APPENDIX A

Data Sheets and Sample Site Photographs

| Project/Site: Seward Highway MP 99 - 105 | Borough/ | City: Anchorag | ge Sampling Date; August | 8, 2006 |
|--|--------------|------------------------------|--|----------|
| Applicant/Owner: DOT&PF | | , | Sampling Point: 1 | |
| | Landform | /hilleide terr | race, hummocks, etc.): none | |
| | | | | |
| Local relief (concave, convex, none): none | | | | |
| | | | ng: Datum: | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | |
| Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} significantly | disturbed | ? Are | "Normal Circumstances" present? Yes N | ·o |
| Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} naturally pr | oblematic? | (If ne | eeded, explain any answers in Remarks.) | |
| SUMMARY OF FINDINGS – Attach site map showing | g sampli | ing point l | locations, transects, important feature | es, etc. |
| Hydrophytic Vegetation Present? Yes No✓ | | | 4.4 | |
| Hydric Soil Present? Yes No | ls. | the Sampled thin a Wetlar | / | |
| Wetland Hydrology Present? Yes No | . " | unin a vveuai | ildr fes No V | |
| Remarks: | *********** | | red to lock year | |
| Hydrology - the winter storage this year is half of the average, so wetland a | - | • | • | |
| The site is adjacent to a bike path and the highway. There is a creek approx | imately 20 f | eet away. Cree | ek is deep cut. | |
| | | | | |
| | | | | |
| VEGETATION | | | | |
| | Absolute | Indicator | T | |
| Species (Use scientific names. List all species in plot.) | % Cover | | Prevalence Index: | |
| 1. Populus balsamifera (t) | 65 | FACU | Total % Cover of:Multiply by: | |
| 2 Gymnocarpium dryopteris (h) | 30 | FACU | OBL species x 1 = | _ |
| 3. Heracleum maximum | 35 | FACU | FACW species x 2 = | _ |
| 4. Equisetum arvense (h) | 15 | FACU | FAC species11 x 3 =33 | _ |
| 5. Calamagrostis canadensis (h) | 10 | FAC | FACU species230 x 4 =920 | _ |
| 6. Aconitum delphinifolium (h) | <1 | FAC | UPL species x 5 = | _ |
| 7. Viburnum edule (s) | 45 | FACU_ | Column Totals:241 (A)953 | (B) |
| 8 Rosa acicularis (s) | 10 | FACU_ | Prevalence Index = B/A = 3.95 | |
| 9. Actaea rubra (s) | 30 | _ <u>NI</u> | Prevalence index - B/A - 600 | _ |
| 10 | | | | |
| 11 | | | Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a se | |
| 12 | | | sheet.) | Jarate |
| 13 | | - | Wetland Cryptogams (record species and of | cover |
| 14 | | | at left) | |
| 15 | | | Morphological Adaptations | |
| 16 | | | Problematic Hydrophytic Vegetation (Expla | in) |
| 17 | | | | |
| 18 | | | | |
| 19 | | | | |
| 20Total Cove | | | | |
| | | _ | Hydrophytic Vegetation | |
| Plot size 30-foot circle | Ground | _ | Present? Yes No | _ |
| Remarks: | priytes | | | |
| Ground is covered in leaf litter. | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| OIL | o the da- | th pandad | to doo | mont the | indicator | ١ | | |
|--|-------------|---|---|---|-----------------------------------|----------------------|--|--|
| rofile Description: (Describe t | o tne aep | itn neeaea | | | |) | | |
| Depth Matrix Inches) Color (moist) | % | Color (| | x Feature % | Type ¹ | Loc ² | Texture | Remarks |
| 6 | | | moisty | | | | TOALGIG | Root wad with decomposed wood. |
| | | | | | | | | |
| 19 10YR 2/1 | 100 | N/A | | | _ | | Sandy loam | Hard packed pebbles and cobbles. |
| 9-20 | — | | | | | | | Tiard packed peobles and coobles. |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ype: C=Concentration, D=Depl | etion, RM | | | | | | RC=Root Chan | nel, M=Matrix. |
| ydric Soil Indicators: | | | | | tic Hydric | Soils ³ : | | |
| Histosol or Histel (A1) | | _ | laska Cold | - | | | Alaska | a Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | | AI | laska Alpii | ne Swale | s (TA5) | | Und | erlying Layer |
| _ Hydrogen Sulfide (A4) | | AI | aska Red | lox With 2 | .5Y Hue | | Other | (Explain in Remarks) |
| _ Thick Dark Surface (A12) | | 30 | | | | | | |
| _ Alaska Gleyed (A13) | | | | | | | | or of wetland hydrology, |
| _ Alaska Redox (A14) | | | | | | | t be present. | |
| _ Alaska Gleyed Pores (A15) estrictive Layer (if present): | | Give | details of | color cha | nge in Rer | narks. | 1 | |
| estrictive Layer (if present): | | | | | | | | |
| | | | | | | | | |
| Type: Depth (inches): emarks: ery loamy, fully soil. Can't hold wate | | | | | | | Hydric Soil | Present? Yes No |
| Type: Depth (inches): emarks: | | | | | | | Hydric Soil | Present? Yes No |
| Type: Depth (inches): emarks: | | | | | | | Hydric Soil | Present? Yes No |
| Type: Depth (inches): emarks: ery loamy, fully soil. Can't hold wate | | _ | | | | | | Present? Yes No |
| Type: | г. | | | | | | Secondary | |
| Type: Depth (inches): emarks: ery loamy, fully soil. Can't hold wate | г. | icient) | e Soil Cra | icks (B6) | | | Secondary Water Drains | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) |
| Type: Depth (inches): emarks: bry loamy, fully soil. Can't hold wate TDROLOGY Tetland Hydrology Indicators: frimary Indicators (any one indicators) | г. | icient) Surfacc | tion Visib | le on Aeri | al Imagery | | Secondary Water Draina Oxidiz | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Ca |
| Type: Depth (inches): emarks: bry loamy, fully soil. Can't hold wate TDROLOGY Tetland Hydrology Indicators: rimary Indicators (any one indicators) Surface Water (A1) | г. | icient) Surface Inunda Sparse | tion Visib ely Vegeta | le on Aeri | ave Surfac | | Secondary Water Drains Oxidiz Prese | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (C3 |
| Type: | г. | icient) Surface Inunda Sparse Hydrog | ition Visib ely Vegeta gen Sulfid | le on Aeri ited Conc e Odor (C | ave Surfac | | Secondary Water Draina Oxidiz Prese Salt D | Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) |
| Type: Depth (inches): emarks: bry loamy, fully soil. Can't hold wate /DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) | г. | icient) Surfact Inunda Sparse Hydrog Dry-Se | ition Visib ely Vegeta gen Sulfid eason Wat | le on Aeri ated Conc e Odor (C ter Table | ave Surfac (1) (C2) | | Secondary Water Draine Oxidiz Prese Salt D | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) led Rhizospheres on Living Roots (Cance of Reduced Iron (C4) eposits (C5) and or Stressed Plants (D1) |
| Type: | tor is suff | icient) Surfact Inunda Sparse Hydrog Dry-Se | ition Visib ely Vegeta gen Sulfid | le on Aeri ated Conc e Odor (C ter Table | ave Surfac (1) (C2) | | Secondary Water Draina Oxidiz Prese Salt D Stunte | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) and Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) and or Stressed Plants (D1) orphic Position (D2) |
| Type: | tor is suff | icient) Surfact Inunda Sparse Hydrog Dry-Se | ition Visib ely Vegeta gen Sulfid eason Wat | le on Aeri ated Conc e Odor (C ter Table | ave Surfac (1) (C2) | | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) add Rhizospheres on Living Roots (Cance of Reduced Iron (C4) eposits (C5) add or Stressed Plants (D1) orphic Position (D2) aw Aquitard (D3) |
| Type: | tor is suff | icient) Surfact Inunda Sparse Hydrog Dry-Se | ition Visib ely Vegeta gen Sulfid eason Wat | le on Aeri ated Conc e Odor (C ter Table | ave Surfac (1) (C2) | | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) and Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) and or Stressed Plants (D1) orphic Position (D2) |
| Type: | tor is suff | icient) Surfact Inunda Sparse Hydrog Dry-Se | ition Visib ely Vegeta gen Sulfid eason Wat | le on Aeri ated Conc e Odor (C ter Table | ave Surfac (1) (C2) | | Secondary Water Drains Oxidiz Prese Salt D Stunte Geom Shallo | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) and Rhizospheres on Living Roots (C3) ance of Reduced Iron (C4) apposits (C5) and or Stressed Plants (D1) orphic Position (D2) and Aquitard (D3) |
| Type: | tor is suff | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| ition Visib ely Vegeta gen Sulfid eason Wat (Explain in | le on Aeri ated Conc e Odor (C ter Table n Remark | ave Surfac (C1) (C2) (S) | ce (B8) | Secondary Water Drains Oxidiz Prese Salt D Stunte Geom Shallo | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) and Rhizospheres on Living Roots (C3) ance of Reduced Iron (C4) eposits (C5) and or Stressed Plants (D1) orphic Position (D2) aw Aquitard (D3) opographic Relief (D4) |
| Type: | (B4) | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| ition Visibi ely Vegeta gen Sulfideason Wat (Explain in | le on Aeri ated Conc e Odor (C ter Table n Remark | ave Surfac (1) (C2) (S) | ce (B8) | Secondary Water Drains Oxidiz Prese Salt D Stunte Geom Shallo | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) and Rhizospheres on Living Roots (C3) ance of Reduced Iron (C4) eposits (C5) and or Stressed Plants (D1) orphic Position (D2) aw Aquitard (D3) opographic Relief (D4) |
| Type: | (B4) | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| ely Vegeta gen Sulfide eason Wat (Explain in Depth (in Depth (in | le on Aeri ated Conc e Odor (C ter Table n Remark ches): ches): | ave Surfac (1) (C2) s) | ce (B8) | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Cince of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) Neutral Test (D5) |
| Type: | (B4) | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| tion Visib ely Vegeta gen Sulfid- eason Wat (Explain in Depth (in Depth (in | le on Aeri ated Conc e Odor (O ter Table n Remark ches): ches): ches): | ave Surfac (C1) (C2) s) | wet | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) aw Aquitard (D3) opographic Relief (D4) |
| Type: | (B4) | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| tion Visib ely Vegeta gen Sulfid- eason Wat (Explain in Depth (in Depth (in | le on Aeri ated Conc e Odor (O ter Table n Remark ches): ches): ches): | ave Surfac (C1) (C2) s) | wet | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (C nce of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) Neutral Test (D5) |
| Type: | (B4) | icient) Surface Inunda Sparse Hydrog Dry-Se Other (| tion Visib ely Vegeta gen Sulfid- eason Wat (Explain in Depth (in Depth (in | le on Aeri ated Conc e Odor (O ter Table n Remark ches): ches): ches): | ave Surfac (C1) (C2) s) | wet | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Cince of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) Neutral Test (D5) |





| Project/Site: Seward Highway MP 99 - 105 | Borough/City: Anchorage Sampling Date: August 8, 2006 | | | | | |
|--|--|-----------------|---------------------------------|---|--|--|
| Applicant/Owner: DOT&PF | Sampling Point: 2 | | | | | |
| | Landform (hillside, terrace, hummocks, etc.): hillside | | | | | |
| Local relief (concave, convex, none): none | | | | | | |
| Subregion: Southcentral Alaska Lat: | | | | | | |
| | | | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | |
| Are Vegetation N, Soil N, or Hydrology N significantly | | | | | | |
| Are Vegetation N, Soil N, or Hydrology N naturally pr | oblematio | ? (If ne | eeded, explain any answers | in Remarks.) | | |
| SUMMARY OF FINDINGS - Attach site map showing | g samp | ling point le | ocations, transects, | important features, etc | | |
| Hydrophytic Vegetation Present? Yes No✓ | Is the Sampled Area | | | | | |
| Hydric Soil Present? Yes No | " | | | No✓ | | |
| Wetland Hydrology Present? Yes No | . " | rithin a Wetlar | iur res_ | NO | | |
| Remarks: hydrology - the winter storage this year is half of the average, so wetland ar | eas may b | e drier compare | d to last year. | | | |
| Approximately 20 feet from site the hill starts to get very steep. Tall cottonwo | nods are al | ong the edge of | the heach | | | |
| | Jous are ar | ong the edge of | the beach. | | | |
| Waypoint 37 | | | | | | |
| Closed Tall Shrub. 80% cover. | | | | | | |
| VEGETATION | | | | | | |
| Species (Use scientific names. List all species in plot.) | Absolut | | Prevalence Index: | | | |
| Sambucus racemosa (s) | % Cove | FACU | | Multiply by: | | |
| 2 Sorbus scopulina (s) | 25 | NI NI | | x 1 = | | |
| 3. Alnus crispa (s) | 40 | FAC | | x 2 = | | |
| 4 Calamagrostis canadensis (h) | 25 | FAC | FAC species 95 | | | |
| 5. Ribes triste (s) | 30 | FAC | FACU species 106 | | | |
| 6. Gymnocarpium dryopteris | 10 | FACU | | x 5 = | | |
| 7. Oplopanax horridus | 10 | FACU | Column Totals: 201 | | | |
| 8. Chamerion angustifolium (h) | 10 | FACU | | | | |
| g. Rosa acicularis (s) | 10 | FACU | Prevalence Index = | = B/A = <u>3.53</u> | | |
| 10. Galium boreale (h) | <1 | FACU | | | | |
| 11 | | | Other Indicators of Hyd | | | |
| 12 | | | (Record supporting data sheet.) | in Remarks or on a separate | | |
| 13 | | | | s (record species and cover | | |
| 14 | | | at left) | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| 15 | | | Morphological Adapt | tations | | |
| 16 | | | | hytic Vegetation (Explain) | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| Z0Total Cover | r 226 | | | | | |
| Plot size 30-foot circle % Bare 0 | | | Hydrophytic Vegetation | | | |
| % Cover of Wetland Bryophytes 0 Total Cover of Bryo | | | Present? Yes | No | | |
| Remarks: | | | 1 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

