## WETLAND DETERMINATION DATA FORM - Alaska Region

| Project  | /Site: Susitna-Watana Hydr       | oelectric Project                                   | B                                      | Borough/City:                                    | Matanusk            | ka-Susitna Borough Sampling Date: 22-Jun-12  |  |  |  |
|----------|----------------------------------|---|--|--|---------------------|--|--|--|--|
| Applica  | int/Owner: Alaska Energy Au      | ıthority  |  |  |                     | Sampling Point: SW12_T25_05  |  |  |  |
| Investiç | gator(s): JGK                    |   | ce, hummocks etc.): Hillside           |  |                     |  |  |  |  |
| Local r  | elief (concave, convex, none):   | hummocky  |  | Slope:   | % / 13.2            | 2 ° Elevation: 474   |  |  |  |
| Subrea   | ion: Southcentral Alaska         |   | Lat ·                                  | 62.803548268                                     |                     | Long.: -149.261575727 Datum: NAD83   |  |  |  |
| _        | p Unit Name:                     |   |  | 02.0000-0200                                     |                     |  |  |  |  |
|          | natic/hydrologic conditions on t | ha aita tuminal for this t                          | ima af vaar                            | o Voc  | ● No ○              | NWI classification: Upland (If no, explain in Remarks.)  |  |  |  |
| Are V    | egetation  , Soil                | , or Hydrology   , or Hydrology   tach site map sho | significantly<br>naturally prowing sam | y disturbed?<br>roblematic?                      | Are "N<br>(If nee   | In the explain in Remarks.)  Iterative for the control of the cont |  |  |  |
|          | Hydrophytic Vegetation Preser    |   |  | le   | the Sam             | uplad Aras   |  |  |  |
|          | Hydric Soil Present?             | Yes O No 🤆  | •                                      | Is the Sampled Area within a Wetland? Yes ○ No ● |                     |  |  |  |  |
|          | Wetland Hydrology Present?       | Yes O No 🤆  | •                                      | W  | tnin a w            | retiand?   |  |  |  |
| VEGE     | TATION - Use scientific          | names of plants. L                                  | •                                      |  | •                   | Dominance Test worksheet:  |  |  |  |
| Tre      | e Stratum                        |   | Absolute<br>% Cover                    | Dominant<br>Species?                             | Indicator<br>Status | Number of Dominant Species   |  |  |  |
|          | Betula neoalaskana               |   | 30                                     | <b>✓</b>   | FACU                | That are OBL, FACW, or FAC: (A)  |  |  |  |
| 2.       | Picea glauca                     |   | 5                                      |  | FACU                | Total Number of Dominant Species Across All Strata: 4 (B)  |  |  |  |
| 3.       | -                                |   | 0                                      |  |                     | Percent of dominant Species  |  |  |  |
| 4.       |                                  |   | 0                                      |  |                     | That Are OBL, FACW, or FAC: 25.0% (A/B)  |  |  |  |
| 5.       |                                  |   | 0                                      |  |                     | Prevalence Index worksheet:  |  |  |  |
|          |                                  | Total Cove  |  |  |                     | Total % Cover of: Multiply by:   |  |  |  |
| Sap      | ling/Shrub Stratum               | 50% of Total Cover:                                 | 17.5 20%                               | of Total Cover                                   |                     | OBL Species0 x 1 =0  |  |  |  |
| 1.       | Vaccinium uliginosum             |   | 40                                     | <b>✓</b>   | FAC                 | FACW Species 3 x 2 = 6   |  |  |  |
|          | Betula glandulosa                |   |  |  | FAC                 | FAC Species <u>56</u> x 3 = <u>168</u>   |  |  |  |
| 3.       | Rhododendron tomentosum          |   | 3                                      |  | FACW                | FACU Species <u>54</u> x 4 = <u>216</u>  |  |  |  |
| 4.       | Vaccinium vitis-idaea            |   | 1                                      |  | FAC                 | UPL Species <u>0</u> x 5 = <u>0</u>  |  |  |  |
| 5.       | Empetrum nigrum                  |   | 5                                      |  | FAC                 | Column Totals: <u>113</u> (A) <u>390</u> (B)   |  |  |  |
| 6.       | Linnaea borealis                 |   | 2                                      |  | FACU                |  |  |  |  |
| 7.       |                                  |   | 0                                      |  |                     | Prevalence Index = B/A = 3.451   |  |  |  |
| 8.       |                                  |   | 0                                      |  |                     | Hydrophytic Vegetation Indicators:   |  |  |  |
|          |                                  |   | 0                                      |  |                     | Dominance Test is > 50%  |  |  |  |
| 10.      |                                  |   |  |  |                     | Prevalence Index is ≤3.0   |  |  |  |
| Her      | b Stratum_                       | <b>Total Cove</b> : 50% of Total Cover:             |  | 6 of Total Cover                                 | 12.2                | Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)   |  |  |  |
| 1.       | Galium boreale                   |   | 2                                      |  | FACU                | Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  |  |  |  |
|          |                                  |   |  | <b>✓</b>   | FACU                | <sup>1</sup> Indicators of hydric soil and wetland hydrology must  |  |  |  |
