

Datasheets

Data Collected: 2013

(Year of Report: October 2013)

APPENDIX B

FULL AND PHOTO POINTS

This page intentionally left blank.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W284
 Investigator(s): SW, SA Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): _____ Slope (%): 25
 Subregion: Interior Alaska Lowlands Lat: 63.57544 Long: 148.80925 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>In the utility corridor</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>0</u> x 2 = <u>0</u> | |
| 1. <u>Picea glauca</u> | 10 | No | FACU | FAC species <u>95</u> x 3 = <u>285</u> | |
| 2. <u>Ledum groenlandicum</u> | 15 | No | FAC | FACU species <u>10</u> x 4 = <u>40</u> | |
| 3. <u>Vaccinium vitis-idaea</u> | 30 | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Betula nana</u> | 10 | No | FAC | Column Totals: <u>105</u> (A) <u>325</u> (B) | |
| 5. <u>Betula glandulosa</u> | 20 | Yes | FAC | Prevalence Index = B/A = <u>3.09</u> | |
| 6. <u>Ribes triste</u> | 10 | No | FAC | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>95</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u> | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Epilobium ciliatum</u> | 10 | Yes | FAC | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. _____ | 0 | No | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>10</u> | | | | | |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | | |
| Plot size (radius, or length x width) <u>15 feet</u> % Bare Ground <u>0</u> | | | | | |
| % Cover of Wetland Bryophytes <u>5</u> Total Cover of Bryophytes <u>90</u> (Where applicable) | | | | | |
| Remarks: _____ | | | | | |

SOIL

Sampling Point: 2010W284

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 7.5YR2.5/2 | | | | | | | organic |
| 2-5 | 7.5YR3/1 | | | | | | | clay loam |
| 5-14 | 25Y4/4 | | | | | | | silt loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Cobbles</u> Depth (inches): <u>14"</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W285
 Investigator(s): SW, SA Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57525 Long: 148.80893 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1/EM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|--------------------------------------|------------------|--|--|
| 1. <u>Picea glauca</u> | 15 | Yes | FACU | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.6</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>115</u> x 3 = <u>345</u> FACU species <u>25</u> x 4 = <u>100</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>170</u> (A) <u>495</u> (B) Prevalence Index = B/A = <u>2.91</u> | |
| Total Cover: <u>15</u> | | | | | |
| 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 1. <u>Vaccinium vitis-idaea</u> | 35 | Yes | FAC | | |
| 2. <u>Empetrum nigrum</u> | 10 | No | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| 3. <u>Picea mariana</u> | 20 | No | FACW | | |
| 4. <u>Ledum groenlandicum</u> | 10 | No | FAC | | |
| 5. <u>Betula glandulosa</u> | 40 | Yes | FAC | | |
| 6. <u>Andromeda polifolia</u> | 10 | No | OBL | | |
| Total Cover: <u>125</u> | | | | | |
| 50% of total cover: <u>62.5</u> 20% of total cover: <u>25</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Cornus canadensis</u> | 10 | Yes | FACU | | |
| 2. <u>Calamagrostis canadensis</u> | 20 | Yes | FAC | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Plot size (radius, or length x width) <u>15 feet</u> | | % Bare Ground <u>0</u> | | | |
| % Cover of Wetland Bryophytes _____ | | Total Cover of Bryophytes <u>100</u> | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2010W285

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | | | | | | | | Organic Sphag. |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>10</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
Sphagnum organic layer down to restrictive layer

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W286
 Investigator(s): SW, SA Landform (hillside, terrace, hummocks, etc.): hummocks
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57499 Long: 148.80833 Datum: NAD83
 Soil Map Unit Name: n/a NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
|--|--------------------------|-------------------|---------------------------|----|--|
| 1. _____ | 0 | No | _____ | | |
| 2. _____ | 0 | No | _____ | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| Total Cover: | 0 | | | | |
| | 50% of total cover: 0 | | 20% of total cover: 0 | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Salix pulchra</u> | 65 | Yes | FACW | | |
| 2. <u>Andromeda polifolia</u> | 10 | No | OBL | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| Total Cover: | 75 | | | | |
| | 50% of total cover: 37.5 | | 20% of total cover: 15 | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Calamagrostis canadensis</u> | 70 | Yes | FAC | | |
| 2. <u>Eriophorum vaginatum</u> | 20 | Yes | FACW | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: | 90 | | | | |
| | 50% of total cover: 45 | | 20% of total cover: 18 | | |
| Plot size (radius, or length x width) | 15 feet | | % Bare Ground | 0 | |
| % Cover of Wetland Bryophytes (Where applicable) | N/A | | Total Cover of Bryophytes | 50 | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------------------|------------------|
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>85</u> | x 2 = <u>170</u> |
| FAC species <u>70</u> | x 3 = <u>210</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>165</u> (A) | <u>390</u> (B) |

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks:

SOIL

Sampling Point: 2010W286

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
Cannont dig pit due to standing water. Highly tannic water. Assumed hydric.

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W287
 Investigator(s): JL, KJ Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57877 Long: 148.80757 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PSS4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|---|---|-------|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> | (A) |
| 2. <u>Picea glauca</u> | <u>20</u> | Yes | FACU | Total Number of Dominant Species Across All Strata: <u>7</u> | (B) |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.85</u> | (A/B) |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>90</u> x 2 = <u>180</u> FAC species <u>200</u> x 3 = <u>600</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>310</u> (A) <u>860</u> (B) Prevalence Index = B/A = <u>2.77</u> | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 1. <u>Ledum decumbens</u> | <u>60</u> | Yes | FACW | | |
| 2. <u>Vaccinium vitis-idaea</u> | <u>50</u> | Yes | FAC | | |
| 3. <u>Betula nana</u> | <u>40</u> | Yes | FAC | | |
| 4. <u>Picea mariana</u> | <u>20</u> | No | FACW | | |
| 5. <u>Salix alaxensis</u> | <u>10</u> | No | FAC | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>180</u> | | | | | |
| 50% of total cover: <u>90</u> 20% of total cover: <u>36</u> | | | | | |
| Total Cover: <u>100</u> | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>80</u> (Where applicable) | | | | | |

Remarks: Moss and lichen

SOIL

Sampling Point: 2010W287

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 2.5YR3/4 | | | | | | | fibric |
| 9-14 | 10YR5/2 | | | | | | | silty loam |
| 14 | frozen | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>14</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W288
 Investigator(s): _____ Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): Depression Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.58343 Long: 148.80582 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>70</u> x 1 = <u>70</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>70</u> x 3 = <u>210</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>220</u> (A) <u>520</u> (B) Prevalence Index = B/A = <u>2.36</u> | |
| Total Cover: <u>0</u> | | | 0 | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Salix pulchra</u> | 40 | Yes | FACW | | |
| 2. <u>Betula nana</u> | 40 | Yes | FAC | | |
| 3. <u>Vaccinium vitis-idaea</u> | 10 | No | FAC | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| Total Cover: <u>90</u> | | | 18 | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Cornus canadensis</u> | 40 | Yes | FACU | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 2. <u>Comarum palustre</u> | 20 | No | OBL | | |
| 3. <u>Carex aquatilis</u> | 20 | No | OBL | | |
| 4. <u>Juncus alpinoarticulatus</u> | 20 | No | OBL | | |
| 5. <u>Calamagrostis canadensis</u> | 20 | No | FAC | | |
| 6. <u>Eleocharis palustris</u> | 10 | No | OBL | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>130</u> | | | 26 | | |
| 50% of total cover: <u>65</u> 20% of total cover: <u>26</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | |

Remarks: _____

SOIL

Sampling Point: 2010W288

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR2/2 | | | | | | | Fibric |
| 1-4 | 10YR3/1 | | | | | | | Silty |
| 4/12 | 2.5Y3/1 | | | | | | | Filty |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input checked="" type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>12</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
Inundated soil - dark

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W289
 Investigator(s): JL, KJ Landform (hillside, terrace, hummocks, etc.): Hummocks
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.61630 Long: 148.78212 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. <u>Picea glauca</u> | <u>70</u> | <u>Yes</u> | <u>FACU</u> | |
| 2. _____ | <u>0</u> | <u>No</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>70</u> | | | | |
| 50% of total cover: <u>35</u> | | 20% of total cover: <u>14</u> | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Picea glauca</u> | <u>40</u> | <u>Yes</u> | <u>FACU</u> | |
| 3. <u>Vaccinium ovalifolium</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | |
| 4. <u>Empetrum nigrum</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | |
| 5. _____ | <u>0</u> | <u>No</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>130</u> | | | | |
| 50% of total cover: <u>65</u> | | 20% of total cover: <u>26</u> | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. _____ | <u>0</u> | <u>No</u> | | |
| 2. _____ | <u>0</u> | <u>No</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | | |
| 7. _____ | <u>0</u> | <u>No</u> | | |
| 8. _____ | <u>0</u> | <u>No</u> | | |
| 9. _____ | <u>0</u> | <u>No</u> | | |
| 10. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>0</u> | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>80</u> (Where applicable) | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------------------|------------------|
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>90</u> | x 3 = <u>270</u> |
| FACU species <u>110</u> | x 4 = <u>440</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>200</u> (A) | <u>710</u> (B) |

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

| | |
|----------|--|
| Remarks: | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> |
|----------|--|