SOIL Sampling Point: 2 Profile Description: (Describe to the depth needed to document the indicator.) Depth Matrix Redox Features Color (moist) % Type (inches) Color (moist) Texture Remarks Root wad with decomposed wood. 0-7 spongy. some cobbles, some gravel. 7-20 100 N/A Sandy loam 2.5Y4/3 Type: C=Concentration, D=Depletion, RM=Reduced Matrix. 2Location: PL=Pore Lining, RC=Root Channel, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils3: Histosol or Histel (A1) Alaska Color Change (TA4)4 Alaska Gleyed Without Hue 5Y or Redder Histic Epipedon (A2) _ Alaska Alpine Swales (TA5) Underlying Layer Hydrogen Sulfide (A4) Alaska Redox With 2.5Y Hue Other (Explain in Remarks) __ Thick Dark Surface (A12) Alaska Gleyed (A13) One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, Alaska Redox (A14) and an appropriate landscape position must be present. Alaska Gleved Pores (A15) Give details of color change in Remarks. Restrictive Layer (if present): Type: _ Depth (inches): Hydric Soil Present? Yes Remarks: Really red soil. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water-stained Leaves (B9) Surface Soil Cracks (B6) Surface Water (A1) Drainage Patterns (B10) __ High Water Table (A2) __ Inundation Visible on Aerial Imagery (B7) Oxidized Rhizospheres on Living Roots (C3) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4) Water Marks (B1) Hydrogen Sulfide Odor (C1) Salt Deposits (C5) ___ Dry-Season Water Table (C2) Sediment Deposits (B2) Stunted or Stressed Plants (D1) Drift Deposits (B3) Other (Explain in Remarks) Geomorphic Position (D2) Mat or Crust of Algae or Marl (B4) Shallow Aquitard (D3) Iron Deposits (B5) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Yes No ___ Depth (inches): ___ Surface Water Present?

Saturation Present? Yes ____ No __ Depth (inches): _____ Wetland Hydrology Present? Yes ____ No __ Depth (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Yes _____ No ____ Depth (inches): _____

Water Table Present?





| Project/Site: Seward Highway MP 99 - 105 | Borough/City: Anchorage Sampling Date: August 8 | | | | |
|---|--|--|--|--|--|
| Applicant/Owner: DOT&PF | | | Sampling Point: 3 | | |
| Investigator(s): RAC/EMC | Landform (hillside, terrace, hummocks, etc.): hummocks | | | | |
| Local relief (concave, convex, none): none | Slope (%): | | | | |
| Subregion: Southcentral Alaska Lat: 60 58 52.4 | 4 Long: 149 29 7.6 Datum: WGS | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | |
| Are Vegetation, Soil, or Hydrology significantly | | | | | |
| | | | | | |
| Are Vegetation, Soil, or Hydrology naturally pro | | eded, explain any answers in Remarks.) | | | |
| SUMMARY OF FINDINGS – Attach site map showing | sampli | ng point le | ocations, transects, important features, etc. | | |
| Hydrophytic Vegetation Present? Yes✓ No | | | | | |
| Hydric Soil Present? Yes No | 18 | the Sampled | | | |
| Wetland Hydrology Present? Yes No | Wil | thin a Wetlar | id? Yes No | | |
| Remarks: hydrology - the winter storage this year is half of the average, so wetland are | eas may be | drier compare | d to last year. | | |
| | , | | , | | |
| Site is adjacent to the highway. | | | | | |
| Waypoint 39 | | | | | |
| Shrub low open | | | | | |
| VEGETATION | | | | | |
| | Absolute | _ | B | | |
| Species (Use scientific names. List all species in plot.) | % Cover | | Prevalence Index: | | |
| 1. Alnus crispa (s) | 30 | FAC | Total % Cover of: Multiply by: OBI species 115 v.1 = 115 | | |
| 2. Betula nana (s) | 35 | FAC | ODE species x 1 | | |
| 3. Potentilla fruticosa | 30 | FAC_ | TAGVI species A Z = | | |
| 4. Andromeda polifolia | 20 | OBL | PAG species X S = | | |
| 5. Empetrum nigrum | 15 | FAC | FACU species 0 x 4 = 0 | | |
| 6. Equisetum hyemale | 35 | FACW | UPL species 0 x 5 = 0 | | |
| 7. Chamaedaphne calyculata | 25 | _ FACW_ | Column Totals:355 (A)735 (B) | | |
| 8. Myrica gale | | OBL | Prevalence Index = B/A = 2.07 | | |
| 9. Menyanthes trifoliata | 5 | OBL | | | |
| 10. Parnassia palustris | 10 | FACW | | | |
| 11. Picea Mariana (s) | 5 | FACW_ | Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate | | |
| 12. Carex aquatilis | 30 | OBL | sheet.) | | |
| 13. Vaccinium cespitosum | 15 | FACW | Wetland Cryptogams (record species and cover | | |
| 14. Vaccinium vitis-idaea | 10 | FAC | at left) | | |
| 15. Equisetum fluviatile | 15 | OBL | Morphological Adaptations | | |
| 16. Ledum decumbens | 10 | FACW | Problematic Hydrophytic Vegetation (Explain) | | |
| 17. Salix monticola | 20 | FAC OR | | | |
| 18. Carex canescens | 15 | OBL | | | |
| 19. Eriophorum angustifolium | 10 | OBL_ | | | |
| 20 | 255 | | | | |
| Total Cover | | _ | Hydrophytic Vegetation | | |
| | Fround | | Present? Yes No | | |
| % Cover of Wetland Bryophytes | phytes | | L | | |
| Alders are growing on hummocks. | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| DIL | | | | Sampling Point: |
|--|---|--|--|---|
| rofile Description: (Des | cribe to the dep | th needed to document the indicator.) | | |
| | trix | Redox Features | | _ |
| nches) Color (moi | st) % | Color (moist) % Type ¹ | Loc ² Texture | e Remarks |
| | | | | _ |
| | | | | |
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| | | | | |
| | | | | |
| ype: C=Concentration, D | =Depletion, RM= | | | hannel, M=Matrix. |
| dric Soil Indicators: | | Indicators for Problematic Hydric | | |
| Histosol or Histel (A1) | | Alaska Color Change (TA4) ⁴ | _ | aska Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | | Alaska Alpine Swales (TA5) | | Jnderlying Layer |
| Hydrogen Sulfide (A4) | | Alaska Redox With 2.5Y Hue | Ot | her (Explain in Remarks) |
| _ Thick Dark Surface (A1 | 12) | 1- | | |
| Alaska Gleyed (A13) | | ³ One indicator of hydrophytic vegeta | | |
| _ Alaska Redox (A14) | | and an appropriate landscape pos | | nt. |
| Alaska Gleyed Pores (| | ⁴ Give details of color change in Rem | arks. | |
| strictive Layer (if prese | ent): | | | |
| strictive Layer (ii prese | ,. | | - 1 | |
| Type: | , | _ | | , |
| | | _ | Hydric : | Soil Present? Yes <u>√</u> No |
| Type: Depth (inches): emarks: | | _ | Hydric : | Soil Present? Yes No |
| Type: Depth (inches): emarks: dric solls assumed due to h | | _ | Hydric : | Soil Present? Yes No |
| Type: Depth (inches): emarks: dric solls assumed due to h | ydrophytic vegetat | _ | | Soil Present? Yes <u>√</u> No |
| Type: Depth (inches): emarks: dric soils assumed due to h DROLOGY etland Hydrology Indica | ydrophytic vegetat | on and hydrology. | Second | |
| Depth (inches):emarks: dric soils assumed due to h | ydrophytic vegetat | on and hydrology. | Second Wa | dary Indicators (2 or more required) |
| Type: Depth (inches): emarks: dric soils assumed due to h DROLOGY etland Hydrology Indicationary Indicators (any one | ydrophytic vegetat | on and hydrology. | Second We | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) |
| Depth (inches):emarks: dric soils assumed due to h | ydrophytic vegetat | on and hydrology. cient) Surface Soil Cracks (B6) | Second — Wa — Dra — (B7) — Ox | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) |
| Depth (inches):emarks: dric solls assumed due to he proceed to be | ydrophytic vegetat | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery | Second We Dra Ox (B7) Ox e (B8) Pre | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C |
| Depth (inches):emarks: dric soils assumed due to he dric soils assum | ydrophytic vegetat ators: | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface | Second | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) didized Rhizospheres on Living Roots (Cesence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) |
| Type: | ydrophytic vegetat | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) | Second Water Draw (B7) Ox e (B8) Pre Sa Store Ge | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) ecomorphic Position (D2) |
| Depth (inches):emarks: dric solls assumed due to hear the following section of the followi | ydrophytic vegetat | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Second We will be a condition of the co | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (Concept of Reduced Iron (C4) alt Deposits (C5) aunted or Stressed Plants (D1) comorphic Position (D2) hallow Aquitard (D3) |
| Depth (inches):emarks: dric solls assumed due to he proceed to be | ydrophytic vegetat | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Second — Wi — Dra — (B7) — Ox — (B8) — Pre — Sa — Str — Ge — Sh — Mi | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) |
| Depth (inches):emarks: dric solls assumed due to he proceed to be | ydrophytic vegetat | cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Second — Wi — Dra — (B7) — Ox — (B8) — Pre — Sa — Str — Ge — Sh — Mi | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) comorphic Position (D2) hallow Aquitard (D3) |
| Type: | ydrophytic vegetat | on and hydrology. Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Second — Wi — Dra — (B7) — Ox — (B8) — Pre — Sa — Str — Ge — Sh — Mi | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) |
| Type: | etors: indicator is suffice. | on and hydrology. cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Second — Wi — Dra — (B7) — Ox — (B8) — Pre — Sa — Str — Ge — Sh — Mi | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C- esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) |
| Depth (inches):emarks: rdric solls assumed due to hear the solls assumed the solls assumed to hear the solls assumed the hear the solls assumed the solls assumed the hear the solls assumed the soll | ydrophytic vegetat ators: a indicator is suffi | on and hydrology. Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Second — Wa — Dra (B7) — Ox — Sa — Stu — Ge — Sh ✓ Mi — FA | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) hC-Neutral Test (D5) |
| Type: | etors: indicator is suffice. | on and hydrology. Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Second — Wa — Dra — Ox — Sa — Sta — Str — Ge — Sh — FA | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) hC-Neutral Test (D5) |
| Type: | ydrophytic vegetat ators: a indicator is suffi | on and hydrology. cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) No Depth (inches): 0 - 6 No Depth (inches): 0 - 6 | Second | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) hC-Neutral Test (D5) |
| Depth (inches):emarks: rdric solls assumed due to he rDROLOGY retland Hydrology Indicationary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of Iron Deposits (B5) retland Observations: reflace Water Present? returation Present? returation Present? returation Present? | ydrophytic vegetat ators: a indicator is suffi | on and hydrology. Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Second | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) hC-Neutral Test (D5) |
| Depth (inches):emarks: dric solls assumed due to he dric solls assumed assumed due to he dric solls assumed due to he dric sol | ydrophytic vegetat ators: a indicator is suffi | on and hydrology. cient) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) No Depth (inches): 0 - 6 No Depth (inches): 0 - 6 | Second | dary Indicators (2 or more required) ater-stained Leaves (B9) ainage Patterns (B10) kidized Rhizospheres on Living Roots (C- esence of Reduced Iron (C4) alt Deposits (C5) unted or Stressed Plants (D1) eomorphic Position (D2) hallow Aquitard (D3) crotopographic Relief (D4) hC-Neutral Test (D5) |