| ٠.       |                                  |   |  | <b>V</b>   | FACU                | be present, unless disturbed or problematic.   |  |  |  |
|          |                                  |   |  |  |                     | Plot size (radius, or length x width)  |  |  |  |
|          |                                  |   | •                                      |  |                     | % Cover of Wetland Bryophytes 1  |  |  |  |
|          |                                  |   |  |  |                     | (Where applicable)   |  |  |  |
|          |                                  |   |  |  |                     | % Bare Ground 2  |  |  |  |
|          |                                  |   |  |  |                     | Total Cover of Bryophytes 25   |  |  |  |
|          |                                  |   |  |  |                     | Hydrophytic  |  |  |  |
|          |                                  | Total Cove  | r: <u>17</u>                           | _  |                     | Vegetation   |  |  |  |
|          |                                  | 50% of Total Cover:                                 |  |  | 3.4                 | Present? Yes No •  |  |  |  |

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SOIL Sampling Point: SW12\_T25\_05

|  |   |                      |              |                                 | ,              |                      |                    | · -                         | 1101111. 54411_125_55               |  |  |
|--|---|----------------------|--------------|---------------------------------|----------------|----------------------|--------------------|-----------------------------|-------------------------------------|--|--|
| Profile Description                          |   | the depth ne  Matrix | eded to docu | ment the indicator or co        | nfirm the at   |                      | ators)             |                             |                                     |  |  |
| Depth<br>(inches)                            | Depth (inches) Color (moist)                  |                      |              |                                 |                | Loc <sup>2</sup>     |                    | Remarks                     |                                     |  |  |
| 0-5  | Color (me                                     | OIST)                | <u> </u>     | Color (moist)                   | <u>%</u>       | Type <sup>1</sup>    | LOC -              | Fibric Organics             | Kemarks                             |  |  |
|  | 2.51/   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| 5-6  | 2.5Y  | 3/2                  | 95           |                                 |                |                      |                    | Silty Clay Loam             | 5% roots                            |  |  |
| 6-10   | 5YR   | 2.5/1                | 50           |                                 |                |                      |                    | Loamy Sand                  | 5% roots 45% cobbles >4in           |  |  |
| 10-14  | 7.5YR   | 3/4                  | 50           |                                 |                |                      |                    | Loamy Sand                  | 40% cobbles 10% fine gravel         |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    | -                           |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| <sup>1</sup> Type: C=Con                     | centration. D                                 | =Depletion           | RM=Reduc     | ed Matrix <sup>2</sup> Location | n: PL=Por      | e Lining. RC         | =Root Cha          | nnel. M=Matrix              |                                     |  |  |
| Hydric Soil Ir                               | dicators:                                     |                      |              | Indicators for Pi               | oblemati       | c Hydric So          | oils: <sup>3</sup> |                             |                                     |  |  |
| Histosol or                                  | Histel (A1)                                   |                      |              | Alaska Color C                  | hange (TA      | 4)                   |                    | Alaska Gleyed Without H     | ue 5Y or Redder                     |  |  |
| Histic Epip                                  | edon (A2)                                     |                      |              | Alaska Alpine s                 | swales (TA     | 5)                   |                    | Underlying Layer            |                                     |  |  |
|  | Sulfide (A4)                                  |                      |              | Alaska Redox V                  | With 2.5Y      | Hue                  |                    | Other (Explain in Remark    | (S)                                 |  |  |
| ☐ Thick Dark                                 | Surface (A12                                  | 2)                   |              |                                 |                |                      |                    |                             |                                     |  |  |
| Alaska Gle                                   | -   | ,                    |              |                                 |                |                      |                    | nary indicator of wetland h | ydrology,                           |  |  |
| Alaska Red                                   | , , ,   |                      |              | and an appropria                | te iandsca     | pe position r        | nust be pre        | esent                       |                                     |  |  |