SOIL

Sampling Point: 2010W289

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 5YR3/4 | | | | | | | fibric |
| 4-9 | 2.5Y5/4 | | | | | | | sandy |
| 9-16 | 10YR4/4 | | | | | | | sandy |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|--|--|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 5/22/2010
 Applicant/Owner: AGDC Sampling Point: 2010W290
 Investigator(s): JL, KJ Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.65046 Long: 148.81842 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--|
| 1. <u>Picea glauca</u> | <u>30</u> | Yes | FACU | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) | |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> (B) | |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B) | |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>1</u> x 1 = <u>1</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>181</u> x 3 = <u>543</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>262</u> (A) <u>764</u> (B) Prevalence Index = B/A = <u>2.91</u> | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>70</u> | Yes | FAC | | |
| 2. <u>Ledum groenlandicum</u> | <u>30</u> | No | FAC | | |
| 3. <u>Picea mariana</u> | <u>40</u> | No | FACW | | |
| 4. <u>Empetrum nigrum</u> | <u>50</u> | Yes | FAC | | |
| 5. <u>Betula glandulosa</u> | <u>30</u> | No | FAC | | |
| 6. <u>Chamaedaphne calyculata</u> | <u>10</u> | No | FACW | | |
| Total Cover: <u>230</u> | | | | | |
| 50% of total cover: <u>115</u> 20% of total cover: <u>46</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 1. <u>Calamagrostis canadensis</u> | <u>1</u> | Yes | FAC | | |
| 2. <u>Eriophorum angustifolium</u> | <u>1</u> | Yes | OBL | | |
| 3. _____ | <u>0</u> | No | _____ | | |
| 4. _____ | <u>0</u> | No | _____ | | |
| 5. _____ | <u>0</u> | No | _____ | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>2</u> | | | | | |
| 50% of total cover: <u>1</u> 20% of total cover: <u>0.4</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>75</u> (Where applicable) | | | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2010W290

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 7.5YR2.5/1 | | | | | | | Fibric Organic |
| 5-7 | 5Y5/3 | | | | | | | Sandy Silt |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Seasonal Ice</u> Depth (inches): <u>7</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
Ice at 7 inches

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W291
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.65744 Long: 148.85214 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>20</u> x 2 = <u>40</u> | |
| 1. <u>Picea mariana</u> | 20 | No | FACW | FAC species <u>20</u> x 3 = <u>60</u> | |
| 2. <u>Populus balsamifera</u> | 20 | No | FACU | FACU species <u>80</u> x 4 = <u>320</u> | |
| 3. <u>Populus tremuloides</u> | 10 | No | FACU | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Salix alaxensis</u> | 10 | No | FAC | Column Totals: <u>120</u> (A) <u>420</u> (B) | |
| 5. <u>Salix reticulata</u> | 10 | No | FAC | Prevalence Index = B/A = <u>3.5</u> | |
| 6. <u>Shepherdia canadensis</u> | 30 | Yes | FACU | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>100</u> | | | | <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| Herb Stratum | | | | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | |
| 1. <u>Chamerion angustifolium</u> | 10 | Yes | FACU | | |
| 2. <u>Taraxacum officinale</u> | 10 | Yes | FACU | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>20</u> | | | | | |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | | |
| Plot size (radius, or length x width) <u>15 feet</u> % Bare Ground <u>40</u> | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | |

Remarks: Pol pul not on list

SOIL

Sampling Point: 2010W291

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 5YR3/4 | 100 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>Cobble</u> Depth (inches): <u>4</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Former clear cut/corridor

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W292
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67067 Long: 148.82336 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>10</u> x 1 = <u>10</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>30</u> x 2 = <u>60</u> | |
| 1. <u>Picea mariana</u> | 10 | No | FACW | FAC species <u>130</u> x 3 = <u>390</u> | |
| 2. <u>Salix reticulata</u> | 30 | Yes | FAC | FACU species <u>20</u> x 4 = <u>80</u> | |
| 3. <u>Salix alaxensis</u> | 20 | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Betula neoalaskana</u> | 10 | No | FACU | Column Totals: <u>190</u> (A) <u>540</u> (B) | |
| 5. <u>Ledum groenlandicum</u> | 10 | No | FAC | Prevalence Index = B/A = <u>2.84</u> | |
| 6. <u>Vaccinium vitis-idaea</u> | 10 | No | FAC | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>90</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Equisetum arvense</u> | 60 | Yes | FAC | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Parnassia palustris</u> | 20 | No | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. <u>Carex pauciflora</u> | 10 | No | OBL | | |
| 4. <u>Chamerion angustifolium</u> | 10 | No | FACU | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>100</u> | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | |

Remarks: Many plants not transcribed from original notes due to poor notes.

SOIL

Sampling Point: 2010W292

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 2.5Y3/3 | | | | | | | Sandy Organic |
| 6-13 | 2.5Y3/2 | | | | | | | Sandy |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|--|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Type: _____ Depth (inches): _____ | |

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W293
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67783 Long: 148.82509 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>20</u> x 2 = <u>40</u> | |
| 1. <u>Betula glandulosa</u> | 30 | Yes | FAC | FAC species <u>90</u> x 3 = <u>270</u> | |
| 2. <u>Populus balsamifera</u> | 10 | No | FACU | FACU species <u>20</u> x 4 = <u>80</u> | |
| 3. <u>Arctostaphylos rubra</u> | 20 | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Populus tremuloides</u> | 10 | No | FACU | Column Totals: <u>130</u> (A) <u>390</u> (B) | |
| 5. _____ | 0 | No | _____ | Prevalence Index = B/A = <u>3</u> | |
| 6. _____ | 0 | No | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>70</u> | | | | <u>Y</u> Dominance Test is >50% | |
| 50% of total cover: <u>35</u> 20% of total cover: <u>14</u> | | | | <u>Y</u> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Calamagrostis canadensis</u> | 40 | Yes | FAC | ____ Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Galium trifidum</u> | 20 | Yes | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | 0 | No | _____ | Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>60</u> | | | | | |
| 50% of total cover: <u>30</u> 20% of total cover: <u>12</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>30</u> (Where applicable) | | | | | |

Remarks: _____

SOIL

Sampling Point: 2010W293

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|--------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/2 | | | | | | | Fibric |
| 4/8 | 10YR2/2 | | | | | | | Fibric |
| 8-16 | 10YR3/4 | | | | | | | Sandy/Silt Mineral |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input checked="" type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|--|
| Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): 4 | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ |
|--|--|

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

Remarks:
Assesmed due to D1, D2, and D4

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: _____ Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W294
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67774 Long: 148.82457 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|---------------------------|------------------|
| 1. _____ | 0 | No | _____ |
| 2. _____ | 0 | No | _____ |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| Total Cover: _____ | 0 | | |
| 50% of total cover: _____ | 0 | 20% of total cover: _____ | 0 |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. _____ | 0 | No | _____ |
| 2. _____ | 0 | No | _____ |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| 5. _____ | 0 | No | _____ |
| 6. _____ | 0 | No | _____ |
| Total Cover: _____ | 0 | | |
| 50% of total cover: _____ | 0 | 20% of total cover: _____ | 0 |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. <u>Calamagrostis canadensis</u> | 80 | Yes | FAC |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC |
| 3. <u>Polemonium acutiflorum</u> | 20 | No | FAC |
| 4. <u>Potentilla norvegica</u> | 20 | No | FAC |
| 5. <u>Galium trifidum</u> | 20 | No | FACW |
| 6. _____ | 0 | No | _____ |
| 7. _____ | 0 | No | _____ |
| 8. _____ | 0 | No | _____ |
| 9. _____ | 0 | No | _____ |
| 10. _____ | 0 | No | _____ |
| Total Cover: _____ | 150 | | |
| 50% of total cover: _____ | 75 | 20% of total cover: _____ | 30 |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | |
| Remarks: _____ | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------------------|------------------|
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>20</u> | x 2 = <u>40</u> |
| FAC species <u>130</u> | x 3 = <u>390</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>150</u> (A) | <u>430</u> (B) |

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:

Y Dominance Test is >50%
Y Prevalence Index is ≤3.0
 _____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

SOIL

Sampling Point: 2010W294

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|----|----------------|----|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-18 | 10YR2/2 | 80 | 10YR2/1 | 20 | | | | Organic |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|---|--|--|
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |
| (includes capillary fringe) | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W295
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Depression
 Local relief (concave, convex, none): Concave Slope (%): 20
 Subregion: Interior Alaska Lowlands Lat: 63.67736 Long: 148.82437 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|--|-------------------------------|-------------------|-------------------------------|--|-------|--|--------------|----------------------|----------------|------------------------|-----------------|-----------------------|------------------|------------------------|------------------|----------------------|----------------|---------------------------|----------------|--------------------------------------|--|
| 1. <u>Picea glauca</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> | (A) | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> | (B) | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> | (A/B) | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>70</u></td> <td>x 3 = <u>210</u></td> </tr> <tr> <td>FACU species <u>40</u></td> <td>x 4 = <u>160</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>140</u></td> <td>(A) <u>430</u></td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A = <u>3.07</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>30</u> | x 2 = <u>60</u> | FAC species <u>70</u> | x 3 = <u>210</u> | FACU species <u>40</u> | x 4 = <u>160</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>140</u> | (A) <u>430</u> | Prevalence Index = B/A = <u>3.07</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>30</u> | x 2 = <u>60</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>70</u> | x 3 = <u>210</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>40</u> | x 4 = <u>160</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>140</u> | (A) <u>430</u> | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.07</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>10</u> | 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. <u>Betula glandulosa</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | | |
| 2. <u>Picea glauca</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>100</u> | 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| 1. <u>Eriophorum vaginatum</u> | <u>30</u> | <u>Yes</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>30</u> | 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | | | | | | | | | | | | | | | | | |
| Remarks: | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2010W295

