | _ Loc ² | Texture Fibric Organics | K | emarks |
| 4-5 | | | | | | | | | Hemic Organics | | |
| | | | | | | | | | - | | |
| 5-5.5 | | | | | | | | | Sapric Organics | charcoal | |
| 5.5-10 | 7.5YR | 5/2 | 50 | 7.5YR | 3/2 | 50 | | M | Ash | two matrix colors | |
| 10-10.5 | 5YR | 3/3 | 100 | | | | | | | thin layer of concre | etions |
| 10.5-18 | 10YR | 4/4 | 100 | | | | | | Sandy Loam | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| ¹ Type: C=Con | centration. D | =Depletior | n. RM=Redu | ced Matrix | ² Location | : PL=Por | e Lining. R | C=Root Cha | annel. M=Matrix | - | |
| Hydric Soil Ir | ndicators: | | | Indicat | ors for Pro | oblemati | c Hydric S | oils: ³ | | | |
| Histosol or | Histel (A1) | | | Alas | ka Color Ch | ange (TA | 4) 4 | | Alaska Gleyed Without H | ue 5Y or Redder | |
| Histic Epipe | edon (A2) | | | Alas | ka Alpine sv | wales (TA | 5) | | Underlying Layer | | |
| Hydrogen S | Sulfide (A4) | | | Alas | ka Redox W | /ith 2.5Y I | Hue | | Other (Explain in Remar | (s) | |
| | Surface (A12 | 2) | | 3 One i | ndicator of | hydronhyl | tic vegetati | on one prir | mary indicator of wetland h | vdrology | |
| Alaska Gley | | | | | appropriat | | | | | iyarology, | |
| Alaska Red | lox (A14) ved Pores (A1 | | | 4 Give | details of co | lor chang | e in Remar | ks | | | |
| | | , | | | | | | | | | |
| Restrictive Laye | r (if present) | : | | | | | | | | | |
| Type: Depth (inch | oo). | | | | | | | | Hydric Soil Present | ? Yes 🔾 | No 🖲 |
| Remarks: | , | | | | | | | | | | |
| | | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | | |
| Wetland Hydr | ology Indic | ators: | | | | | | | Secondary Indi | cators (two or mo | re are required) |
| Primary Indicat | ors (any one | is sufficier | nt) | | | | | | Water Stai | ned Leaves (B9) | |
| Surface W | ater (A1) | | | 🗌 In | undation Vi | sible on A | erial Image | ery (B7) | Drainage I | Patterns (B10) | |
| | r Table (A2) | | | Sp | arsely Vege | etated Cor | ncave Surfa | ice (B8) | | | J Living Roots (C3) |
| Saturation | | | | | arl Deposits | . , | | | | of Reduced Iron (| 24) |
| Water Mar | | | | | drogen Sul | | | | Salt Depos | | |
| | Deposits (B2) |) | | | y-Season V | | . , | | | Stressed Plants (| DI) |
| Drift Depo | | | | | her (Explain | n in Rema | irks) | | | ic Position (D2) | |
| Image: Algal Mat or Crust (B4) Image: Shallow Aquitard (D3) Image: Iron Deposits (B5) Image: Microtopographic Relief (D4) | | | | | | | | | |) | |
| | oil Cracks (B6 |) | | | | | | | | al Test (D5) |) |
| Field Observa | | / | | | | | | | | | |
| Surface Water | | Yes |) No 🖲 | De | epth (inche | s): | | | | | |
| Water Table P | | | No 🖲 | | epth (inche | | | Wetla | nd Hydrology Presen | t? Yes 🔿 | No 🖲 |
| Saturation Pre (includes capil | sent? | | No 🔍 | | epth (inches | | | | | | |
| Describe Record | | eam dauge | monitor | ell aerial n | hotos prev | inus incre | ection) if av | ailable | | | |
| | | sam guuge | ., | | | .545 11590 | | | | | |
| Remarks: | | | | | | | | | | | |

no wetland hydrology indicators