| Project/Site: Seward Highway MP 99 - 105 | Borough/C | e Sampling Date: August 8, 2006 | | | | |
|--|--|---------------------------------|--|--|--|--|
| Applicant/Owner: DOT&PF | Sampling Point: 4 | | | | | |
| Investigator(s): RAC/EMC | Landform (hillside, terrace, hummocks, etc.): none | | | | | |
| Local relief (concave, convex, none): none | Slope (%): 0 | | | | | |
| Subregion: Southcentral Alaska Lat: 60 58 54.4 | 4 Long: 149 29 15.3 Datum: | | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | |
| Are Vegetation N , Soil N , or Hydrology N significantly | | | Normal Circumstances" present? Yes _ ✓ No | | | |
| Are Vegetation N , Soil N , or Hydrology N naturally pro | | | eded, explain any answers in Remarks.) | | | |
| SUMMARY OF FINDINGS – Attach site map showing | | | | | | |
| | | | , | | | |
| Hydrophytic Vegetation Present? Yes No | ls t | he Sampled | Area | | | |
| Hydric Soil Present? Yes No | wit | hin a Wetlar | nd? Yes No | | | |
| Wetland Hydrology Present? Yes ✓ No | | | | | | |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland ar | eas may be | drier compare | d to last year. | | | |
| Site is adjacent to the highway. | | | | | | |
| Open low shrub. 35% cover. | | | | | | |
| Waypoint 41 | | | | | | |
| VEGETATION | | | | | | |
| VEGETATION | Absolute | Indicator | 1 | | | |
| Species (Use scientific names. List all species in plot.) | % Cover | _ | Prevalence Index: | | | |
| 1. Myrica gale (s) | 35 | OBL | Total % Cover of: Multiply by: | | | |
| 2 Equisetum pratense (h) | 15 | FACW | OBL species105 x 1 =105 | | | |
| 3. Potentilla fruticosa (s) | 30 | FAC | FACW species 55 x 2 = 110 | | | |
| 4. Andromeda polifolia (s) | 20 | OBL | FAC species75 x 3 =225 | | | |
| 5. Oxycoccus microcarpus (s) | 10 | NI_ | FACU species x 4 = | | | |
| 6. Parnassia palustris (h) | 10 | FACW | UPL species x 5 = | | | |
| 7. Carex aquatilis (h) | 20 | OBL_ | Column Totals:235 (A)440 (B) | | | |
| 8. Viola palustris (h) | 5 | NI_ | Prevalence Index = B/A = 1.87 | | | |
| 9. Ledum groenlandicum (s) | 10 | FAC | Trevalence made = D/A = | | | |
| 10. Rubus chamaemorus (h) | 15 | FACW | | | | |
| 11. Rubus arctica (h) | 5 | NI | Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate | | | |
| 12. Betula papyrifera (saplings) (s) | 15 | FAC | sheet.) | | | |
| 13. Calamagrostis canadensis (h) 14. Equisetum fluviatile (h) | <u>5</u> 10 | FAC OBL | Wetland Cryptogams (record species and cover | | | |
| 15. Sanguisorba stipulata (h) | 10 | NI | at left) | | | |
| 16. Salix commutata (s) | 15 | FAC | Morphological Adaptations | | | |
| 17. Carex canescens (h) | 20 | OBL | Problematic Hydrophytic Vegetation (Explain) | | | |
| 18. Picea mariana (sapling) | 15 | FACW | | | | |
| 19. | | | | | | |
| 20. | | | | | | |
| Total Cover | 265 | | Hudronbudio | | | |
| | Fround | | Hydrophytic Vegetation Present? Yes No | | | |
| % Cover of Wetland Bryophytes 0 Total Cover of Bryophytes | phytes | 0 | 103 110 | | | |
| Remarks: Tussocks. No bare ground - plants occupying every space available. | | | | | | |
| | | | | | | |

| SOIL | | | | | | | Sa | mpling Point | |
|--|----------------------|-----------------------------------|--------------|-------------------|------------------|--------------|----------------------------|---------------|--------------|
| Profile Description: (Desc | ribe to the depth | needed to docu | ment the ir | dicator.) | | | | | |
| Depth Mat | rix | Redo | x Features | | | | | | |
| (inches) Color (mois | st)% | Color (moist) | % | Type ¹ | Loc ² | Texture | | Remarks | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=Concentration, D | =Depletion RM=R | aduced Matrix | 2 Location | PI =Pore | Lining R | =Root Chann | ol M=Matri | • | |
| Hydric Soil Indicators: | -Depletion, KM-K | Indicators for | | | | J-NOOL CHAIN | ci, m-maui | ۸. | |
| Histosol or Histel (A1) | | Alaska Col | | | | Alaska | Gleyed With | hout Hue 5Y | or Redder |
| Histic Epipedon (A2) | | Alaska Alpi | _ | | | | rlying Layer | | |
| Hydrogen Sulfide (A4) | | Alaska Red | dox With 2.5 | Y Hue | | Other (| Explain in R | (emarks) | |
| Thick Dark Surface (A1: | 2) | | | | | | | | |
| Alaska Gleyed (A13) | | ³ One indicator of | | - | | | or of wetland | hydrology, | |
| Alaska Redox (A14) | 45) | and an appro | | | | be present. | | | |
| Alaska Gleyed Pores (A | | ⁴ Give details of | color chang | ge in Rema | rks. | | | | |
| Restrictive Layer (if prese | - | | | | | | | | |
| Type: | | _ | | | | Unidada Call | D | Yes _ | N. |
| Depth (inches): Remarks: | | | | | | nyuric Soil | rresentr | res | MO |
| | | | | | | | | | |
| HYDROLOGY | | | | | | | | | |
| Wetland Hydrology Indica | tors: | | | | | Secondary | Indicators (2 | or more req | uired) |
| Primary Indicators (any one | indicator is suffici | ent) | | | | Water- | stained Leav | ves (B9) | |
| ✓ Surface Water (A1) | _ | Surface Soil Cra | acks (B6) | | | Drainag | ge Patterns | (B10) | |
| High Water Table (A2) | _ | Inundation Visib | | | | _ | | | g Roots (C3) |
| Saturation (A3) | _ | Sparsely Vegeta | | | (B8) | _ | | ced Iron (C4) | |
| Water Marks (B1) | _ | _ Hydrogen Sulfid | | | | _ | posits (C5) | 1 DI (D4) | |
| Sediment Deposits (B2) | _ | Dry-Season Wa Other (Explain i | | | | | | d Plants (D1) | |
| Drift Deposits (B3) Mat or Crust of Algae or | Marl (R4) | _ Other (Explain i | n Kemarks) | | | _ | rphic Position Aquitard (I | | |
| Iron Deposits (B5) | mair (54) | | | | | _ | pographic F | - | |
| | | | | | | _ | eutral Test (| | |
| Field Observations: | | | | | Т | | | | |
| Surface Water Present? | Yes _✓_ No | Depth (in | ches): 0-6 | | . | | | | |
| Water Table Present? | Yes No | Depth (in | ches): | | . | | | | |
| Saturation Present? | | Depth (in | | | Wetla | nd Hydrology | Present? | Yes | No |
| (includes capillary fringe) Describe Recorded Data (st | ream gauge mon | itoring well periol | photos pro | vious inen | actione) i | f available: | | | |
| Describe Recorded Data (St | ream gauge, mon | noring well, aerial | priotos, pre | vious ilispe | ouons), I | available. | | | |
| Remarks: | | | | | | | | | |
| Tributary has very clear water. | Area adjacent to cre | eek is very saturate | d and spong | y. Water bet | ween tuss | ocks. | | | |
| | | | | | | | | | |
| | | | | | | | | | |