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/3 | | | | | | | Fibric |
| 4-12 | 5YR4/4 | | | | | | | Sandy Loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|--|--|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W296
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): _____ Slope (%): 20
 Subregion: Interior Alaska Lowlands Lat: 63.68212 Long: 148.83409 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>140</u> x 3 = <u>420</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>230</u> (A) <u>650</u> (B) Prevalence Index = B/A = <u>2.82</u> | |
| Total Cover: <u>0</u> | | | 0 | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Betula glandulosa</u> | 80 | Yes | FAC | | |
| 2. <u>Populus tremuloides</u> | 20 | No | FACU | | |
| 3. <u>Dasiphora fruticosa</u> | 10 | No | FAC | | |
| 4. <u>Picea mariana</u> | 10 | No | FACW | | |
| 5. <u>Arctostaphylos rubra</u> | 10 | No | FAC | | |
| 6. <u>Salix arctophila</u> | 10 | No | OBL | | |
| Total Cover: <u>140</u> | | | _____ | | |
| 50% of total cover: <u>70</u> 20% of total cover: <u>28</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <u>Y</u> Dominance Test is >50% <u>Y</u> Prevalence Index is ≤3.0 _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 1. <u>Eriophorum vaginatum</u> | 40 | Yes | FACW | | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | | |
| 3. <u>Galium boreale</u> | 10 | No | FACU | | |
| 4. <u>Calamagrostis canadensis</u> | 20 | Yes | FAC | | |
| 5. <u>Poa arctica</u> | 10 | No | FAC | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>90</u> | | | _____ | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | |
| Remarks: | | | | | |

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|-------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/2 | | | | | | | Silty Fabric |
| 4-14 | 2.5Y4/3 | | | | | | | Silty/Sand Fabric |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input checked="" type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
> 6 inches without gleyed matrix

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 4 | |
| (includes capillary fringe) | |

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

Remarks:
Inferred saturated based on location and plants

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W297
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): _____ Slope (%): 40
 Subregion: Interior Alaska Lowlands Lat: 63.68241 Long: 148.83372 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|--|--------------------|-------------------|-------------------------------|--|-------|---|--------------|----------------------|----------------|------------------------|-----------------|------------------------|------------------|------------------------|------------------|----------------------|----------------|---------------------------|--------------------|--------------------------------------|--|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> | (A) | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> | (B) | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.75</u> | (A/B) | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>110</u></td> <td>x 3 = <u>330</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>220</u></td> <td>(A) <u>710</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.22</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>30</u> | x 2 = <u>60</u> | FAC species <u>110</u> | x 3 = <u>330</u> | FACU species <u>80</u> | x 4 = <u>320</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>220</u> | (A) <u>710</u> (B) | Prevalence Index = B/A = <u>3.22</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>30</u> | x 2 = <u>60</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>110</u> | x 3 = <u>330</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>80</u> | x 4 = <u>320</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>220</u> | (A) <u>710</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.22</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>10</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>5</u> | | | 20% of total cover: <u>2</u> | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. <u>Populus tremuloides</u> | <u>80</u> | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 2. <u>Arctostaphylos rubra</u> | <u>30</u> | No | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | |
| 3. <u>Vaccinium vitis-idaea</u> | <u>30</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Salix alaxensis</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>150</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>75</u> | | | 20% of total cover: <u>30</u> | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Astragalus alpinus</u> | <u>10</u> | No | FAC | | | Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | |
| 2. <u>Eriophorum vaginatum</u> | <u>20</u> | Yes | FACW | | | | | | | | | | | | | | | | | | |
| 3. <u>Calamagrostis canadensis</u> | <u>20</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Senecio lugens</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>60</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>30</u> | | | 20% of total cover: <u>12</u> | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | | | | | | | | | | | | | | | | | |

Remarks:

SOIL

Sampling Point: 2010W297

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 5YR3/1 | | | | | | | Fibric Organic |
| 2-12 | 2.5YR4/4 | | | | | | | Silt/Loam matrix |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Type: _____ Depth (inches): _____ | |

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/27/2010
 Applicant/Owner: AGDC Sampling Point: 2010W298
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Depression
 Local relief (concave, convex, none): concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.68205 Long: 148.83369 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|------------------------|
| 1. _____ | 0 | No | | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| Total Cover: 0 | | | | |
| 50% of total cover: 0 | | | | 20% of total cover: 0 |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Dasiphora fruticosa</u> | 10 | Yes | FAC | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| 5. _____ | 0 | No | | |
| 6. _____ | 0 | No | | |
| Total Cover: 10 | | | | |
| 50% of total cover: 5 | | | | 20% of total cover: 2 |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Polemonium acutiflorum</u> | 10 | No | FAC | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | |
| 3. <u>Galium boreale</u> | 10 | No | FACU | |
| 4. <u>Carex magellanica</u> | 10 | No | OBL | |
| 5. <u>Stellaria longifolia</u> | 10 | No | FAC | |
| 6. _____ | 0 | No | | |
| 7. _____ | 0 | No | | |
| 8. _____ | 0 | No | | |
| 9. _____ | 0 | No | | |
| 10. _____ | 0 | No | | |
| Total Cover: 50 | | | | |
| 50% of total cover: 25 | | | | 20% of total cover: 10 |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | |
| Remarks: | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|------------------------------|------------------|
| OBL species <u>10</u> | x 1 = <u>10</u> |
| FACW species <u>0</u> | x 2 = <u>0</u> |
| FAC species <u>40</u> | x 3 = <u>120</u> |
| FACU species <u>10</u> | x 4 = <u>40</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>60</u> (A) | <u>170</u> (B) |

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: 2010W298

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 10YR3/2 | | | | | | | Fibric |
| 5-8 | 10YR2/1 | | | | | | | Fibric |
| 8-12 | 10YR2/2 | | | | | | | Silty Organic |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|---|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/28/2010
 Applicant/Owner: AGDC Sampling Point: 2010W299
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68463 Long: 148.83728 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|-------|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> | (A) |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> | (B) |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> | (A/B) |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>10</u> | | | | | |
| 50% of total cover: <u>5</u> | <u>2</u> | | | OBL species <u>10</u> x 1 = <u>10</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>80</u> x 2 = <u>160</u> | |
| 1. <u>Betula glandulosa</u> | <u>30</u> | Yes | FAC | FAC species <u>120</u> x 3 = <u>360</u> | |
| 2. <u>Picea mariana</u> | <u>10</u> | No | FACW | FACU species <u>0</u> x 4 = <u>0</u> | |
| 3. <u>Arctostaphylos rubra</u> | <u>30</u> | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Vaccinium vitis-idaea</u> | <u>30</u> | Yes | FAC | Column Totals: <u>210</u> (A) <u>530</u> (B) | |
| 5. <u>Salix pulchra</u> | <u>10</u> | No | FACW | Prevalence Index = B/A = <u>2.52</u> | |
| 6. <u>Salix arctophila</u> | <u>10</u> | No | OBL | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>120</u> | | | | | |
| 50% of total cover: <u>60</u> | <u>24</u> | | | Y Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 1. <u>Deschampsia caespitosa</u> | <u>10</u> | No | FAC | | |
| 2. <u>Eriophorum vaginatum</u> | <u>40</u> | Yes | FACW | | |
| 3. <u>Calamagrostis canadensis</u> | <u>10</u> | No | FAC | | |
| 4. <u>Dasiphora fruticosa</u> | <u>10</u> | No | FAC | | |
| 5. <u>Pedicularis labradorica</u> | <u>10</u> | No | FACW | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>80</u> | | | | Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | |
| 50% of total cover: <u>40</u> | <u>16</u> | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2010W299

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|----|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 7.5YR3/2 | | | | | | | Fibric |
| 5-16 | 10YR3/2 | | G14/10GY | 10 | | | | Silt |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : |
|--|---|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue |
| <input type="checkbox"/> Thick Dark Surface (A12) | |
| <input type="checkbox"/> Alaska Gleyed (A13) | |
| <input type="checkbox"/> Alaska Redox (A14) | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | |

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks.

| | |
|--|--|
| Restrictive Layer (if present): Type: <u>Permafrost</u> Depth (inches): <u>18</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|--|

Remarks:
 Gleyed 6-12 inches

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|---|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|---|--|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|--|

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/28/2010
 Applicant/Owner: AGDC Sampling Point: 2010W300
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): convex Slope (%): 30
 Subregion: Interior Alaska Lowlands Lat: 63.68467 Long: 148.83701 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|-------------------------------------|---|--|--|--------------|--|----------------------|-------|----------|------------------------|-------|-----------|-----------------------|-------|------------|------------------------|-------|------------|----------------------|-------|----------|-------------------------------|--|----------------|--------------------------------------|--|--|
| 1. <u>Picea glauca</u> | <u>20</u> | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.57</u> (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>30</u> | | | | Prevalence Index worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 =</td> <td><u>60</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 =</td> <td><u>270</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 =</td> <td><u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td></td> <td><u>530</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>3.11</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | | OBL species <u>0</u> | x 1 = | <u>0</u> | FACW species <u>30</u> | x 2 = | <u>60</u> | FAC species <u>90</u> | x 3 = | <u>270</u> | FACU species <u>50</u> | x 4 = | <u>200</u> | UPL species <u>0</u> | x 5 = | <u>0</u> | Column Totals: <u>170</u> (A) | | <u>530</u> (B) | Prevalence Index = B/A = <u>3.11</u> | | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>30</u> | x 2 = | <u>60</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>90</u> | x 3 = | <u>270</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>50</u> | x 4 = | <u>200</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>170</u> (A) | | <u>530</u> (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.11</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>15</u> | | | 20% of total cover: <u>6</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Betula glandulosa</u> | <u>20</u> | No | FAC | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Vaccinium vitis-idaea</u> | <u>30</u> | Yes | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. <u>Empetrum nigrum</u> | <u>30</u> | Yes | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. <u>Vaccinium ovalifolium</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. <u>Shepherdia canadensis</u> | <u>10</u> | No | FACU | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. <u>Salix myrtilifolia</u> | <u>10</u> | No | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>110</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>55</u> | | | 20% of total cover: <u>22</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Linnaea borealis</u> | <u>10</u> | Yes | FACU | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Chamerion angustifolium</u> | <u>10</u> | Yes | FACU | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. <u>Eriophorum vaginatum</u> | <u>10</u> | Yes | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>30</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>15</u> | | | 20% of total cover: <u>6</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>15 feet</u> | | | % Bare Ground <u>5</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | | Total Cover of Bryophytes <u>50</u> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2010W300