| Alaska Gle                                   | yed Pores (A1                                 | 15)                  |              | <sup>4</sup> Give details of c  | olor chang     | e in Remark          | S                  |                             |                                     |  |  |
| Restrictive Laye                             | r (if nrecent):                               |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| Type:  | i (ii present).                               | •                    |              |                                 |                |                      |                    | Hydric Soil Present         | ? Yes ○ No •                        |  |  |
| Depth (inch                                  | es).  |                      |              |                                 |                |                      |                    | nyunc son Present           | r les 🔾 NO 🕓                        |  |  |
|  | cs).  |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| Remarks:                                     |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| HYDROLO                                      | GV  |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| Wetland Hydr                                 | _   | ators:               |              |                                 |                |                      |                    | Secondary Indi              | cators (two or more are required)   |  |  |
| Primary Indicat                              |   |                      | ٠)           |                                 |                |                      |                    |                             | ned Leaves (B9)                     |  |  |
|  |   | 13 Summercin         | -1           | ☐ Inundation V                  | /icible on /   | orial Image          | ov (B7)            |                             |                                     |  |  |
| ☐ Surface Water (A1) ☐ High Water Table (A2) |   |                      |              | Sparsely Veg                    |                | _                    |                    |                             | hizospheres along Living Roots (C3) |  |  |
| Saturation (A3)                              |   |                      |              | Marl Deposit                    |                | iicave Suriac        | .е (во)            |                             | of Reduced Iron (C4)                |  |  |
| Water Mai                                    |   |                      |              | Hydrogen Su                     | . ,            | (C1)                 |                    | Salt Depos                  | ` ,                                 |  |  |
|  | Dry-Season                                    |                      |              |                                 |                | Stressed Plants (D1) |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             | ic Position (D2)                    |  |  |
|  | . ,   |                      |              | U Other (Expla                  | III III Keilia | ii KS)               |                    |                             | quitard (D3)                        |  |  |
|  | ☐ Algal Mat or Crust (B4)☐ Iron Deposits (B5) |                      |              |                                 |                |                      |                    |                             | graphic Relief (D4)                 |  |  |
|  | oil Cracks (B6)                               | 1                    |              |                                 |                |                      |                    |                             | al Test (D5)                        |  |  |
| Field Observa                                |   | )                    |              |                                 |                |                      |                    | TAC fledute                 | ii rest (D3)                        |  |  |
| Surface Water                                |   | Yes C                | No •         | Depth (inche                    | oc).           |                      |                    |                             |                                     |  |  |
|  |   |                      | No •         |                                 | •              |                      |                    |                             |                                     |  |  |
| Water Table P                                |   | Yes $\subseteq$      | No 🖭         | Depth (inche                    | es):           |                      | Wetiai             | nd Hydrology Presen         | t? Yes O No 💿                       |  |  |
| Saturation Pre<br>(includes capil            |   | Yes C                | No 💿         | Depth (inche                    | es):           |                      |                    |                             |                                     |  |  |
|  |   | 02m 421140           | monitor wo   | all parial photos pro           | vious inco     | action) if au        | vilable            |                             |                                     |  |  |
| Describe Record                              | ieu Data (Stre                                | eam gauge,           | monitor we   | ell, aerial photos, pre         | vious irispe   | ecuon) ii ava        | illable:           |                             |                                     |  |  |
| Damada                                       |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
| Remarks:                                     |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |
|  |   |                      |              |                                 |                |                      |                    |                             |                                     |  |  |

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