| Project/Site: Seward Highway MP 99 - 105 | e Sampling Date: August 8, 2006 | | | | | |
|--|---------------------------------|-------------------|---|--|--|--|
| Applicant/Owner: DOT&PF | ity: Anchorage | Sampling Point: 5 | | | | |
| Investigator(s): RAC/EMC | (hillside terr | | | | | |
| Local relief (concave, convex, none): slightly concave | | | | | | |
| Subregion: Southcentral Alaska Lat: | | | | | | |
| | | | _ | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | |
| Are Vegetation N., Soil N., or Hydrology N. significantly | | | | | | |
| Are Vegetation N , Soil N , or Hydrology N naturally pro | oblematic? | (If ne | eeded, explain any answers in Remarks.) | | | |
| SUMMARY OF FINDINGS – Attach site map showing | ı sampli | ng point l | ocations, transects, important features, etc. | | | |
| Hydrophytic Vegetation Present? Yes No✓ | | | | | | |
| Hydric Soil Present? Yes No | | | | | | |
| Wetland Hydrology Present? Yes No | | ann a vvector | 163 110 | | | |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland ar | eas may be | drier compare | ed to last year. | | | |
| Site is adjacent to a trail. | | | | | | |
| , | | | | | | |
| Forest broadleaf closed. 65-70% cover. Weak shrub layer. | | | | | | |
| Waypoint 42 | | | | | | |
| VEGETATION | | | | | | |
| Species (Heat exicutific names List all appeals in plat) | Absolute | | Prevalence Index: | | | |
| Species (Use scientific names. List all species in plot.) 1. Betula papyrifera (t) | % Cover 65 | Status FACU | Total % Cover of: Multiply by: | | | |
| 2 Calamagrostis canadensis (h) | 40 | FAC | OBL species x 1 = | | | |
| 3. Chamerion angustifolium (h) | 25 | FACU | FACW species x 2 = | | | |
| 4 Rosa acicularis (s) | | FACU | FAC species 100 x 3 = 300 | | | |
| 5. Athyrium filix-femina | 10 | FAC | FACU species 135 x 4 = 540 | | | |
| 6. Cornus canadensis (h) | 35 | FAC | UPL species x 5 = | | | |
| 7. Alnus crispa | 15 | FAC | Column Totals: 235 (A) 840 (B) | | | |
| 8. Sambucus racemosa | 15 | FACU | 0.57 | | | |
| 9 | | | Prevalence Index = B/A = 3.57 | | | |
| 10 | | | | | | |
| 11 | | | Other Indicators of Hydrophytic Vegetation: | | | |
| 12 | | | (Record supporting data in Remarks or on a separate sheet.) | | | |
| 13 | | | Wetland Cryptogams (record species and cover | | | |
| 14 | | | at left) | | | |
| 15 | | | Morphological Adaptations | | | |
| 16 | | | Problematic Hydrophytic Vegetation (Explain) | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 20. | | | | | | |
| Total Cover | 235 | | Hydrophytic | | | |
| Plot size 30-foot circle % Bare 0 | Fround | 100 | Vegetation Present? Yes No | | | |
| % Cover of Wetland Bryophytes 0 Total Cover of Bryo | phytes | 0 | riesenti ies <u> </u> | | | |
| Remarks: | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | | | | | Sampling Point: |
|--|---|---|--|--|---------------------|--|--|
| Profile Desc | cription: (Describe | to the depti | needed to docu | ment the indicator. |) | | |
| Depth | Matrix (consist) | | | ox Features | 12 | T | Demode |
| (inches) | Color (moist) | % | Color (moist) | %Type¹_ | _Loc ² _ | Texture | Remarks O layer - root wad |
| | | | | | | - | ash layer |
| -4 | 10YR 3/2 | 100 | | | | silty loam | tightly packed cobbles with interstitial re |
| -7 | 10YR3/4 | 100 | | | | sandy loam | soil some gravel |
| -20 | 10YR3/4 | 100 | | | — | sandy loam | 9.0.10 |
| | | | | | | | |
| | | | | | | | |
| | | | | | = | | |
| | oncentration, D=Dep Indicators: | letion, RM= | | ² Location: PL=Por Problematic Hydric | | C=Root Chan | nel, M=Matrix. |
| | or Histel (A1) | | | or Change (TA4)4 | Julia . | Alaeks | Gleyed Without Hue 5Y or Redder |
| _ | pipedon (A2) | | | ine Swales (TA5) | | | erlying Layer |
| | en Sulfide (A4) | | | dox With 2.5Y Hue | | | (Explain in Remarks) |
| _ , , | ark Surface (A12) | | radona rec | dox mar E.or mac | | _ 0000 | (Explain in Fernancy) |
| _ | Gleyed (A13) | | ³ One indicator | of hydrophytic veget: | ation one | primary indicat | or of wetland hydrology, |
| _ | Redox (A14) | | | opriate landscape po | | | or or motion of the control of the c |
| | Gleyed Pores (A15) | | | color change in Ren | | r bo procenti | |
| | Layer (if present): | | | - | | T | |
| | | | | | | | |
| | | | | | | 1 | |
| | chee): | | _ | | | Hydric Soil | Present? Ves No √ |
| Depth (in | ches): | | | | | Hydric Soil | Present? Yes No |
| Depth (in Remarks: | | | | | | Hydric Soil | Present? Yes No |
| Depth (in Remarks: | | | | | | Hydric Soil | Present? Yes No |
| Depth (in emarks: | | | | | | Hydric Soil | Present? Yes No |
| Depth (in emarks: | | | | | | Hydric Soil | Present? Yes No |
| Depth (in emarks: | | | | | | Hydric Soil | Present? Yes No |
| Depth (in emarks: y | ches): | | | | | | |
| Depth (in temarks: ny | ches): | | | | | | Present? Yes No |
| Depth (in Remarks: ry | GY | | | | | Secondary | |
| Depth (in temarks: ry YDROLO Vetland Hydrimary India | GY drology Indicators: | | | acks (B6) | | Secondary Water | Indicators (2 or more required) |
| Depth (in temarks: ny PDROLO Vetland Hy rrimary India Surface | GY drology Indicators: | | ient) _ Surface Soil Cra | acks (B6) ble on Aerial Imagery | (B7) | Secondary Water Drains | Indicators (2 or more required) -stained Leaves (B9) -ge Patterns (B10) |
| Depth (in temarks: ny PDROLO Vetland Hy rrimary India Surface | GY drology Indicators: cators (any one indic Water (A1) ater Table (A2) | | ient) _ Surface Soil Cr _ Inundation Visit | , | | Secondary Water Draina Oxidiz | Indicators (2 or more required) -stained Leaves (B9) |
| Depth (in temarks: y) /DROLO /etland Hyrrimary India Surface High Wa Saturation | GY drology Indicators: cators (any one indic Water (A1) ater Table (A2) | | ient) _ Surface Soil Cr _ Inundation Visit | ole on Aerial Imagery ated Concave Surfac | | Secondary Water Draina Oxidiz Preser | Indicators (2 or more required) -stained Leaves (B9) -ge Patterns (B10) -ged Rhizospheres on Living Roots (C3 |
| Popth (in temarks: ny | drology Indicators: cators (any one indic Water (A1) ater Table (A2) on (A3) | | ient) _ Surface Soil Cra _ Inundation Visib _ Sparsely Veget | ole on Aerial Imagery ated Concave Surfac de Odor (C1) | | Secondary Water Draina Oxidiz Presea | Indicators (2 or more required) stained Leaves (B9) sige Patterns (B10) ed Rhizospheres on Living Roots (C3) nce of Reduced Iron (C4) |
| YDROLO Yetland Hy rimary India Surface High Wa Saturatia Water N Sedimen | drology Indicators: cators (any one indicators (any one indicators) water (A1) ater Table (A2) on (A3) tarks (B1) | | ient) Surface Soil Cra Inundation Visit Sparsely Veget Hydrogen Sulfic | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) | | Secondary Water Draina Oxidiz Presea Salt D | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Leaves (C3) -stained Reduced Iron (C4) -stained Reduced Iron (C4) |
| YDROLO Yetland Hy Primary India Surface High Wa Saturati Water M Sedimei Drift De | drology Indicators: cators (any one indicators) water (A1) ater Table (A2) on (A3) farks (B1) nt Deposits (B2) | ator is suffic | ient) _ Surface Soil Cro _ Inundation Visit _ Sparsely Veget _ Hydrogen Sulfic _ Dry-Season Wa | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) | | Secondary Water Draina Oxidiz Presei Salt D Stunte | Indicators (2 or more required) -stained Leaves (B9) -stee Patterns (B10) -stee Rhizospheres on Living Roots (C3 -stee of Reduced Iron (C4) -steeposits (C5) -steeposits (C5) -steeposits (D1) |
| Depth (in emarks: y) /DROLO /etland Hy rimary India Surface High Wa Saturatia Water N Sedimen Drift Dep | drology Indicators: cators (any one indicators) water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) | ator is suffic | ient) _ Surface Soil Cro _ Inundation Visit _ Sparsely Veget _ Hydrogen Sulfic _ Dry-Season Wa | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) | | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (D1) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D3) -stained Iron (D3) -stained Iron (D4) -stained Iron Iron Iron Iron Iron Iron Iron Iron |
| Popth (in temarks: by Popular | drology Indicators: cators (any one indicators: (any one indicators) ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) Crust of Algae or Markosits (B5) | ator is suffic | ient) _ Surface Soil Cro _ Inundation Visit _ Sparsely Veget _ Hydrogen Sulfic _ Dry-Season Wa | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) | | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Leaves (B10) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (D1) -stained Reduced Iron (D1) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Iron (D3) |
| YDROLO Yetland Hy Primary India Surface High Wa Saturati Water N Sedimen Drift Dep Mat or C Iron Dep | drology Indicators: cators (any one indicators) water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) crust of Algae or Markosits (B5) vations: | ator is suffic | ient) Surface Soil Cra Inundation Visit Sparsely Veget Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) in Remarks) | ee (B8) | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (D1) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D3) -stained Iron (D3) -stained Iron (D4) -stained Iron Iron Iron Iron Iron Iron Iron Iron |
| YDROLO YDROLO Yetland Hy Primary India Surface High Wa Saturatia Water N Sedimen Drift Dep Mat or C Iron Dep | drology Indicators: cators (any one indicators) cators (any one indicators) dater (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) posits (B3) crust of Algae or Management (B5) vations: er Present? | ator is sufficed and a sufficed and | ient) Surface Soil Cra Inundation Visit Sparsely Veget Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery ated Concave Surface de Odor (C1) ater Table (C2) in Remarks) | e (B8) | Secondary Water Draina Oxidiz Prese Salt D Stunte Geom Shallo | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (D1) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D3) -stained Iron (D3) -stained Iron (D4) -stained Iron Iron Iron Iron Iron Iron Iron Iron |
| Primary India Saturati Water N Sedimen Drift Dep Mat or C Iron Dep | drology Indicators: cators (any one indicators) water (A1) ater Table (A2) on (A3) flarks (B1) int Deposits (B2) posits (B3) crust of Algae or Marrosits (B5) vations: per Present? Y | ator is suffic | ient) Surface Soil Cra Inundation Visit Sparsely Veget Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery ated Concave Surfac de Odor (C1) ater Table (C2) in Remarks) | e (B8) | Secondary Water Draina Oxidiz Presei Salt D Stunte Geom Shallo | Indicators (2 or more required) -stained Leaves (B9) -stained Leaves (B10) -stained Leaves (B10) -stained Leaves (B10) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (C4) -stained Reduced Iron (D1) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D2) -stained Reduced Iron (D3) -stained Reduced Iron (D4) |

Appendix C - Page 55

Remarks: Dry





| Project/Site: Seward Highway MP 99 - 105 | Borough | /City: Anchorag | е | San | nnling Dat | te: August 8, : | 2006 |
|--|-------------------|----------------------------------|--------------------------------------|-----------------|--------------|-----------------|--------|
| Applicant/Owner: DOT&PF | Dorougii | Jony. | | | npling Poi | | |
| Investigator(s): RAC/EMC | Landford | m /hilleide terr | ace hummocke et | | iping roi | | |
| | | | ace, numinocks, et | 0.). | | | |
| Local relief (concave, convex, none): none | | | | | | | |
| Subregion: Southcentral Alaska Lat: | | | | | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | _ | |
| Are Vegetation N, Soil N, or Hydrology N, significantly | | | 'Normal Circumstar | nces" prese | nt? Yes_ | No | |
| Are Vegetation N, Soil N, or Hydrology N naturally pr | oblematio | ? (If ne | eded, explain any | answers in | Remarks. |) | |
| SUMMARY OF FINDINGS - Attach site map showing | g samp | ling point l | ocations, trans | sects, im | portant | features | , etc. |
| Hydrophytic Vegetation Present? Yes No✓ | . . | a tha Camplad | A | | | | |
| Hydric Soil Present? Yes No | 18 | s the Sampled vithin a Wetlar | | Yes | No | | |
| Wetland Hydrology Present? Yes No | . [" | vitilii a vvetiai | iur | 162 | NO | | |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland a | reas may t | be drier compare | ed to last year. | | | | |
| This point seems to provide seasonal drainage, as evidenced by a culvert r | | | | | | | |
| wetland, but no hydric soils have developed and with the exception of the se and is directing flow into a drainage channel. | ege, the p | lants are upland | I indicators. BPJ is the | at the trail (< | 10 years of | d) impounds | water |
| across Waypoint 44 Closed Mixed Forest | | | | | | | |
| | | | | | | | |
| VEGETATION | ** | | | | | | |
| Species (Use scientific names. List all species in plot.) | Absolut % Cove | | Prevalence Inde | ex: | | | |
| 1. Sitka sitchensis (t) | 20 | FACU | Total % Cov | er of: | Mul | Itiply by: | |
| 2. Equisetum sylvaticum (h) | 10 | FACU | OBL species | 40 | x 1 = _ | 40 | |
| 3. Cornus canadensis (h) | 15 | FAC | FACW species | 0 | x 2 = _ | 0 | |
| 4. Calamagrostis canadensis (h) | 40 | FAC | FAC species . | 65 | x3=_ | 195 | |
| 5. Betula papyrifera (t) | 45 | FACU | FACU species | 85 | x 4 = _ | 340 | |
| 6. Athyrium distentifolium | 10 | FAC | UPL species . | | x5=_ | | |
| 7. Equisetum arvense (h) | 10 | FACU_ | Column Totals: | 190 | (A) _ | 575 | (B) |
| 8 Carex canescens (h) | 40 | OBL | Prevalence | Index = B/ | A = 3.02 | | |
| 9 | | | T TO VOICTION | IIIdax - Di | | | |
| 10 | - — | | | | | | |
| 11 | - — | | Other Indicators (Record supporti | | | | rate |
| 12 | | | sheet.) | ng data iii i | · ciliaino c | n on a sepa | 1010 |
| 13 | | | Wetland Cry | ptogams (re | cord spec | cies and cov | /er |
| 14 | | | at left) | | | | |
| 15 | - | | Morphologic | al Adaptatio | ns | | |
| 17 | | | Problematic | Hydrophytic | Vegetati | on (Explain) |) |
| 18. | | | | | | | |
| 19 | | | | | | | |
| 20. | | | | | | | |
| Total Cove | | | Hydrophytic | | | | |
| Plot size 30 foot swath % Bare 0 | Ground _ | 40 | Vegetation Present? | Yes | <u> </u> | No | _ |
| % Cover of Wetland Bryophytes 0 Total Cover of Bryo | phytes _ | 0 | | | | | |
| Remarks: Water stained leaves covered the bare ground. The larch are on the periphe | ∍ral and on | hummocks. The | e birch are going in th | ne middle of tl | he site on h | nummocks. | |
| | | | | | | | |