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR4/3 | | | | | | | Fibric |
| 4-12 | 2.5YR4/6 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|--|--|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/28/2010
 Applicant/Owner: AGDC Sampling Point: 2010W301
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68806 Long: 148.84196 Datum: NAD83
 Soil Map Unit Name: _____ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------|------------------|---------------------------|
| 1. _____ | 0 | No | _____ | |
| 2. _____ | 0 | No | _____ | |
| 3. _____ | 0 | No | _____ | |
| 4. _____ | 0 | No | _____ | |
| Total Cover: _____ | | | 0 | |
| 50% of total cover: _____ | | | 0 | 20% of total cover: _____ |
| Sapling/Shrub Stratum | | | | |
| 1. <u>Picea mariana</u> | 10 | No | <u>FACW</u> | |
| 2. <u>Populus balsamifera</u> | 20 | Yes | <u>FACU</u> | |
| 3. <u>Salix reticulata</u> | 10 | No | <u>FAC</u> | |
| 4. <u>Shepherdia canadensis</u> | 10 | No | <u>FACU</u> | |
| 5. <u>Populus tremuloides</u> | 10 | No | <u>FACU</u> | |
| 6. _____ | 0 | No | _____ | |
| Total Cover: _____ | | | 60 | |
| 50% of total cover: _____ | | | 30 | 20% of total cover: _____ |
| Herb Stratum | | | | |
| 1. <u>Chamerion angustifolium</u> | 20 | Yes | <u>FACU</u> | |
| 2. <u>Festuca altaica</u> | 20 | Yes | <u>FAC</u> | |
| 3. <u>Calamagrostis canadensis</u> | 20 | Yes | <u>FAC</u> | |
| 4. _____ | 0 | No | _____ | |
| 5. _____ | 0 | No | _____ | |
| 6. _____ | 0 | No | _____ | |
| 7. _____ | 0 | No | _____ | |
| 8. _____ | 0 | No | _____ | |
| 9. _____ | 0 | No | _____ | |
| 10. _____ | 0 | No | _____ | |
| Total Cover: _____ | | | 60 | |
| 50% of total cover: _____ | | | 30 | 20% of total cover: _____ |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | |
| Remarks: | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

Prevalence Index worksheet:

| | |
|--------------------------------------|------------------|
| Total % Cover of: | Multiply by: |
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>10</u> | x 2 = <u>20</u> |
| FAC species <u>50</u> | x 3 = <u>150</u> |
| FACU species <u>60</u> | x 4 = <u>240</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>120</u> (A) | <u>410</u> (B) |
| Prevalence Index = B/A = <u>3.41</u> | |

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

SOIL

Sampling Point: 2010W301

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 2.5Y5/4 | | | | | | Sandy | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Cobble</u> Depth (inches): <u>2</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
Graded

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/28/2010
 Applicant/Owner: AGDC Sampling Point: 2010W302
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): Depression
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68799 Long: 148.84152 Datum: _____
 Soil Map Unit Name: _____ NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. <u>Picea mariana</u> | <u>20</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) | |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> (B) | |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>20</u> | | | | | |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | OBL species <u>40</u> x 1 = <u>40</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>30</u> x 2 = <u>60</u> | |
| 1. <u>Picea mariana</u> | <u>10</u> | No | FACW | FAC species <u>90</u> x 3 = <u>270</u> | |
| 2. <u>Betula glandulosa</u> | <u>30</u> | Yes | FAC | FACU species <u>0</u> x 4 = <u>0</u> | |
| 3. <u>Ledum groenlandicum</u> | <u>10</u> | No | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Empetrum nigrum</u> | <u>20</u> | Yes | FAC | Column Totals: <u>160</u> (A) <u>370</u> (B) | |
| 5. <u>Vaccinium vitis-idaea</u> | <u>10</u> | No | FAC | Prevalence Index = B/A = <u>2.31</u> | |
| 6. <u>Salix arctophila</u> | <u>10</u> | No | OBL | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>90</u> | | | | | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| Herb Stratum | | | | | |
| 1. <u>Glyceria striata</u> | <u>30</u> | Yes | OBL | | |
| 2. <u>Poa palustris</u> | <u>20</u> | Yes | FAC | | |
| 3. _____ | <u>0</u> | No | _____ | | |
| 4. _____ | <u>0</u> | No | _____ | | |
| 5. _____ | <u>0</u> | No | _____ | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>50</u> | | | | | |
| 50% of total cover: <u>25</u> 20% of total cover: <u>10</u> | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>80</u> Total Cover of Bryophytes _____ (Where applicable) | | | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2010W302

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR3/2 | | | | | | | Fibric |
| 12-14 | 10YR2/2 | | | | | | | Silty |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:
Saturated at 6 inches, water at 6 inches glistening walls

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 7/28/2010
 Applicant/Owner: AGDC Sampling Point: 2010W303
 Investigator(s): DL, JL Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.70056 Long: 148.87511 Datum: _____
 Soil Map Unit Name: _____ NWI classification: PSS1/EM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____ | Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ |
| Remarks: _____ | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|---|--|-------------------|--------------|-----------------------|-----------------|------------------------|------------------|------------------------|------------------|------------------------|------------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> (B) | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B) | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 = <u>140</u></td> </tr> <tr> <td>FAC species <u>120</u></td> <td>x 3 = <u>360</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>240</u> (A)</td> <td><u>640</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.66</u></td> </tr> </table> | | Total % Cover of: | Multiply by: | OBL species <u>20</u> | x 1 = <u>20</u> | FACW species <u>70</u> | x 2 = <u>140</u> | FAC species <u>120</u> | x 3 = <u>360</u> | FACU species <u>30</u> | x 4 = <u>120</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>240</u> (A) | <u>640</u> (B) | Prevalence Index = B/A = <u>2.66</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>20</u> | x 1 = <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>70</u> | x 2 = <u>140</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>120</u> | x 3 = <u>360</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>30</u> | x 4 = <u>120</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>240</u> (A) | <u>640</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.66</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Salix reticulata</u> | 30 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 2. <u>Betula glandulosa</u> | 20 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Betula neoalaskana</u> | 20 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 4. <u>Picea mariana</u> | 10 | No | FACW | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>80</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Petasites frigidus</u> | 50 | Yes | FACW | Hydrophytic Vegetation Indicators: <u>Y</u> Dominance Test is >50% <u>Y</u> Prevalence Index is ≤3.0 _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Chamerion angustifolium</u> | 10 | No | FACU | | | | | | | | | | | | | | | | | | |
| 4. <u>Calamagrostis canadensis</u> | 50 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 5. <u>Eriophorum angustifolium</u> | 20 | No | OBL | | | | | | | | | | | | | | | | | | |
| 6. <u>Senecio triangularis</u> | 10 | No | FACW | | | | | | | | | | | | | | | | | | |
| 7. <u>Polemonium acutiflorum</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>160</u> | | | | Hydrophytic Vegetation Present? Yes <u>X</u> No _____ | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>80</u> 20% of total cover: <u>32</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) _____ % Bare Ground _____ | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable) | | | | | | | | | | | | | | | | | | | | | |

Remarks: _____

SOIL

Sampling Point: 2010W303

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|----|----------------|----|-------------------|------------------|---------|--------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 5YR2.5/1 | | | | | | | Fibric |
| 5-12 | 7.5YR4/2 | 80 | 2.5YR5/6 | 20 | | | | Silty Clay few/prominent |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input checked="" type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| | |
|---|---|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | <input checked="" type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W01A
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): terrace/seeps
 Local relief (concave, convex, none): concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.73318 Long: 148.88478 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Wetland plot for mosaic, seeps. 4 inches standing water adjacent to seep.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
|---|------------------|---------------------------|------------------|
| 1. _____ | 0 | No | _____ |
| 2. _____ | 0 | No | _____ |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| Total Cover: _____ | 0 | | |
| 50% of total cover: _____ | 0 | 20% of total cover: _____ | 0 |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. _____ | 0 | No | _____ |
| 2. _____ | 0 | No | _____ |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| 5. _____ | 0 | No | _____ |
| 6. _____ | 0 | No | _____ |
| Total Cover: _____ | 0 | | |
| 50% of total cover: _____ | 0 | 20% of total cover: _____ | 0 |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. <u>Calamagrostis canadensis</u> | 100 | Yes | FAC |
| 2. <u>Galium boreale</u> | 30 | Yes | FACU |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| 5. _____ | 0 | No | _____ |
| 6. _____ | 0 | No | _____ |
| 7. _____ | 0 | No | _____ |
| 8. _____ | 0 | No | _____ |
| 9. _____ | 0 | No | _____ |
| 10. _____ | 0 | No | _____ |
| Total Cover: _____ | 130 | | |
| 50% of total cover: _____ | 65 | 20% of total cover: _____ | 26 |
| Plot size (radius, or length x width) <u>5 feet</u> % Bare Ground <u>3</u> | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 100 x 3 = 300
 FACU species 30 x 4 = 120
 UPL species 0 x 5 = 0
 Column Totals: 130 (A) 420 (B)
 Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks: Transition area; seep has dried up

SOIL

Sampling Point: 2013W01A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|--------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | | | | | | | | Organic |
| 2-6 | 10YR2/1 | | | | | | | Sandy Loam |
| 6-12 | 4/10Y | | | | | | | 5Y or Redder |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : |
|--|---|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue |
| <input type="checkbox"/> Thick Dark Surface (A12) | |
| <input type="checkbox"/> Alaska Gleyed (A13) | |
| <input type="checkbox"/> Alaska Redox (A14) | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | |

Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
 Other (Explain in Remarks)

³One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
⁴Give details of color change in Remarks.

| | |
|--|--|
| Restrictive Layer (if present): Type: <u>Gravel Refusal</u> Depth (inches): <u>12</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|--|

Remarks:
 Problematic soil. Seeps in area. Gravel refusal would not allow to dig lower than 12 inches.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|---|--|
| Primary Indicators (any one indicator is sufficient) <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|--|
| Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|--|

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

Remarks:
 Algal mat, surface water observed on adjacent seep. No saturation at data point. Saturation exists along with surface water at adjacent seep.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W01B
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): terrace
 Local relief (concave, convex, none): concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.73318 Long: 148.88469 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Upland plot for mosaic in seep area.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|--|--|
| 1. <u>Picea glauca</u> | <u>80</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.33</u> (A/B) | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| Total Cover: <u>80</u> | | | | Prevalence Index worksheet: | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>130</u> x 3 = <u>390</u> FACU species <u>132</u> x 4 = <u>528</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>262</u> (A) <u>918</u> (B) | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>90</u> | <u>Yes</u> | <u>FAC</u> | Prevalence Index = B/A = <u>3.5</u> Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 2. <u>Rhododendron lapponicum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | |
| 3. <u>Empetrum nigrum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | |
| 4. <u>Salix barclayi</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | | |
| 5. <u>Populus tremuloides</u> | <u>1</u> | <u>No</u> | <u>FACU</u> | | |
| 6. <u>Populus balsamifera</u> | <u>1</u> | <u>No</u> | <u>FACU</u> | | |
| Total Cover: <u>132</u> | | | | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| 50% of total cover: <u>66</u> 20% of total cover: <u>26.4</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Mertensia paniculata</u> | <u>50</u> | <u>Yes</u> | <u>FACU</u> | | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 7. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 8. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 9. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 10. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| Total Cover: <u>50</u> | | | | | |
| 50% of total cover: <u>25</u> 20% of total cover: <u>10</u> | | | | | |
| Plot size (radius, or length x width) <u>5 feet</u> % Bare Ground <u>1</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Remarks: zygele not on list. No hydric vegetation by either prevalence or dominance test.

SOIL

Sampling Point: 2013W01B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | | | | | | | | Fibric Organic |
| 2-15 | 10YR5/2 | | | | | | Coarse | Sandy Loam |
| 15 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Rocks/cobble</u> Depth (inches): <u>15"</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
No indicator of hydric soil observed

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
Plot located adjacent to wetland plot of mosaic. On toe of slope but no other hydro indicators observed.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W02
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): tussock
 Local relief (concave, convex, none): convex Slope (%): 1
 Subregion: Interior Alaska Lowlands Lat: 63.72523 Long: 148.89088 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1/EM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Toe of Slope</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|--|--|
| 1. <u>Picea mariana</u> | <u>3</u> | <u>Yes</u> | <u>FACW</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.75</u> (A/B) | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>3</u> x 1 = <u>3</u> FACW species <u>103</u> x 2 = <u>206</u> FAC species <u>120</u> x 3 = <u>360</u> FACU species <u>70</u> x 4 = <u>280</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>296</u> (A) <u>849</u> (B) Prevalence Index = B/A = <u>2.86</u> | |
| Total Cover: <u>3</u> | | | | | |
| 50% of total cover: <u>1.5</u> 20% of total cover: <u>0.6</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Picea mariana</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | |
| 2. <u>Salix candida</u> | <u>3</u> | <u>No</u> | <u>OBL</u> | | |
| 3. <u>Arctostaphylos alpina</u> | <u>70</u> | <u>Yes</u> | <u>FACU</u> | | |
| 4. <u>Betula glandulosa</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | |
| 5. <u>Ledum groenlandicum</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | | |
| 6. <u>Vaccinium vitis-idaea</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | | |
| Total Cover: <u>183</u> | | | | | |
| 50% of total cover: <u>91.5</u> 20% of total cover: <u>36.6</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Eriophorum vaginatum</u> | <u>90</u> | <u>Yes</u> | <u>FACW</u> | | |
| 2. <u>Carex bigelowii</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>110</u> | | | | | |
| 50% of total cover: <u>55</u> 20% of total cover: <u>22</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)
¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks: Hydrophytic Vegetation Observed

SOIL

Sampling Point: 2013W02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | | | | | | | | Hemic Organic |
| 10 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|---|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>10 Inches</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
Saturated Organics to surface. Hemic.

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|---|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | |

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

Remarks:
Hydrology Observed

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W03
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): convex Slope (%): 5
 Subregion: Interior Alaska Lowlands Lat: 63.70914 Long: 148.88574 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Slope leading down. Premapped as PSS/EM</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | |
|--|------------------|-------------------|------------------|---|--------------------|--|--|
| 1. <u>Picea glauca</u> | <u>50</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66</u> (A/B) | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| Total Cover: <u>50</u> | | | | Prevalence Index worksheet: | | | |
| 50% of total cover: <u>25</u> 20% of total cover: <u>10</u> | | | | Total % Cover of: _____ | Multiply by: _____ | | |
| Sapling/Shrub Stratum | | | | OBL species <u>3</u> x 1 = <u>3</u> | | | |
| 1. <u>Vaccinium uliginosum</u> | <u>65</u> | <u>Yes</u> | <u>FAC</u> | FACW species <u>0</u> x 2 = <u>0</u> | | | |
| 2. <u>Ledum groenlandicum</u> | <u>40</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>128</u> x 3 = <u>384</u> | | | |
| 3. <u>Betula nana</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | FACU species <u>50</u> x 4 = <u>200</u> | | | |
| 4. <u>Salix candida</u> | <u>3</u> | <u>No</u> | <u>OBL</u> | UPL species <u>0</u> x 5 = <u>0</u> | | | |
| 5. <u>Alnus rubra</u> | <u>3</u> | <u>No</u> | <u>FAC</u> | Column Totals: <u>181</u> (A) <u>587</u> (B) | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index = B/A = <u>3.24</u> | | | |
| Total Cover: <u>131</u> | | | | Hydrophytic Vegetation Indicators: | | | |
| 50% of total cover: <u>65.5</u> 20% of total cover: <u>26.2</u> | | | | <u>Y</u> Dominance Test is >50% | | | |
| Herb Stratum | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | | | |
| 1. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| Total Cover: <u>0</u> | | | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>80</u> (Where applicable) | | | | | | | |

Remarks: salnip not on list. FAC Dominance Pass.

SOIL

Sampling Point: 2013W03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|--------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-7 | | | | | | | | Fibric Organics |
| 7 | | | | | | | | Rock Large Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Large Rocks</u> Depth (inches): <u>7 inches</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
 Attempted several holes with same result. No hydric soil observed.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
 No indicators of hydrology observed

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W04
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Hummocks
 Local relief (concave, convex, none): concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.69820 Long: 148.86836 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Scrub/Shrub. Toe of Roadway Fill</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|--|--|--|--|-------------------|-------|--------------|-------|-------------|----|-------|----|--------------|----|-------|----|-------------|----|-------|-----|--------------|---|-------|---|-------------|---|-------|---|----------------|-----|-----|-----|-----|--------------------------------------|--|--|--|--|--|--|--|--|--|-----------------------|------------------|-------------------|------------------|--|--|-------------------------|----|----|------|-----------------------------|----|-----|-----|---|--|-------------------------|----|-----|-----|--------------------------------|----|----|-----|----------|---|----|-------|----------|---|----|-------|--|--|--|--|--------------|------------------|-------------------|------------------|----------------------------|---|-----|-----|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|----------|---|----|-------|-----------|---|----|-------|--|--|--|--|---|--|--|--|--|--|
| 1. _____ | 0 | No | _____ | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: center;">_____</td> <td style="text-align: right;">Multiply by:</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>OBL species</td> <td style="text-align: center;">81</td> <td>x 1 =</td> <td style="text-align: center;">81</td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;">20</td> <td>x 2 =</td> <td style="text-align: center;">40</td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;">90</td> <td>x 3 =</td> <td style="text-align: center;">270</td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;">0</td> <td>x 4 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;">0</td> <td>x 5 =</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: center;">191</td> <td>(A)</td> <td style="text-align: center;">391</td> <td>(B)</td> </tr> <tr> <td colspan="4" style="text-align: right;">Prevalence Index = B/A = <u>2.04</u></td> <td colspan="2" rowspan="2"> Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) </td> </tr> <tr> <td colspan="4" style="text-align: right;"> Total Cover: <u>0</u> 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> </td> </tr> <tr> <th style="text-align: left;">Sapling/Shrub Stratum</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> <td colspan="2" rowspan="2"> Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> </td> </tr> <tr> <td>1. <u>Picea mariana</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Betula glandulosa</u></td> <td style="text-align: center;">80</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> <td colspan="2" rowspan="10"> ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. </td> </tr> <tr> <td>3. <u>Salix candida</u></td> <td style="text-align: center;">80</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>4. <u>Vaccinium uliginosum</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>5. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>6. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td colspan="4" style="text-align: right;"> Total Cover: <u>190</u> 50% of total cover: <u>95</u> 20% of total cover: <u>38</u> </td> </tr> <tr> <th style="text-align: left;">Herb Stratum</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Comarum palustre</u></td> <td style="text-align: center;">1</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>2. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>3. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>4. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>5. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>6. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>7. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>8. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>9. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td>10. _____</td> <td style="text-align: center;">0</td> <td style="text-align: center;">No</td> <td style="text-align: center;">_____</td> </tr> <tr> <td colspan="4" style="text-align: right;"> Total Cover: <u>1</u> 50% of total cover: <u>0.5</u> 20% of total cover: <u>0.2</u> </td> </tr> <tr> <td colspan="4">Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u></td> </tr> <tr> <td colspan="4">% Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>90</u> (Where applicable)</td> </tr> </table> | | Total % Cover of: | _____ | Multiply by: | _____ | OBL species | 81 | x 1 = | 81 | FACW species | 20 | x 2 = | 40 | FAC species | 90 | x 3 = | 270 | FACU species | 0 | x 4 = | 0 | UPL species | 0 | x 5 = | 0 | Column Totals: | 191 | (A) | 391 | (B) | Prevalence Index = B/A = <u>2.04</u> | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | Total Cover: <u>0</u> 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | 1. <u>Picea mariana</u> | 20 | No | FACW | 2. <u>Betula glandulosa</u> | 80 | Yes | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | 3. <u>Salix candida</u> | 80 | Yes | OBL | 4. <u>Vaccinium uliginosum</u> | 10 | No | FAC | 5. _____ | 0 | No | _____ | 6. _____ | 0 | No | _____ | Total Cover: <u>190</u> 50% of total cover: <u>95</u> 20% of total cover: <u>38</u> | | | | Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | 1. <u>Comarum palustre</u> | 1 | Yes | OBL | 2. _____ | 0 | No | _____ | 3. _____ | 0 | No | _____ | 4. _____ | 0 | No | _____ | 5. _____ | 0 | No | _____ | 6. _____ | 0 | No | _____ | 7. _____ | 0 | No | _____ | 8. _____ | 0 | No | _____ | 9. _____ | 0 | No | _____ | 10. _____ | 0 | No | _____ | Total Cover: <u>1</u> 50% of total cover: <u>0.5</u> 20% of total cover: <u>0.2</u> | | | | Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>90</u> (Where applicable) | |
| Total % Cover of: | _____ | Multiply by: | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OBL species | 81 | x 1 = | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | 20 | x 2 = | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | 90 | x 3 = | 270 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | 0 | x 4 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | 0 | x 5 = | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Totals: | 191 | (A) | 391 | (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.04</u> | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Picea mariana</u> | 20 | No | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Betula glandulosa</u> | 80 | Yes | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. <u>Salix candida</u> | 80 | Yes | OBL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. <u>Vaccinium uliginosum</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>190</u> 50% of total cover: <u>95</u> 20% of total cover: <u>38</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Comarum palustre</u> | 1 | Yes | OBL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>1</u> 50% of total cover: <u>0.5</u> 20% of total cover: <u>0.2</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>90</u> (Where applicable) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Remarks:

SOIL

Sampling Point: 2013W04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-9 | | | | | | | | Fibric Organic |
| 9 | | | | | | | | Ice Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>9</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
Orgs saturated to surface

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |
| (includes capillary fringe) | |

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

Remarks:
No water table observed due to restrictive layer. Stunted black spruce

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W05
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside
 Local relief (concave, convex, none): convex Slope (%): 30
 Subregion: Interior Alaska Lowlands Lat: 63.69091 Long: 148.84967 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Hillside leading to wetland</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|-------------------------------|---|--------------------|
| 1. <u>Picea glauca</u> | <u>60</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66</u> (A/B) | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>60</u> | | | | | |
| 50% of total cover: <u>30</u> | | | 20% of total cover: <u>12</u> | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Prevalence Index worksheet: | |
| 1. <u>Betula glandulosa</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | Total % Cover of: <u>5</u> | Multiply by: _____ |
| 2. <u>Vaccinium vitis-idaea</u> | <u>40</u> | <u>Yes</u> | <u>FAC</u> | OBL species <u>5</u> x 1 = <u>5</u> | |
| 3. <u>Empetrum nigrum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | FACW species <u>0</u> x 2 = <u>0</u> | |
| 4. <u>Salix arctophila</u> | <u>5</u> | <u>No</u> | <u>OBL</u> | FAC species <u>120</u> x 3 = <u>360</u> | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | FACU species <u>60</u> x 4 = <u>240</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | UPL species <u>0</u> x 5 = <u>0</u> | |
| Total Cover: <u>125</u> | | | | Column Totals: <u>185</u> (A) <u>605</u> (B) | |
| 50% of total cover: <u>62.5</u> | | | 20% of total cover: <u>25</u> | Prevalence Index = B/A = <u>3.27</u> | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: | |
| 1. _____ | <u>0</u> | <u>No</u> | _____ | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | 20% of total cover: <u>0</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | |
| Remarks: <u>Hydrophytic based on FAC vegetation</u> | | | | | |

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | | | | | | | | Organics, dry |
| 6-12 | 10YR4/3 | | | | | | | Silty Loam |
| 12 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Cobble</u> Depth (inches): <u>12 inches</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
No hydric soil present

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No hydrology indicators

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W06
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Terrace
 Local relief (concave, convex, none): convex Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.6675 Long: 148.83061 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Recent heavy rains.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.75</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>0</u> x 2 = <u>0</u> | |
| 1. <u>Picea glauca</u> | 90 | Yes | FACU | FAC species <u>145</u> x 3 = <u>435</u> | |
| 2. <u>Salix barclayi</u> | 90 | Yes | FAC | FACU species <u>100</u> x 4 = <u>400</u> | |
| 3. <u>Empetrum nigrum</u> | 20 | No | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Populus tremuloides</u> | 10 | No | FACU | Column Totals: <u>245</u> (A) <u>835</u> (B) | |
| 5. <u>Dasiphora fruticosa</u> | 5 | No | FAC | Prevalence Index = B/A = <u>3.4</u> | |
| 6. _____ | 0 | No | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>215</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>107.5</u> 20% of total cover: <u>43</u> | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Epilobium anagallidifolium</u> | 20 | Yes | FAC | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Calamagrostis canadensis</u> | 10 | Yes | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | 0 | No | _____ | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Remarks: Dominant hydrophytic vegetation due to FAC shrubs

SOIL

Sampling Point: 2013W06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | | | | | | | | Organics |
| 2-9 | 10YR5/1 | | | | | | | Sandy Silt |
| 9 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: <u>Rock</u> Depth (inches): <u>9 inches</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|--|

Remarks:
No indicators of hydric soil

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No field indicators of hydrology

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W07
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): terrace
 Local relief (concave, convex, none): convex Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.66180 Long: 148.83434 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: <u>Recent heavy rain. On cut ROW</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|-------------------------------|---|-------|-------------------|--------------|----------------------|----------------|-----------------------|----------------|------------------------|------------------|-------------------------|------------------|----------------------|----------------|---------------------------|-----------------|--------------------------------------|--|
| 1. <u>Populus tremuloides</u> | <u>90</u> | Yes | FACU | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> | (A) | | | | | | | | | | | | | | | | |
| 2. <u>Picea glauca</u> | <u>80</u> | Yes | FACU | Total Number of Dominant Species Across All Strata: <u>4</u> | (B) | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> | (A/B) | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>105</u></td> <td>x 3 = <u>315</u></td> </tr> <tr> <td>FACU species <u>180</u></td> <td>x 4 = <u>720</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>285</u></td> <td>(A) <u>1035</u></td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A = <u>3.63</u></td> </tr> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>0</u> | x 2 = <u>0</u> | FAC species <u>105</u> | x 3 = <u>315</u> | FACU species <u>180</u> | x 4 = <u>720</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>285</u> | (A) <u>1035</u> | Prevalence Index = B/A = <u>3.63</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>0</u> | x 2 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>105</u> | x 3 = <u>315</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>180</u> | x 4 = <u>720</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>285</u> | (A) <u>1035</u> | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.63</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>170</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>85</u> | | | 20% of total cover: <u>34</u> | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>90</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>90</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>45</u> | | | 20% of total cover: <u>18</u> | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | | | | |
| 1. <u>Geocaulon lividum</u> | <u>5</u> | No | FACU | | | | | | | | | | | | | | | | | | |
| 2. <u>Calamagrostis canadensis</u> | <u>15</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Lupinus arcticus</u> | <u>5</u> | No | FACU | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>25</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>12.5</u> | | | 20% of total cover: <u>5</u> | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>100</u> (Where applicable) | | | | | | | | | | | | | | | | | | | | | |

Remarks:

SOIL

Sampling Point: 2013W07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | | | | | | | | Fibric Organic |
| 3-8 | 10YR5/4 | | | | | | | Silty Loam |
| 8 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: <u>Rocks</u> Depth (inches): <u>8</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|--|

Remarks:
Soils dry after recent heavy rains

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No field indicators of hydrology observed

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W08
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): terrace
 Local relief (concave, convex, none): none Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.63005 Long: 148.78188 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Near disturbed power line. Some cobble and gravel from road fill and power line.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|-------------------------------------|-------------------|------------------------------|---|--------------|
| 1. <u>Picea glauca</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> | (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> | (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66</u> | (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>30</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>15</u> | | | 20% of total cover: <u>6</u> | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>0</u> x 2 = <u>0</u> | |
| 1. <u>Betula nana</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>40</u> x 3 = <u>120</u> | |
| 2. <u>Vaccinium vitis-idaea</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>30</u> x 4 = <u>120</u> | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Column Totals: <u>70</u> (A) <u>240</u> (B) | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index = B/A = <u>3.42</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>40</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>20</u> | | | 20% of total cover: <u>8</u> | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | 20% of total cover: <u>0</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> | % Bare Ground <u>10</u> | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | Total Cover of Bryophytes <u>50</u> | | | | |
| Remarks: <u>Only hydric due to FAC</u> | | | | | |

SOIL

Sampling Point: 2013W08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|-------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | | | | | | | | Organics |
| 5-12 | 10YR4/4 | | | | | | | Sandy Loam Coarse |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Gravel</u> Depth (inches): <u>12 inches</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
No hydric soil indicators observed

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W10
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): tussock
 Local relief (concave, convex, none): concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.60368 Long: 148.79897 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Large depression, re map to PEM1B area resembles vernal pool area.</u> | |

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

| <u>Tree Stratum</u> | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------------------|------------------|--|
| 1. _____ | 0 | No | | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| Total Cover: <u>0</u> | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | |
| <u>Sapling/Shrub Stratum</u> | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. _____ | 0 | No | | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| 5. _____ | 0 | No | | |
| 6. _____ | 0 | No | | |
| Total Cover: <u>0</u> | | | | |
| 50% of total cover: <u>0</u> | | 20% of total cover: <u>0</u> | | |
| <u>Herb Stratum</u> | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Carex rostrata</u> | 95 | Yes | OBL | |
| 2. <u>Epilobium anagallidifolium</u> | 5 | No | FAC | |
| 3. <u>Polemonium acutiflorum</u> | 5 | No | FAC | |
| 4. <u>Rubus chamaemorus</u> | 5 | No | FACW | |
| 5. _____ | 0 | No | | |
| 6. _____ | 0 | No | | |
| 7. _____ | 0 | No | | |
| 8. _____ | 0 | No | | |
| 9. _____ | 0 | No | | |
| 10. _____ | 0 | No | | |
| Total Cover: <u>110</u> | | | | |
| 50% of total cover: <u>55</u> | | 20% of total cover: <u>22</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>80</u> (Where applicable) | | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 1 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: | |
|-------------------------------|--------------|----------------|
| OBL species <u>95</u> | x 1 = | <u>95</u> |
| FACW species <u>5</u> | x 2 = | <u>10</u> |
| FAC species <u>10</u> | x 3 = | <u>30</u> |
| FACU species <u>0</u> | x 4 = | <u>0</u> |
| UPL species <u>0</u> | x 5 = | <u>0</u> |
| Column Totals: <u>110</u> (A) | | <u>135</u> (B) |

Prevalence Index = B/A = 1.22

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

SOIL

Sampling Point: 2013W10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-9 | | | | | | | | Fibric organics |
| 9-18 | 10YR3/1 | | | | | | | Sandy loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
Histic epipedon (saturation) assumed based on secondary indicators.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No primary hydrology indicators observed. Assume saturation during wet periods based on number of primary indicators.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W11
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hummock
 Local relief (concave, convex, none): concave Slope (%): 1
 Subregion: Interior Alaska Lowlands Lat: 63.60357 Long: 148.79546 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Keep as upland, along utility.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|--------------------------------------|---------------------------------|---|--------------------|
| 1. <u>Picea glauca</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B) | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| Total Cover: <u>5</u> | | | | | |
| 50% of total cover: <u>2.5</u> | | | 20% of total cover: <u>1</u> | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Prevalence Index worksheet: | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>1</u> | <u>No</u> | <u>FAC</u> | Total % Cover of: _____ | Multiply by: _____ |
| 2. <u>Betula glandulosa</u> | <u>95</u> | <u>Yes</u> | <u>FAC</u> | OBL species <u>0</u> x 1 = <u>0</u> | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | FACW species <u>0</u> x 2 = <u>0</u> | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | FAC species <u>96</u> x 3 = <u>288</u> | |
| 5. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | FACU species <u>5</u> x 4 = <u>20</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| Total Cover: <u>96</u> | | | | Column Totals: <u>101</u> (A) <u>308</u> (B) | |
| 50% of total cover: <u>48</u> | | | 20% of total cover: <u>19.2</u> | Prevalence Index = B/A = <u>3.04</u> | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: | |
| 1. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | <input type="checkbox"/> Dominance Test is >50% | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 5. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 7. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 8. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 9. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 10. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | 20% of total cover: <u>0</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | % Bare Ground <u>5</u> | | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | Total Cover of Bryophytes <u>N/A</u> | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2013W11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | | | | | | | | Organics |
| 2-18 | 10YR5/4 | | | | | | | Silt loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>Cobble/Gravel</u> Depth (inches): <u>18</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|---|

Remarks:
No indicators of hydric soils observed

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Only secondary due to location on toe of slope.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W12
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Hummocks
 Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion: Interior Alaska Lowlands Lat: 63.59846 Long: 148.80173 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1/4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Premapped as upland, change to PSS1/4B</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B) | | | | | | | | | | | | | | | | | |
|--|------------------|--------------------------------------|------------------|--|--|--|--|-------------------|--------------|----------------------|----------------|------------------------|-----------------|------------------------|------------------|-----------------------|-----------------|----------------------|----------------|-------------------------------|----------------|
| 1. <u>Picea glauca</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>290</u></td> <td>x 3 = <u>870</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>305</u> (A)</td> <td><u>910</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.98</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>10</u> | x 2 = <u>20</u> | FAC species <u>290</u> | x 3 = <u>870</u> | FACU species <u>5</u> | x 4 = <u>20</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>305</u> (A) | <u>910</u> (B) |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>10</u> | x 2 = <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>290</u> | x 3 = <u>870</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>5</u> | x 4 = <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>305</u> (A) | <u>910</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.98</u> | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>5</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | Footnote: ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | |
| 1. <u>Betula glandulosa</u> | <u>90</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | | |
| 2. <u>Ledum groenlandicum</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | | |
| 3. <u>Vaccinium vitis-idaea</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | | |
| 4. <u>Rubus chamaemorus</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>250</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>125</u> 20% of total cover: <u>50</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| 1. <u>Rhododendron lapponicum</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | | | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>50</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>25</u> 20% of total cover: <u>10</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | % Bare Ground <u>0</u> | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | Total Cover of Bryophytes <u>100</u> | | | | | | | | | | | | | | | | | | | |

Remarks: Hydrophytic based on dominance and prevalence.

SOIL

Sampling Point: 2013W12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | | | | | | | | Sphagnum |
| 2-8 | | | | | | | | Fibric Organic |
| 8 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|---|--|--|
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>8</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
Histel present. Not saturated observed due to time of year, but assumed based on secondary indicators.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Hydro present based on secondary indicators. Late June not primary hydro period to observe saturation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/24/2013
 Applicant/Owner: AGDC Sampling Point: 2013W13
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside, hummocks
 Local relief (concave, convex, none): Convex Slope (%): 20
 Subregion: Interior Alaska Lowlands Lat: 63.59015 Long: 148.80496 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Hillside adjacent to power line. Premapped as upland, keep.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|-------------------|
| 1. <u>Picea glauca</u> | <u>5</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: | <u>3</u> (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: | <u>4</u> (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>0.75</u> (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>5</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>2.5</u> 20% of total cover: <u>1</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>0</u> x 2 = <u>0</u> | |
| 1. <u>Betula glandulosa</u> | <u>100</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>295</u> x 3 = <u>885</u> | |
| 2. <u>Ledum groenlandicum</u> | <u>90</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>5</u> x 4 = <u>20</u> | |
| 3. <u>Vaccinium uliginosum</u> | <u>75</u> | <u>Yes</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Vaccinium vitis-idaea</u> | <u>30</u> | <u>No</u> | <u>FAC</u> | Column Totals: <u>300</u> (A) <u>905</u> (B) | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index = B/A = <u>3.01</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>295</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>147.5</u> 20% of total cover: <u>59</u> | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. _____ | <u>0</u> | <u>No</u> | _____ | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>90</u> (Where applicable) | | | | | |

Remarks: 90% moss coverage

SOIL

Sampling Point: 2013W13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|----|----------------|----|-------------------|------------------|---------|--------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | | | | | | | | Organics |
| 4-12 | 10YR3/1 | | | | | | | Silt loam |
| 12-16 | 10YR4/3 | 50 | coarse sand | 50 | | | | |
| 16 | | | | | | | | Gravel/Coarse sand |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Gravel</u> Depth (inches): <u>16</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Poorly formed hummocks on hillside. Sufficient indicators of hydro not observed.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W14
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Hummocks
 Local relief (concave, convex, none): None Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.57981 Long: 148.80722 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Upland, no soils. Only secondary hydrology due to FACN test and a discharge from culvert.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|--|-------------------|--|--------------|--|-------------|----------|-------|----------|--------------|-----------|-------|------------|-------------|-----------|-------|------------|--------------|----------|-------|----------|-------------|----------|-------|----------|----------------|----------------|--|----------------|-------------------------------------|--|--|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center"><u>0</u></td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>80</u></td> <td align="center">x 2 =</td> <td align="center"><u>160</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>80</u></td> <td align="center">x 3 =</td> <td align="center"><u>240</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>0</u></td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>0</u></td> <td align="center">x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>160</u> (A)</td> <td></td> <td align="center"><u>400</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.5</u></td> </tr> </table> | Total % Cover of: | | Multiply by: | | OBL species | <u>0</u> | x 1 = | <u>0</u> | FACW species | <u>80</u> | x 2 = | <u>160</u> | FAC species | <u>80</u> | x 3 = | <u>240</u> | FACU species | <u>0</u> | x 4 = | <u>0</u> | UPL species | <u>0</u> | x 5 = | <u>0</u> | Column Totals: | <u>160</u> (A) | | <u>400</u> (B) | Prevalence Index = B/A = <u>2.5</u> | | | |
| Total % Cover of: | | Multiply by: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OBL species | <u>0</u> | x 1 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACW species | <u>80</u> | x 2 = | <u>160</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAC species | <u>80</u> | x 3 = | <u>240</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACU species | <u>0</u> | x 4 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UPL species | <u>0</u> | x 5 = | <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Totals: | <u>160</u> (A) | | <u>400</u> (B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.5</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. <u>Dasiphora fruticosa</u> | 80 | Yes | FAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. <u>Salix pulchra</u> | 80 | Yes | FACW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>160</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>80</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>32</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Cover of Bryophytes <u>N/A</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Remarks: <u>Dead grass/sedge. No seed head to ID</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2013W14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-3 | | | | | | | | Organics |
| 3-20 | 10YR3/4 | | | | | | | Silty/Loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>None</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u>X</u> _____ |
|--|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|---|---|
| Field Observations: | Wetland Hydrology Present? Yes <u>X</u> _____ No _____ |
| Surface Water Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Water Table Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> _____ Depth (inches): _____ | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W15
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Flat hummock
 Local relief (concave, convex, none): None Slope (%): 10
 Subregion: Interior Alaska Lowlands Lat: 63.57722 Long: 148.811137 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Premapped as upland, change to PSS4B. 9 inch saturated organics, saturated at 2 inches.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|--------------------------------------|-------------------|-------------------------------|---|----------------|
| 1. <u>Picea mariana</u> | <u>75</u> | <u>Yes</u> | <u>FACW</u> | Number of Dominant Species That Are OBL, FACW, or FAC: | <u>4</u> (A) |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Total Number of Dominant Species Across All Strata: | <u>4</u> (B) |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>1</u> (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Prevalence Index worksheet: | |
| Total Cover: <u>75</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>37.5</u> | | | 20% of total cover: <u>15</u> | OBL species <u>0</u> x 1 = <u>0</u> | |
| <u>Sapling/Shrub Stratum</u> | | | | FACW species <u>95</u> x 2 = <u>190</u> | |
| 1. <u>Betula glandulosa</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>245</u> x 3 = <u>735</u> | |
| 2. <u>Vaccinium uliginosum</u> | <u>75</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>0</u> x 4 = <u>0</u> | |
| 3. <u>Vaccinium vitis-idaea</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Salix pulchra</u> | <u>20</u> | <u>No</u> | <u>FACW</u> | Column Totals: <u>340</u> (A) <u>925</u> (B) | |
| 5. <u>Ledum groenlandicum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | Prevalence Index = B/A = <u>2.72</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>265</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>132.5</u> | | | 20% of total cover: <u>53</u> | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| <u>Herb Stratum</u> | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 7. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 8. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 9. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| 10. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | 20% of total cover: <u>0</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> | % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes _____ | Total Cover of Bryophytes <u>N/A</u> | | | | |