| Ionto Ma | atrix | | ment the indicator.) ox Features | | | |
|--|---|--|---|----------------------|--|---|
| nches) Color (mo | | Color (moist) | % Type¹ | Loc ² | Texture | Remarks |
| - 2 | | | | | | Root wad |
| 20 10YR 2/1 | | N/A | | | silty loam | organic soil |
| | | | | _ | | |
| | | | | | | |
| ype: C=Concentration, D | D=Depletion, RM | | ² Location: PL=Pore | | =Root Chan | nel, M=Matrix. |
| dric Soil Indicators: | | | Problematic Hydric S | ioils ³ : | | |
| Histosol or Histel (A1) | | _ | or Change (TA4) ⁴ | | | a Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | | | ine Swales (TA5) | | | erlying Layer |
| Hydrogen Sulfide (A4) Thick Dark Surface (A' | | Alaska Red | dox With 2.5Y Hue | | Other | (Explain in Remarks) |
| Alaska Gleyed (A13) | 12) | 3One indicator | of hydrophytic vagetati | on one pri | many indica | tor of wetland hydrology, |
| Alaska Redox (A14) | | | opriate landscape posit | | - | tor or wettarid riyurology, |
| Alaska Gleyed Pores (| A15) | | color change in Rema | | e present. | |
| strictive Layer (if prese | - | orro dotallo or | onor ononge mirronia | | | |
| Type: | | | | | | |
| туре | | | | | | / |
| Depth (inches): marks: | | | | | Hydric Soi | Present? Yes No |
| | | | | | Hydric Soi | Present? Yes No _V |
| emarks: | | | | | Hydric Soil | Present? Yes No |
| marks: DROLOGY | | | | | | I Present? Yes No |
| marks: DROLOGY etland Hydrology Indica | ators: | ficient) | | | Secondary | |
| marks: DROLOGY etland Hydrology Indica | ators: | ficient) Surface Soil Cra | acks (B6) | | Secondary ✓ Water | r Indicators (2 or more required) |
| DROLOGY etland Hydrology Indica | ators: e indicator is suff | Surface Soil Cra | acks (B6) ole on Aerial Imagery (I | | Secondary ✓ Water ✓ Drains | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) |
| DROLOGY etland Hydrology Indica mary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) | ators: e indicator is suff | Surface Soil Cra Inundation Visib Sparsely Vegeta | ole on Aerial Imagery (I ated Concave Surface | B7) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) |
| DROLOGY etland Hydrology Indications (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) | ators: e indicator is suff | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfid | ole on Aerial Imagery (lated Concave Surface de Odor (C1) | B7) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) |
| DROLOGY etland Hydrology Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) | ators: e indicator is suff | Surface Soil Cra Inundation Visit Sparsely Vegete Hydrogen Sulfic Dry-Season Wa | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) | B7) | Secondary ✓ Water ✓ Draina Oxidiz Prese — Salt D — Stunte | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ted Rhizospheres on Living Roots (Conce of Reduced Iron (C4) teposits (C5) and or Stressed Plants (D1) |
| emarks: DROLOGY etland Hydrology Indication in the properties of | ators: e indicator is suff 2) | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfid | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) | B7) | Secondary ✓ Water ✓ Draina Oxidiz Prese Salt D Stunte Geom | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ted Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) |
| DROLOGY etland Hydrology Indica mary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of | ators: e indicator is suff 2) | Surface Soil Cra Inundation Visit Sparsely Vegete Hydrogen Sulfic Dry-Season Wa | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) | B7) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D — Stunte — Geom — Shallo | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ded Rhizospheres on Living Roots (Conce of Reduced Iron (C4) deposits (C5) ded or Stressed Plants (D1) dorphic Position (D2) ow Aquitard (D3) |
| DROLOGY etland Hydrology Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) | ators: e indicator is suff 2) | Surface Soil Cra Inundation Visit Sparsely Vegete Hydrogen Sulfic Dry-Season Wa | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) | B7) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D — Stunte — Geom — Shallo — Microt | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) reposits (C5) ad or Stressed Plants (D1) rorphic Position (D2) row Aquitard (D3) ropographic Relief (D4) |
| emarks: DROLOGY etland Hydrology Indications (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of | ators: e indicator is suff 2) | Surface Soil Cra Inundation Visit Sparsely Vegete Hydrogen Sulfic Dry-Season Wa | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) | B7) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D — Stunte — Geom — Shallo — Microt | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ded Rhizospheres on Living Roots (Conce of Reduced Iron (C4) deposits (C5) ded or Stressed Plants (D1) dorphic Position (D2) ow Aquitard (D3) |
| emarks: DROLOGY etland Hydrology Indicationary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of Iron Deposits (B5) | ators: e indicator is suff 2) or Marl (B4) | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) Iter Table (C2) In Remarks) | B7) (B8) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D — Stunte — Geom — Shallo — Microt | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) red Rhizospheres on Living Roots (Conce of Reduced Iron (C4) reposits (C5) ad or Stressed Plants (D1) rorphic Position (D2) row Aquitard (D3) ropographic Relief (D4) |
| PROLOGY Petland Hydrology Indicationary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of Iron Deposits (B5) Peld Observations: Unface Water Present? | ators: e indicator is suff 2) or Marl (B4) Yes | Surface Soil Cra Inundation Visit Sparsely Veget: Hydrogen Sulfid Dry-Season Wa Other (Explain i | ole on Aerial Imagery (I ated Concave Surface de Odor (C1) ater Table (C2) In Remarks) | B7) (B8) | Secondary ✓ Water ✓ Drains — Oxidiz — Prese — Salt D — Stunte — Geom — Shallo — Microt | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ced Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) ow Aquitard (D3) opographic Relief (D4) |
| PROLOGY etland Hydrology Indicationary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae (Iron Deposits (B5)) eld Observations: urface Water Present? | ators: e indicator is suff 2) or Marl (B4) Yes Yes | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery (I ated Concave Surface le Odor (C1) oter Table (C2) on Remarks) | B7) (B8) | Secondary ✓ Water ✓ Draina Oxidiz Prese — Salt D — Stunte — Geom — Shallo — Microt — FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ted Rhizospheres on Living Roots (Conce of Reduced Iron (C4) teposits (C5) ad or Stressed Plants (D1) torphic Position (D2) tow Aquitard (D3) topographic Relief (D4) Neutral Test (D5) |
| emarks: DROLOGY etland Hydrology Indicationary Indicators (any one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of Iron Deposits (B5) eld Observations: urface Water Present? | ators: e indicator is suff 2) or Marl (B4) Yes Yes Yes | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery (I ated Concave Surface le Odor (C1) oter Table (C2) on Remarks) oches): oches): | B7) (B8) | Secondary ✓ Water ✓ Draina Oxidiz Prese Salt D Stunte Geom Shallo FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ced Rhizospheres on Living Roots (Conce of Reduced Iron (C4) eposits (C5) ad or Stressed Plants (D1) orphic Position (D2) ow Aquitard (D3) opographic Relief (D4) |
| emarks: DROLOGY etland Hydrology Indication in the property of the property | ators: e indicator is suff 2) or Marl (B4) Yes Yes Yes | Surface Soil Cra Inundation Visit Sparsely Vegeta Hydrogen Sulfic Dry-Season Wa Other (Explain i | ole on Aerial Imagery (I ated Concave Surface le Odor (C1) oter Table (C2) on Remarks) oches): oches): | B7) (B8) | Secondary ✓ Water ✓ Draina Oxidiz Prese Salt D Stunte Geom Shallo FAC-N | r Indicators (2 or more required) -stained Leaves (B9) age Patterns (B10) ted Rhizospheres on Living Roots (Conce of Reduced Iron (C4) teposits (C5) ad or Stressed Plants (D1) torphic Position (D2) tow Aquitard (D3) topographic Relief (D4) Neutral Test (D5) |





| Project/Site: Seward Highway MP 99 - 105 | Borough | /City: Anchora | age Sampling Date: August 8, 2006 |
|---|-------------------|----------------|---|
| Applicant/Owner: DOT&PF | | ,. | Sampling Point: 7 |
| | Landfor | m (hillside te | rrace, hummocks, etc.); none |
| Local relief (concave, convex, none): none | | | |
| Subregion: Southcentral Alaska Lat: | | | Datum: |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | |
| | | | |
| Are Vegetation N , Soil N , or Hydrology N significantly | | | |
| Are Vegetation N, Soil N, or Hydrology N naturally pro | | | |
| Hydrophytic Vegetation Present? Yes No _✓ | | | |
| Hydrophytic Vegetation Present? Yes No V Hydric Soil Present? Yes No V | 18 | s the Sample | |
| Wetland Hydrology Present? Yes No | \ \ | vithin a Wetl | and? Yes No |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland are | reas may h | oe drier compa | ared to last year. |
| The site is a swath of Bepa and Caca that connects to site 6. | | | |
| Waypoint 46 | | | |
| | | | |
| This site does not have hydrophytic vegetation, however due to the strong hy | ydric soils | and hydrology | / it is professional opinion that this site is located within a wetland. |
| VEGETATION | | | |
| Species (Use scientific names. List all species in plot.) | Absolut % Cove | | |
| 1. Betula papyrifera (t) | 55 | FACU | Total % Cover of:Multiply by: |
| 2. Calamagrostis canadensis (h) | 75 | FAC | OBL species x 1 = |
| 3. Viola adunca | 20 | FAC | FACW species x 2 = |
| 4. Equisetum sylvaticum (h) | 25 | FACU | FAC species 130 x 3 = 390 |
| 5. Athyrium distentifolium | 35 | FAC | FACU species95 x 4 =380 |
| 6. Equisetum arvense (h) | 15 | FACU | UPL species x 5 = |
| 7 | | | Column Totals:(A)(B) |
| 8 | | _ | Prevalence Index = B/A = 3.42 |
| 9 | | | Prevalence index - b/A - 3.12 |
| 10 | | _ | |
| 11. | | | Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate |
| 12 | | | sheet.) |
| 13 | | | Wetland Cryptogams (record species and cover |
| 14 | | | at left) |
| 15 | | | Morphological Adaptations |
| 17. | | | Problematic Hydrophytic Vegetation (Explain) |
| 18. | | | ` |
| 19. | | | |
| 20. | | | |
| Total Cover | | | Hydrophytic |
| Plot size 20 foot diameter circle | | | Vegetation Present? Yes No |
| % Cover of Wetland Bryophytes0 Total Cover of Bryop | phytes _ | 0 | |
| Remarks: Water stained leaves covered the ground. The viola is patchy. | | | |
| | | | |

| OIL Profile Descrip | otion: (Describe t | o the der | oth needed | to docun | nent the i | indicator.) |) | | |
|--|--|--------------|---|---|--|---------------------------------|-------------------|---|---|
| Depth | Matrix | | | | x Feature | | | | |
| inches) | Color (moist) | % | Color (r | | % | Type ¹ | _Loc ² | Texture | Remarks |
| - 8 | | | | | | | | | root matter. accordian. |
| - 20 10 | 0YR 2/1 | 100 | N/A | | | | | silty loam | organic soil |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | — | | | | | | | |
| | | | | | | | | | |
| ype: C=Cond | centration, D=Deple | etion, RM | | | | : PL=Pore | | RC=Root Cha | nnel, M=Matrix. |
| _ Histosol or | Histel (A1) | | | aska Colo | | - | | Alas | ka Gleyed Without Hue 5Y or Redder |
| Histic Epipe | edon (A2) | | Ala | aska Alpir | ne Swales | (TA5) | | | derlying Layer |
| _ , , | Sulfide (A4) | | Ala | aska Red | ox With 2. | 5Y Hue | | Othe | er (Explain in Remarks) |
| | Surface (A12) | | 3Ono ir | dicator o | f hudroph | utic vocata | tion one | primanı indica | ator of watland hydrology |
| _ Alaska Gle | | | | | | | | t be present. | ator of wetland hydrology, |
| _ | yed Pores (A15) | | | | | nge in Rem | | t be present. | |
| | yer (if present): | | 0.110 | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Type: Depth (inche | es): | | | | | | | Hydric Sc | oil Present? Yes No |
| Type: Depth (inche | | | | | | | | Hydric So | oil Present? Yes No |
| Type: Depth (inche | es): | | | | | | | Hydric So | oil Present? Yes No |
| Type: Depth (inchestemarks: | es): | | | | | | | | ry Indicators (2 or more required) |
| Type: | es):Y | | | | | | | Seconda | |
| Type: | Y plogy Indicators: ors (any one indica | | ficient) | a Soil Crae | cks (B6) | | | <u>Seconda</u> | ry Indicators (2 or more required) |
| Type: Depth (inche emarks: **TOROLOGY** **TOROLOG | Y plogy Indicators: ors (any one indicators) ater (A1) r Table (A2) | | ficient) Surface Inundat | tion Visible | e on Aeria | al Imagery | | Seconda ✓ Wate ✓ Drain Oxid | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 |
| Type: Depth (inche emarks: **TOROLOGY** **TOROLOGY | Y plogy Indicators: ors (any one indicater (A1) r Table (A2) (A3) | | ficient) Surface Inundat Sparse | tion Visibl ly Vegeta | e on Aeria ted Conca | ave Surfac | | Seconda ✓ Wate ✓ Drain — Oxid — Pres | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 |
| Type: Depth (inchestemarks: **TOROLOGY** **Vetland Hydrorimary Indicate** Surface Water Market | Y Dlogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1) | | ficient) Surface Inundat Sparse Hydrog | tion Visibl ly Vegeta en Sulfide | e on Aeria ted Conca Odor (C | ave Surfac | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 ence of Reduced Iron (C4) Deposits (C5) |
| Type: | Y Dlogy Indicators: ors (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2) | | ficient) Surface Inundat Sparse Hydrog Dry-Se | tion Visibl ly Vegeta en Sulfide ason Wat | e on Aeria ted Conca Odor (C er Table (| ave Surfac 1) (C2) | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) |
| Type: | Y Dology Indicators: ors (any one indicator) ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se | tion Visibl ly Vegeta en Sulfide | e on Aeria ted Conca Odor (C er Table (| ave Surfac 1) (C2) | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) |
| Type: | Y Dology Indicators: ors (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se | tion Visibl ly Vegeta en Sulfide ason Wat | e on Aeria ted Conca Odor (C er Table (| ave Surfac 1) (C2) | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) |
| Type: | Y Dology Indicators: ors (any one indicator (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se | tion Visibl ly Vegeta en Sulfide ason Wat | e on Aeria ted Conca Odor (C er Table (| ave Surfac 1) (C2) | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micro | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) |
| Type: | Y Dlogy Indicators: ors (any one indicators (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marlits (B5) | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se | tion Visibl ly Vegeta en Sulfide ason Wat | e on Aeria ted Conca Odor (C er Table (| ave Surfac 1) (C2) | | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micro | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3 ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) |
| Type: | Y plogy Indicators: ors (any one indicators) ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl its (B5) | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se Other (| ion Visibl ly Vegeta en Sulfide ason Wat Explain in | e on Aeria ted Conca e Odor (C er Table (Remarks | ave Surfac 1) (C2) (S) | e (B8) | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micro | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) |
| Type: | Y Dlogy Indicators: ors (any one indicater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marlits (B5) tions: Present? Ye | otor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se Other (i | tion Visibli ly Vegetat en Sulfide ason Wate Explain in | e on Aeria ted Conca e Odor (C er Table (Remarks | ave Surfac 1) (C2) | e (B8) | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micro | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) |
| Type: | Y Dology Indicators: ors (any one indicators) ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl itis (B5) tions: Present? Yesent? Yesent? Yesent? Yesent? Yesent? | tor is suff | ficient) Surface Inundat Sparse Hydrog Dry-Se Other (| tion Visibli ly Vegetal en Sulfide ason Wate Explain in Depth (inco | e on Aeria ted Conca o Odor (C er Table (Remarks ches): ches): | ave Surfac 1) (C2) (S) | e (B8) | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micr — FAC | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) |
| Type: | Y Dology Indicators: ors (any one indicators) ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl sits (B5) tions: Present? Yesent? Yesent? Yesent? Yesent? Yesent? | (B4) | Surface Inundat Sparse Hydrog Dry-Se Other (I | tion Visibli ly Vegetal en Sulfide ason Wate Explain in Depth (incomplete the control Depth (incomplete the control | e on Aeria ted Conca o Odor (C er Table (Remarks ches): ches): ches): | ave Surfac 1) (C2) (S) | e (B8) | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micr — FAC | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) -Neutral Test (D5) |
| Type: | Y Dology Indicators: ors (any one indicators) ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) st of Algae or Marl sits (B5) tions: Present? esent? Yesent? Yesent? Yesent? Yesent? Yesent? Yesent? | (B4) | Surface Inundat Sparse Hydrog Dry-Se Other (I | tion Visibli ly Vegetal en Sulfide ason Wate Explain in Depth (incomplete the control Depth (incomplete the control | e on Aeria ted Conca o Odor (C er Table (Remarks ches): ches): ches): | ave Surfac 1) (C2) (S) | e (B8) | Seconda ✓ Wate ✓ Drain — Oxid — Pres — Salt — Stun — Geo — Shal — Micr — FAC | ry Indicators (2 or more required) er-stained Leaves (B9) nage Patterns (B10) lized Rhizospheres on Living Roots (C3) ence of Reduced Iron (C4) Deposits (C5) ted or Stressed Plants (D1) morphic Position (D2) low Aquitard (D3) otopographic Relief (D4) -Neutral Test (D5) |



| Project/Site: Seward Highway MP 99 - 105 Borou | ugh/City: Anchorage Sampling Date: August 8, 2006 |
|--|--|
| Applicant/Owner: DOT&PF | Sampling Point: 8 |
| | form (hillside, terrace, hummocks, etc.): none |
| Local relief (concave, convex, none): none Slope | |
| Subregion: Southcentral Alaska Lat: | |
| Are climatic / hydrologic conditions on the site typical for this time of year? Y | |
| Are Vegetation N, Soil N, or Hydrology N significantly distur | |
| Are Vegetation N , Soil N , or Hydrology N naturally problem | |
| SUMMARY OF FINDINGS – Attach site map showing san | |
| Hydrophytic Vegetation Present? Yes _ ✓ No | |
| Hydric Soil Present? Yes No _✓ | Is the Sampled Area within a Wetland? Yes No |
| Wetland Hydrology Present? Yes No | within a Wedand? |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas many | ay be drier compared to last year. |
| Waypoint 47 | |
| | |
| | (0000) |
| The area perhaps serves as a temorary storage area in times of high precipitation, | and the summer of 2006 had high rainfall amounts. |
| VEGETATION | |
| | olute Indicator over Status Prevalence Index: |
| 1. Menyanthes trifoliata 8 | 0 OBL Total % Cover of: Multiply by: |
| 2. Calamagrostis canadensis (h) | 5 FAC OBL species 145 x 1 = 145 |
| 3. Carex lyngbyei 6 | 5 OBL FACW species x 2 = |
| 4 | FAC species25 x 3 =75 |
| 5 | |
| 6 | |
| 7 | |
| 8 | Prevalence Index = R/A = 1.29 |
| 9 | |
| 11. | Other Indicators of Hydrophytic Vegetation: |
| 12. | (Record supporting data in Remarks or on a separate |
| 13. | sheet.) |
| 14 | Wetland Cryptogams (record species and cover |
| 15 | at left) Morphological Adaptations |
| 16 | Morphological Adaptations Problematic Hydrophytic Vegetation (Explain) |
| 17 | |
| 18 | —— |
| 19 | |
| 20 | 70 |
| | Vegetation |
| Plot size 30 foot swath | Present? Yes V No |
| Remarks: | , |
| Grounds was cover in water stained leaves. | |
| | |
| | |
| | |
| | |
| I . | |

SOIL Sampling Point: 8 Profile Description: (Describe to the depth needed to document the indicator.) Redox Features Matrix Color (moist) % Type' (inches) Color (moist) Texture Root wad with organics 0 - 7 organic soil 100 N/A 7 - 20 silty loam 10YR 2/1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix. 2Location: PL=Pore Lining, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils³: Hydric Soil Indicators: Histosol or Histel (A1) Alaska Color Change (TA4)4 Alaska Gleved Without Hue 5Y or Redder Histic Epipedon (A2) Alaska Alpine Swales (TA5) Underlying Layer Hydrogen Sulfide (A4) Alaska Redox With 2.5Y Hue Other (Explain in Remarks) __ Thick Dark Surface (A12) Alaska Gleyed (A13) One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, Alaska Redox (A14) and an appropriate landscape position must be present. Alaska Gleved Pores (A15) Give details of color change in Remarks. Restrictive Layer (if present): Type: _ Depth (inches): Hydric Soil Present? Yes Remarks: HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (2 or more required) Primary Indicators (any one indicator is sufficient) ✓ Water-stained Leaves (B9) ✓ Drainage Patterns (B10) Surface Water (A1) Surface Soil Cracks (B6) High Water Table (A2) __ Inundation Visible on Aerial Imagery (B7) Oxidized Rhizospheres on Living Roots (C3) Saturation (A3) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4) __ Water Marks (B1) Hydrogen Sulfide Odor (C1) Salt Deposits (C5) ___ Dry-Season Water Table (C2) Sediment Deposits (B2) Stunted or Stressed Plants (D1) Drift Deposits (B3) Other (Explain in Remarks) Geomorphic Position (D2) Mat or Crust of Algae or Marl (B4) Shallow Aquitard (D3) Iron Deposits (B5) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Yes ____ No __ Depth (inches): _ Surface Water Present? Yes ____ No _ Depth (inches): _ Water Table Present? Wetland Hydrology Present? Yes

✓ No Yes ___ No ___ Depth (inches): 0 Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:





| Project/Site: Seward Highway MP 99 - 105 | Borough/C | ity: Anchorag | e Sampling Date: August 8, 2006 |
|--|------------|---------------|---|
| | | ′ — | Sampling Point: 9 |
| Investigator(s): RAC/EMC | | | |
| Local relief (concave, convex, none): none | | | 6 6 6 F |
| Subregion: Southcentral Alaska Lat: | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | |
| | | | |
| Are Vegetation N, Soil N, or Hydrology N significantly | | | |
| Are Vegetation N, Soil N, or Hydrology N naturally pro | oblematic? | (If ne | eded, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing | ı sampli | ng point l | ocations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No _✓ | | | |
| Hydric Soil Present? Yes No 🗸 | | he Sampled | |
| Wetland Hydrology Present? Yes No | wit | hin a Wetlar | nd? Yes No✓ |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland an | ooo may ba | drior compare | ad to look year |
| Hydrology - the winter storage this year is half of the average, so wetland ar | eas may be | drier compare | ed to last year. |
| | | | |
| Shrub tall closed | | | |
| official closed | | | |
| VEGETATION | | | |
| | Absolute | | |
| Species (Use scientific names, List all species in plot.) | % Cover | | Prevalence Index: |
| 1. Alnus crispa (s) | 90 | FAC | Total % Cover of: Multiply by: |
| 2. Heracleum Ianatum (h) 3. Galium triflorum (h) | 20 | FACU FACU | OBL species x 1 = |
| Galeopsis tetrahit (h) | | NI | FACW species x 2 = FAC species y 3 = 270 |
| 5 | | | FACU species 80 x 4 = 320 |
| 6. | | | UPL species x 5 = |
| 7. | | | Column Totals: 170 (A) 590 (B) |
| 8. sphagnum | | | |
| 9. | | | Prevalence Index = B/A = 3.47 |
| 10 | | | |
| 11 | | | Other Indicators of Hydrophytic Vegetation: |
| 12 | | | (Record supporting data in Remarks or on a separate sheet.) |
| 13 | | | Wetland Cryptogams (record species and cover |
| 14 | | | at left) |
| 15 | | | Morphological Adaptations |
| 16 | | | Problematic Hydrophytic Vegetation (Explain) |
| 17 | | | |
| 18 19 | | | |
| 20. | | | |
| Total Cover | 200 | | Hydrophytic |
| Plot size 30-foot circle % Bare G | | | Vegetation |
| % Cover of Wetland Bryophytes0 Total Cover of Bryon | | | Present? Yes No✓ |
| Remarks: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

SOIL Sampling Point: 9

| Profile Description: (Describe to the depth | needed to document the indicator.) | |
|--|--|--|
| Depth Matrix | Redox Features | |
| (inches) Color (moist) % | Color (moist) % Type ¹ Loc ² | Texture Remarks |
| 0 - 6 10YR2/2 100 N | N/A | sandy mixed organics |
| 6+ | | fractured bedrock |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| ¹ Type: C=Concentration, D=Depletion, RM=F | Reduced Matrix. ² Location: PL=Pore Lining, F | RC=Root Channel, M=Matrix. |
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
| Histosol or Histel (A1) | Alaska Color Change (TA4) ⁴ | Alaska Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | Alaska Alpine Swales (TA5) | Underlying Layer |
| Hydrogen Sulfide (A4) | Alaska Redox With 2.5Y Hue | Other (Explain in Remarks) |
| Thick Dark Surface (A12) | | |
| Alaska Gleyed (A13) | 3One indicator of hydrophytic vegetation, one | primary indicator of wetland hydrology, |
| Alaska Redox (A14) | and an appropriate landscape position mus | at be present. |
| Alaska Gleyed Pores (A15) | ⁴ Give details of color change in Remarks. | |
| Restrictive Layer (if present): | | |
| Type: | _ | |
| Donth (inches): | | Hydric Soil Present? Yes No _✓ |
| Depth (inches). | | |
| Depth (inches): | | |
| Remarks: | | |
| 0.10.00 | | |
| 0.10.00 | | |
| 0.10.00 | | |
| Remarks: | | |
| 0.10.00 | | |
| Remarks: | | Secondary Indicators (2 or more required) |
| Remarks: HYDROLOGY | ent) | Secondary Indicators (2 or more required) Water-stained Leaves (B9) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: | ent) _ Surface Soil Cracks (B6) | |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici | | Water-stained Leaves (B9) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) | _ Surface Soil Cracks (B6) | Water-stained Leaves (B9) Drainage Patterns (B10) |
| HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) |
| HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5) Field Observations: | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) |
| HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5) Field Observations: Surface Water Present? Yes No | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) |
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| Project/Site: Seward Highway MP 99 - 105 | Borough/C | city: Anchorag | e | Sampling Da | ate: August 8, 2 | 2006 |
|--|-------------|----------------|---------------------------|-----------------|------------------|--------|
| Applicant/Owner: DOT&PF | Dorougise | y | | _ Sampling Po | | |
| Investigator(s): CAD/SPT | Landform | (hilleide terr | ace hummocke etc): NO | | | |
| | | | ace, Hullillocks, etc.). | ,,,, | | |
| Local relief (concave, convex, none): none | | | | D. t. | | |
| Subregion: Southcentral Alaska Lat: | | | _ | | n: | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | |
| Are Vegetation N., Soil N., or Hydrology N. significantly | disturbed? | ? Are | "Normal Circumstances" | present? Yes | No _ | |
| Are Vegetation N, Soil N, or Hydrology N, naturally pre- | oblematic? | (If ne | eded, explain any answ | ers in Remarks | .) | |
| SUMMARY OF FINDINGS - Attach site map showing | sampli | ng point l | ocations, transect | s, importan | t features, | etc. |
| Hydrophytic Vegetation Present? Yes No | le (| the Sampled | Arna | | | |
| Hydric Soil Present? Yes No | | thin a Wetlar | | s No | • ✓ | |
| Wetland Hydrology Present? Yes No | | u rrouu | | | | |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland an | reas may be | drier compare | ed to last year. | | | |
| | oue may be | and compare | a to last year. | | | |
| Forest broadleaf open | | | | | | |
| | | | | | | |
| | | | | | | |
| VEGETATION | | | | | | |
| | Absolute | Indicator | | | | \neg |
| Species (Use scientific names. List all species in plot.) | % Cover | | Prevalence Index: | | | |
| 1. Betula papyrifera (t) | 80 | FACU | Total % Cover of: | | | |
| 2Alnus crispa (s) | 40 | FAC | | x 1 = . | | |
| 3. Achillea millefolium (h) | 40 | FACU | FACW species | | | |
| Calamagrostis canadensis (h) | | FAC | | 40 x 3 = . | | |
| 5. Trientalis arctica | 20 | FACU | FACU species1 | | | |
| 6. Viburnum edule (s) | | FAC | UPL species | | 950 | /D\ |
| 7. Cornus canadensis (h) 8. Picea mariana | 5 | FACW | Column Totals:2 | 75 (A) | | (b) |
| 9. | | | Prevalence Inde | x = B/A = 3.45 | 5 | , |
| 10 | | | | | | - |
| 11. Sphagnum sp. (h) | | | Other Indicators of H | lydrophytic Ve | egetation: | |
| 12. | | | (Record supporting da | | | ate |
| 13. | | | sheet.) | (| | |
| 14 | | | Wetland Cryptoga | ams (record spe | cies and cove | er |
| 15 | | | at left) Morphological Ad | antatione | | |
| 16 | | | Problematic Hydro | | tion (Evolain) | |
| 17 | | | | opriyao vegeta | ion (Explain) | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20. | | | | | | \neg |
| Total Cover | | | Hydrophytic | | | |
| Plot size 30 foot diameter circle % Bare 0 | | | Vegetation Present? Y | es | No | - |
| % Cover of Wetland Bryophytes0 Total Cover of Bryo | phytes | 10 | | | | - |
| Remarks. | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

SOIL Sampling Point: 10

| Profile Description: (Describe to the depth needed to docu | ment the indicator.) | |
|--|---|---|
| Depth Matrix Red | ox Features | |
| (inches) Color (moist) % Color (moist) | | Texture Remarks |
| 0-3 | | Root wad. |
| 0-3 | | |
| 3 - 12 10YR4/6 100 N/A | | fine sand mixed with ash sandy loam |
| N/A | | same, with mixed cobbles |
| 12 - 20 10YR4/6 100 N/A | | sandy loam |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| ¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix. | ² Location: PL=Pore Lining, R | C=Root Channel, M=Matrix. |
| | Problematic Hydric Soils ³ : | |
| Histosol or Histel (A1) Alaska Col | or Change (TA4) ⁴ | Alaska Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) Alaska Alp | ine Swales (TA5) | Underlying Layer |
| Hydrogen Sulfide (A4) Alaska Re | dox With 2.5Y Hue | Other (Explain in Remarks) |
| Thick Dark Surface (A12) | | |
| Alaska Gleyed (A13) ³ One indicator | of hydrophytic vegetation, one p | primary indicator of wetland hydrology, |
| | opriate landscape position must | |
| | color change in Remarks. | |
| Restrictive Layer (if present): | | |
| | | |
| Type: | | |
| Depth (inches): | | Hydric Soil Present? Yes No |
| Remarks: | | |
| l . | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| HYDROLOGY | | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (2 or more required) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) | | Water-stained Leaves (B9) |
| Wetland Hydrology Indicators: | acks (B6) | Water-stained Leaves (B9) Drainage Patterns (B10) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cri | acks (B6) ble on Aerial Imagery (B7) | Water-stained Leaves (B9) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Inundation Visit | , , | Water-stained Leaves (B9) Drainage Patterns (B10) |
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| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Inundation Visit Saturation (A3) Hydrogen Sulfice | ole on Aerial Imagery (B7) ated Concave Surface (B8) de Odor (C1) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) |
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| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cr. High Water Table (A2) Inundation Visit Saturation (A3) Sparsely Veget Water Marks (B1) Hydrogen Sulfid Sediment Deposits (B2) Dry-Season Water Drift Deposits (B3) Other (Explain in the color of t | ole on Aerial Imagery (B7) ated Concave Surface (B8) de Odor (C1) ater Table (C2) n Remarks) nches): nches): mches): | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) Surface Soil Cr. High Water Table (A2) Inundation Visit Saturation (A3) Sparsely Veget Water Marks (B1) Hydrogen Sulfid Sediment Deposits (B2) Dry-Season Water Drift Deposits (B3) Other (Explain in the color of t | ole on Aerial Imagery (B7) ated Concave Surface (B8) de Odor (C1) ater Table (C2) n Remarks) nches): nches): mches): | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) |





| Project/Site: Seward Highway MP 99 - 105 | Borough/ | City: Anchorage | е | Sam | pling Date | : August 8, | 2006 |
|---|--------------------|------------------|------------------------------|---------------|----------------|--------------|--------|
| Applicant/Owner: DOT&PF | | | | | pling Poir | | |
| Investigator(s): CAD/SPT | Landform | (hillside terr | ace hummocks etc | | p.i.i.g . o.i. | | |
| Local relief (concave, convex, none): none | | | | ., | | | |
| Subregion: Southcentral Alaska Lat: | | | a. | | Datum: | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | | |
| | | | | | | / 11- | |
| Are Vegetation N , Soil N , or Hydrology N significantly | | | | | | | |
| Are Vegetation N, Soil N, or Hydrology N naturally pro- | | | eded, explain any a | | | | |
| SUMMARY OF FINDINGS – Attach site map showing | sampl | ing point l | ocations, trans | ects, imp | ortant | features | , etc. |
| Hydrophytic Vegetation Present? Yes No✓ | le le | the Sampled | Area | | | | |
| Hydric Soil Present? Yes No | - 1 | ithin a Wetlar | | Yes | No | | |
| Wetland Hydrology Present? Yes No | | | | | | | |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland an | reas may be | e drier compare | ed to last year. | | | | |
| Immediately at base of shoulder and a few feet before the community chang | es into a he | erbaceous wet o | graminoid with stream | L | | | |
| | | · | | | h. drolog. | this sits is | |
| This is a transition zone where it appears road side weeds have dominated to considered to be located within a wetland. | ine vegetati | ion. Since the s | ite has very strong hy | unc sons and | nyarology | this site is | |
| | | | | | | | |
| VEGETATION | | | | | | | |
| Species (Use scientific names. List all species in plot.) | Absolute % Cove | | Prevalence Inde | ٧. | | | |
| 1 Calamagrostis canadensis (h) | 90 | FAC | Total % Cove | | Mult | inly by: | |
| 2. Achillea millefolium (h) | 10 | FACU | | | | | - |
| 3. Equisetum arvense (h) | 25 | FACU | FACW species _ | | | | |
| 4. Salix sp. (s) | 10 | FAC | FAC species | | x 3 = | | |
| 5. Trifolium pratense (h) | 30 | FAC | FACU species | | x 4 = | | |
| 6. Chamerion angustifolium (h) | 20 | FACU | UPL species | | | | |
| 7. Rhinanthus arcticus (h) | 5 | FAC | Column Totals: _ | 195 | (A) _ | 645 | (B) |
| 8. Heracleum maximum (h) | 5 | FACU | | | 2.20 | | |
| 9 | | | Prevalence | Index = B// | 3.30 | | |
| 10 | | _ | | | | | |
| 11 | | | Other Indicators | of Hydrop | hytic Veg | etation: | |
| 12 | | | (Record supportir sheet.) | ng data in R | emarks or | r on a sepa | rate |
| 13 | | | Wetland Cryp | otogams (re | cord spec | ies and cov | /er |
| 14 | | | at left) | | | | |
| 15 | | | Morphologica | al Adaptation | ns | | |
| 16 | | | Problematic | | | n (Explain) | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| Total Cover | r. 195 | | | | | | |
| Plot size 20 foot swath % Bare 0 | | | Hydrophytic Vegetation | | | . / | |
| % Cover of Wetland Bryophytes 0 Total Cover of Bryo | | | Present? | Yes | | lo | - |
| Remarks: | | | ı | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

SOIL Sampling Point: 11

| Profile Desc | | | | | | | | | |
|---|---|--------------------------|--|--|----------------------------|------------|---|---|---------|
| Depth (inches) | Matrix Color (moist) | % | Redo Color (moist) | x Feature: | Type | 1002 | Texture | Remarks | |
| | Color (moist) | | Color (moist) | | түре | LOC | Texture | Saturated organics. Mucky peat. | |
| 0 - 16 | | | | | | | | | |
| 16 - 20 | Gley 1 2.5/10GY | 100 | N/A | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=Depl | etion, RM= | | | | | RC=Root Chann | nel, M=Matrix. | |
| Hydric Soil | | | Indicators for F | | | Soils: | Alesto | Claured Willer & Live & V D- | 44 |
| _ | or Histel (A1) pipedon (A2) | | Alaska Colo Alaska Alpir | | | | _ | Gleyed Without Hue 5Y or Re- erlying Layer | ader |
| | en Sulfide (A4) | | Alaska Red | | - | | | (Explain in Remarks) | |
| | ark Surface (A12) | | | OX THUI L. | o i iliac | | _ 00101 | (Explain in Homana) | |
| | Gleyed (A13) | | 3One indicator o | f hydrophy | tic vegeta | ation, one | primary indicate | or of wetland hydrology, | |
| Alaska F | Redox (A14) | | and an appro | priate land | scape po | sition mus | t be present. | | |
| ✓ Alaska (| Gleyed Pores (A15) | | ⁴ Give details of | color chan | ge in Ren | narks. | | | |
| Restrictive | Layer (if present): | | | | | | | | |
| Type: | | | _ | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil | Present? Yes No | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| | GY drology Indicators: | | | | | | Secondary | Indicators (2 or more required) | |
| | | ator is suffic | cient) | | | | | Indicators (2 or more required) stained Leaves (B9) | |
| Wetland Hyd Primary India Surface | drology Indicators: cators (any one indica Water (A1) | ator is suffic | cient) Surface Soil Cra | cks (B6) | | | Water- | | |
| Primary India Surface High Wa | drology Indicators: cators (any one indica Water (A1) ater Table (A2) | ator is suffic | Surface Soil Cra Inundation Visible | e on Aeria | | | Water- Draina Oxidize | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo | |
| Wetland Hyder Primary India Surface ✓ High Water Staturation | drology Indicators: cators (any one indica Water (A1) ater Table (A2) on (A3) | ator is suffice | Surface Soil Cra Inundation Visibl Sparsely Vegeta | e on Aeria ted Conca | ve Surfac | | Water Draina Oxidize Preser | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) | |
| Wetland Hydeling Primary India Surface High Way Saturatia Water M | drology Indicators: cators (any one indica Water (A1) ater Table (A2) on (A3) farks (B1) | ator is suffice | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide | e on Aeria ted Conca Odor (C | ve Surfac | | Water- Draina Oxidize Preser Salt De | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) | |
| Wetland Hyderimary India Surface ✓ High Wa ✓ Saturatio Water M — Sedimen | drology Indicators: cators (any one indica Water (A1) ater Table (A2) on (A3) darks (B1) nt Deposits (B2) | ator is suffice | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat | e on Aeria ted Conca Odor (C er Table (| ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) | |
| Wetland Hyderimary India Surface High Wa Saturatio Water M Sedimer Drift Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) | | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide | e on Aeria ted Conca Odor (C er Table (| ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) | |
| Wetland Hyder Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) Crust of Algae or Marl | | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat | e on Aeria ted Conca Odor (C er Table (| ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) | |
| Wetland Hyder Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) | | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat | e on Aeria ted Conca Odor (C er Table (| ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon Microte | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) | |
| Wetland Hyder Primary India Surface High Wa Saturatio Water M Sedimen Drift Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) darks (B1) int Deposits (B2) posits (B3) Crust of Algae or Marl | | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat | e on Aeria ted Conca Odor (C er Table (| ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon Microte | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) | |
| Wetland Hyderimary India Surface High Wa Saturatia Water M Sedimer Drift Deg Iron Deg | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) int Deposits (B2) posits (B3) Crust of Algae or Mark posits (B5) | - - - - (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfid Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (n Remarks | ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon Microte | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) | |
| Wetland Hyderimary India Surface ✓ High Wa ✓ Saturatio Water M — Sedimen — Drift Dep — Mat or C — Iron Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) flarks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat | e on Aeria ted Conca e Odor (C' er Table (i Remarks | ive Surfac 1) C2) | | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon Microte | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) | |
| Wetland Hyderimary India Surface ✓ High Wa ✓ Saturatia Water M Sedimer Drift Dep Mat or C Iron Dep | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Yes | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks | ive Surfac 1) C2) | ze (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallor FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) leutral Test (D5) | ts (C3) |
| Wetland Hyderimary India Surface High Wa Saturatio Sedimer Drift Dep Mat or Company Iron Dep Field Obser Surface Wat Water Table Saturation P (includes cap | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Present? Yesent? Yesent? Yesent? Yesent? | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks ches): ches): ches): | vve Surfac | ee (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) | ts (C3) |
| Wetland Hyderimary India Surface High Wa Saturatio Sedimer Drift Dep Mat or Company Iron Dep Field Obser Surface Wat Water Table Saturation P (includes cap | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Yesent? Yesent? Yesent? | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks ches): ches): ches): | vve Surfac | ee (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) leutral Test (D5) | ts (C3) |
| Wetland Hyderimary India Surface ✓ High Wa ✓ Saturatia Water M — Sedimer — Drift Dep — Mat or C — Iron Dep Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Present? Yesent? Yesent? Yesent? Yesent? | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks ches): ches): ches): | ove Surfact (1) (C2) | ee (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) leutral Test (D5) | ts (C3) |
| Wetland Hyderimary India Surface High Water Management Sediment Drift Dep Mat or Canagement Iron Dep Field Obsert Surface Water Table Saturation Pagement Cincludes canagement Describe Reserved | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) Marks (B1) nt Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Present? Yesent? Yesent? Yesent? Yesent? | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks ches): ches): ches): | ove Surfact (1) (C2) | ee (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) leutral Test (D5) | ts (C3) |
| Wetland Hyderimary India Surface High Water Management Sediment Drift Dep Mat or Canagement Iron Dep Field Obsert Surface Water Table Saturation Pagement Cincludes canagement Describe Reserved | drology Indicators: cators (any one indicators) Water (A1) ater Table (A2) on (A3) farks (B1) int Deposits (B2) posits (B3) Crust of Algae or Marl posits (B5) vations: er Present? Present? Present? Ye pillary fringe) corded Data (stream | (B4) | Surface Soil Cra Inundation Visibl Sparsely Vegeta Hydrogen Sulfide Dry-Season Wat Other (Explain in | e on Aeria ted Conca e Odor (C' er Table (i Remarks ches): ches): ches): | ove Surfact (1) (C2) | ee (B8) | Water- Draina Oxidize Preser Salt De Stunte Geome Shallon FAC-N | stained Leaves (B9) ge Patterns (B10) ed Rhizospheres on Living Roo nce of Reduced Iron (C4) eposits (C5) d or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) opographic Relief (D4) leutral Test (D5) | ts (C3) |





| Project/Site: Seward Highway MP 99 - 105 | Borough/Ci | w Anchorag | e | _ Sampling Da | te: August 8 | 2006 |
|--|---------------------|----------------------------|----------------------------------|-----------------|---------------|--------|
| Applicant/Owner: DOT&PF | borougistor | .y | | Sampling Po | | 2000 |
| Investigator(s): CAD/SPT | Landform / | hillaida tara | and hummooks at a h no | | | |
| | | | ace, numinocks, etc.). | | | |
| Local relief (concave, convex, none): none | | | | - | | |
| Subregion: Southcentral Alaska Lat: | | | | | n: | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | | | | |
| Are Vegetation \underline{N} , Soil \underline{N} , or Hydrology \underline{N} significantly | disturbed? | Are * | 'Normal Circumstances" | present? Yes | No | |
| Are Vegetation N, Soil N, or Hydrology N, naturally pre- | oblematic? | (If ne | eded, explain any answ | ers in Remarks | .) | |
| SUMMARY OF FINDINGS - Attach site map showing | ı samplin | g point l | ocations, transect | s, importan | t features | , etc. |
| Hydrophytic Vegetation Present? Yes _ ✓ No | | | | | | |
| Hydric Soil Present? Yes ✓ No | is u | ne Sampled nin a Wetlar | | s No | | |
| Wetland Hydrology Present? Yes No | With | iin a vvetiar | iur te: | S NO | , | |
| Remarks: | | lui | | | | |
| Hydrology - the winter storage this year is half of the average, so wetland an | eas may be o | frier compare | ed to last year. | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| VEGETATION | | | | | | |
| VEGETATION | Absolute | Indicator | 1 | | | |
| Species (Use scientific names. List all species in plot.) | Absolute % Cover | Indicator Status | Prevalence Index: | | | |
| 1. Picea mariana (t) | 20 | FACW | Total % Cover of: | Mu | iltiply by: | _ |
| 2. Betula papyrifera (t) | 40 | FACU | OBL species6 | 00 x 1 = | 60 | |
| 3. Equisetum arvense (h) | 60 | FACU | | 0 x 2 = | 140 | |
| 4. Calamagrostis canadensis (h) | 20 | FAC | FAC species7 | 0 x 3 = | 210 | |
| 5. Picea sitchensis (t) | 10 | _FACU_ | FACU species1 | 10 x 4 = | 440 | |
| 6. Alnus crispa (s) | 50 | FAC | UPL species | 0 x 5 = | 0 | |
| 7. Ledum decumbens (h) | 50 | _FACW_ | Column Totals:3 | 00 (A) . | 850 | (B) |
| 8. Myrica gale (s) | 60 | OBL | Prevalence Inde | - D/A = 28 | | |
| 9. Betula nana (s) | 60 | FAC_ | Prevalence inde. | X = B/A = 2.0 | | - |
| 10. Potentilla fruticosa (s) | 30 | FAC_ | | | | |
| 11 | | | Other Indicators of H | | | |
| 12. | | | (Record supporting da sheet.) | ita in Remarks | or on a sepa | rate |
| 13. Sphagnum sp. (h) | 20 | | Wetland Cryptoga | ms (record spe | cies and cov | ver |
| 14 | | | at left) | | | |
| 15 | | | Morphological Ada | aptations | | |
| 16 | | | Problematic Hydro | ophytic Vegetat | ion (Explain) |) |
| 17 | | | | | | |
| 18 | | | | | | |
| 20. | | | | | | |
| | r: 420 | | Hydrophytic | | | |
| Plot size 20 foot diameter circle | | | Vegetation | es | No | |
| % Cover of Wetland Bryophytes0 Total Cover of Bryo | phytes | 20 | Tresent: | | | _ |
| Remarks: | | | | | | |
| | | | | | | |
| | | | | | | |
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| SOIL | | Sampling Point: |
|--|---|--|
| Profile Description: (Describe to the depth | n needed to document the indicator.) | |
| Depth Matrix | Redox Features | |
| (inches) Color (moist) % | Color (moist) % Type ¹ L | |
| 0 - 20 N/A | | Peat - saturated organics |
| | | |
| | | |
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| | | |
| Time: CoConcentration DeDoubtion BM-5 | Padvand Matrix 21 anotion: DI - Para Li | ining BC-Boot Channel MaMatrix |
| ¹ Type: C=Concentration, D=Depletion, RM=F Hydric Soil Indicators: | Indicators for Problematic Hydric So | ining, RC=Root Channel, M=Matrix. |
| ✓ Histosol or Histel (A1) | Alaska Color Change (TA4) ⁴ | Alaska Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | Alaska Color Change (TA4) Alaska Alpine Swales (TA5) | Underlying Layer |
| Hydrogen Sulfide (A4) | Alaska Redox With 2.5Y Hue | Other (Explain in Remarks) |
| Thick Dark Surface (A12) | Alaska Redox Will 2.51 Flue | Otter (Explain in Remarks) |
| Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation | n, one primary indicator of wetland hydrology, |
| Alaska Redox (A14) | and an appropriate landscape position | |
| Alaska Gleyed Pores (A15) | Give details of color change in Remark | |
| Restrictive Layer (if present): | one details of color analigs in realism | |
| | | |
| Type: Depth (inches): | _ | Hydric Soil Present? Yes ✓ No |
| Remarks: | | nyuric Soil Present? Tes V No |
| | | |
| HYDROLOGY | | |
| Wetland Hydrology Indicators: | | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is suffici | ient) | Water-stained Leaves (B9) |
| ✓ Surface Water (A1) | _ Surface Soil Cracks (B6) | Drainage Patterns (B10) |
| ✓ High Water Table (A2) | _ Inundation Visible on Aerial Imagery (B) | Oxidized Rhizospheres on Living Roots (C3) |
| ✓ Saturation (A3) | Sparsely Vegetated Concave Surface (I | B8) Presence of Reduced Iron (C4) |
| Water Marks (B1) | _ Hydrogen Sulfide Odor (C1) | Salt Deposits (C5) |
| Sediment Deposits (B2) | _ Dry-Season Water Table (C2) | Stunted or Stressed Plants (D1) |
| Drift Deposits (B3) | Other (Explain in Remarks) | Geomorphic Position (D2) |
| Mat or Crust of Algae or Marl (B4) | | Shallow Aquitard (D3) |
| Iron Deposits (B5) | | Microtopographic Relief (D4) |
| | | FAC-Neutral Test (D5) |
| Field Observations: | | |
| | o Depth (inches): 8 | |
| Water Table Present? Yes N | | , |
| (includes capillary fringe) | o Depth (inches): _0 | Wetland Hydrology Present? Yes No |
| Describe Recorded Data (stream gauge, mon | itoring well, aerial photos, previous inspec | ctions), if available: |
| Remarks: | | |
| | | |
| | | |





| Project/Site: Seward Highway MP 99 - 105 | Borough/C | City: Anchorag | e Sampling Date: August 8, 2006 |
|---|-------------|----------------|---|
| Applicant/Owner: DOT&PF | Doroug.s o | , | Sampling Point: 13 |
| Investigator(s): CAD/SPT | Landform | /hilleide terr | |
| | | | ace, Hallinocks, etc.). |
| Local relief (concave, convex, none): concave on macro scale | | | 140.26.44.9 |
| Subregion: Southcentral Alaska Lat: 60 57 59.4 | | | |
| Are climatic / hydrologic conditions on the site typical for this time of ye | | | |
| Are Vegetation N., Soil N., or Hydrology N. significantly | disturbed? | ? Are | "Normal Circumstances" present? Yes No |
| Are Vegetation N, Soil N, or Hydrology N, naturally pr | oblematic? | (If ne | eeded, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map showing | j sampli | ng point l | ocations, transects, important features, etc. |
| Hydrophytic Vegetation Present? Yes No | le i | the Sampled | Area |
| Hydric Soil Present? Yes No | 18 (| thin a Wetlar | |
| Wetland Hydrology Present? Yes No | | amir a vvetiai | 163 10 |
| Remarks: Hydrology - the winter storage this year is half of the average, so wetland a | reas may be | drier compare | ed to last year |
| | odo may bo | anor compare | a to last your. |
| The site is located on a hill that slopes down towards the inlet. | | | |
| | | | |
| | | | |
| VEGETATION | | | |
| | Absolute | Indicator | |
| Species (Use scientific names. List all species in plot.) | % Cover | | Prevalence Index: |
| 1. Betula papyrifera (t) | 50 | FACU | Total % Cover of:Multiply by: |
| 2Alnus crispa (s) | 30 | FAC | OBL species x 1 = |
| 3. Chamerion angustifolium (h) | 70 | FACU | FACW species x 2 = |
| 4 Sambucus racemosa (s) | 30 | FACU | FAC species 50 x 3 = 150 |
| 5. Pteridium aquilinum (h) | 40 10 | FACU FAC | FACU species 205 x 4 = 820 |
| 6. Ribes triste (s) | 5 | FACU | UPL species x 5 = Column Totals:255 (A)970 (B) |
| 7. Picea glauca (t) 8. Trientalis arctica (h) | 10 | FAC | Column Totals:255 (A)970 (B) |
| g Galium triflorum (h) | 10 | FACU | Prevalence Index = B/A = 3.80 |
| 10 | | | |
| 11. | | | Other Indicators of Hydrophytic Vegetation: |
| 12. | | | (Record supporting data in Remarks or on a separate |
| 13. | | | sheet.) |
| 14 | | | Wetland Cryptogams (record species and cover |
| 15 | | | at left) Morphological Adaptations |
| 16 | | | Problematic Hydrophytic Vegetation (Explain) |
| 17 | | | Problematic Hydrophytic Vegetation (Explain) |
| 18 | | | |
| 19 | | | |
| 20. | | | |
| Total Cover | 255 | - | Hydrophytic |
| Plot size 30 foot diameter circle % Bare 0 | | | Vegetation |
| % Cover of Wetland Bryophytes0 Total Cover of Bryo | pnytes | | |
| Remarks. | | | |
| | | | |
| | | | |
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| | | | |

SOIL Sampling Point: 13

| Profile Description: (Describe to the depth | needed to document the indicator.) | |
|--|--|--|
| Depth Matrix | Redox Features | |
| (inches) Color (moist) % | Color (moist) % Type ¹ Loc ² | Texture Remarks |
| 0 - 4 N/A | | Root mat |
| | | dry organics |
| 4-14 | | ash |
| 14 - 16 | | |
| 16 | | fractured bedrock |
| | | |
| | | |
| | | |
| | | |
| | | |
| ¹ Type: C=Concentration, D=Depletion, RM=F | | RC=Root Channel, M=Matrix. |
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
| Histosol or Histel (A1) | Alaska Color Change (TA4) ⁴ | Alaska Gleyed Without Hue 5Y or Redder |
| Histic Epipedon (A2) | Alaska Alpine Swales (TA5) | Underlying Layer |
| Hydrogen Sulfide (A4) | Alaska Redox With 2.5Y Hue | Other (Explain in Remarks) |
| Thick Dark Surface (A12) | _ | _ |
| Alaska Gleyed (A13) | 3One indicator of hydrophytic vegetation, one | primary indicator of wetland hydrology, |
| Alaska Redox (A14) | and an appropriate landscape position mus | |
| Alaska Gleyed Pores (A15) | ⁴ Give details of color change in Remarks. | • |
| Restrictive Layer (if present): | | |
| Type: | | |
| Depth (inches): | _ | Hydric Soil Present? Yes No |
| Remarks: | | 1.,, |
| Remarks. | | |
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| | | |
| HYDROLOGY | | |
| HYDROLOGY Wetland Hydrology Indicators: | | Secondary Indicators (2 or more required) |
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| Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici | | Water-stained Leaves (B9) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici | _ Surface Soil Cracks (B6) | Water-stained Leaves (B9) Drainage Patterns (B10) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) |
| Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffici Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) | Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Hydrogen Sulfide Odor (C1) | Water-stained Leaves (B9) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) |
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