Remarks: Carex sp. observed. No seed head to ID

SOIL

Sampling Point: 2013W15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-9 | | | | | | | | Organic Fibric |
| 9 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>9</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |
| (includes capillary fringe) | |

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

Remarks:
No water table observed due to ice.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W16
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Flat hummock
 Local relief (concave, convex, none): None Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.57288 Long: 148.81041 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks: <u>Premapped as PSS/EM1B, change to PSS4B.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------------------|------------------|---|----------------|
| 1. <u>Picea mariana</u> | <u>40</u> | <u>Yes</u> | <u>FACW</u> | Number of Dominant Species That Are OBL, FACW, or FAC: | <u>3</u> (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: | <u>3</u> (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>1</u> (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>115</u> x 2 = <u>230</u> FAC species <u>280</u> x 3 = <u>840</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>395</u> (A) <u>1070</u> (B) Prevalence Index = B/A = <u>2.7</u> | |
| Total Cover: <u>40</u> | | | <u>8</u> | | |
| 50% of total cover: <u>20</u> | | 20% of total cover: <u>8</u> | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Betula glandulosa</u> | <u>40</u> | <u>No</u> | <u>FAC</u> | | |
| 2. <u>Ledum groenlandicum</u> | <u>60</u> | <u>No</u> | <u>FAC</u> | | |
| 3. <u>Rubus chamaemorus</u> | <u>70</u> | <u>No</u> | <u>FACW</u> | | |
| 4. <u>Vaccinium vitis-idaea</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | | |
| 5. <u>Empetrum nigrum</u> | <u>60</u> | <u>No</u> | <u>FAC</u> | | |
| 6. <u>Vaccinium uliginosum</u> | <u>40</u> | <u>No</u> | <u>FAC</u> | | |
| Total Cover: <u>350</u> | | | <u>70</u> | | |
| 50% of total cover: <u>175</u> | | 20% of total cover: <u>70</u> | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 1. <u>Equisetum palustre</u> | <u>5</u> | <u>Yes</u> | <u>FACW</u> | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>5</u> | | | <u>1</u> | | |
| 50% of total cover: <u>2.5</u> | | 20% of total cover: <u>1</u> | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Remarks:

SOIL

Sampling Point: 2013W16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | | | | | | | | Fibric organic |
| 6 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>6</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
Use A1 as indicator due to ice.

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> | |
| (includes capillary fringe) | |

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

Remarks:
Saturation at bottom of hole at ice.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W17
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Flat hummock
 Local relief (concave, convex, none): None Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.56851 Long: 148.81355 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Upland line - tall white spruce/lichen</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--------------|
| 1. <u>Picea glauca</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> | (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>6</u> | (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.83</u> | (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>30</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>15</u> x 2 = <u>30</u> | |
| 1. <u>Betula glandulosa</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>275</u> x 3 = <u>825</u> | |
| 2. <u>Ledum groenlandicum</u> | <u>50</u> | <u>No</u> | <u>FAC</u> | FACU species <u>30</u> x 4 = <u>120</u> | |
| 3. <u>Vaccinium vitis-idaea</u> | <u>80</u> | <u>Yes</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Vaccinium uliginosum</u> | <u>60</u> | <u>Yes</u> | <u>FAC</u> | Column Totals: <u>320</u> (A) <u>975</u> (B) | |
| 5. <u>Salix pulchra</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | Prevalence Index = B/A = <u>3.04</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>275</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>137.5</u> 20% of total cover: <u>55</u> | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Empetrum nigrum</u> | <u>5</u> | <u>Yes</u> | <u>FAC</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Equisetum palustre</u> | <u>10</u> | <u>Yes</u> | <u>FACW</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>15</u> | | | | | |
| 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>5</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Remarks: Vegetation is hydrophytic by dominance.

SOIL

Sampling Point: 2013W17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-7 | | | | | | | | Organics dry Fibric |
| 7-10 | 10YR5/2 | | | | | | | Sandy loam |
| 10 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>10</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
 Dry Fibric, no moisture at all in orgs. Some lichen around. Not enough organics.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
 Hummocks - 3 secondary indicators

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W19
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Hillside
 Local relief (concave, convex, none): None Slope (%): 30
 Subregion: Interior Alaska Lowlands Lat: 63.55883 Long: 148.82057 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Hillside small R4SB to west</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. <u>Picea glauca</u> | <u>70</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | |
| 2. <u>Populus balsamifera</u> | <u>20</u> | <u>Yes</u> | <u>FACU</u> | Total Number of Dominant Species Across All Strata: <u>6</u> (B) | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.33</u> (A/B) | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>90</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>5</u> x 2 = <u>10</u> | |
| 1. <u>Rosa acicularis</u> | <u>20</u> | <u>Yes</u> | <u>FACU</u> | FAC species <u>80</u> x 3 = <u>240</u> | |
| 2. <u>Vaccinium uliginosum</u> | <u>25</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>167</u> x 4 = <u>668</u> | |
| 3. <u>Ledum groenlandicum</u> | <u>5</u> | <u>No</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Salix richardsonii</u> | <u>5</u> | <u>No</u> | <u>FACW</u> | Column Totals: <u>252</u> (A) <u>918</u> (B) | |
| 5. <u>Betula neoalaskana</u> | <u>2</u> | <u>No</u> | <u>FACU</u> | Prevalence Index = B/A = <u>3.64</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>57</u> | | | | <input type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>28.5</u> 20% of total cover: <u>11.4</u> | | | | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Equisetum sylvaticum</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Cornus canadensis</u> | <u>40</u> | <u>Yes</u> | <u>FACU</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. <u>Mertensia paniculata</u> | <u>5</u> | <u>No</u> | <u>FACU</u> | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| 4. <u>Hedysarum alpinum</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>105</u> | | | | | |
| 50% of total cover: <u>52.5</u> 20% of total cover: <u>21</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>30</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>5</u> | | | | | |
| (Where applicable) | | | | | |

Remarks: Indicators of hydric vegetation not observed

SOIL

Sampling Point: 2013W19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-18 | 10YR4/4 | | | | | | | Silty Loam |
| 18 | | | | | | | | Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|---|---|

Remarks:
No hydric soil indicators observed

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No hydrology observed. Small R4SB to west of point. Take ob point @ 2013 19-1.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/23/2013
 Applicant/Owner: AGDC Sampling Point: 2013W20-1
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Ditch/Roadside
 Local relief (concave, convex, none): Concave Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.55042 Long: 148.81145 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Adjacent to wetland - upland/wetland line</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|--|------------------|
| 1. <u>Betula neoalaskana</u> | <u>1</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: | <u>2</u> (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: | <u>4</u> (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>0.5</u> (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>60</u> x 2 = <u>120</u> FAC species <u>125</u> x 3 = <u>375</u> FACU species <u>31</u> x 4 = <u>124</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>216</u> (A) <u>619</u> (B) Prevalence Index = B/A = <u>2.86</u> | |
| Total Cover: <u>1</u> | | | | | |
| 50% of total cover: <u>0.5</u> 20% of total cover: <u>0.2</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 1. <u>Rosa acicularis</u> | <u>20</u> | <u>Yes</u> | <u>FACU</u> | | |
| 2. <u>Salix pulchra</u> | <u>60</u> | <u>Yes</u> | <u>FACW</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>80</u> | | | | | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | |
| 1. <u>Calamagrostis canadensis</u> | <u>100</u> | <u>Yes</u> | <u>FAC</u> | | |
| 2. <u>Mertensia paniculata</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | | |
| 3. <u>Equisetum sylvaticum</u> | <u>15</u> | <u>No</u> | <u>FAC</u> | | |
| 4. <u>Epilobium anagallidifolium</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>135</u> | | | | | |
| 50% of total cover: <u>67.5</u> 20% of total cover: <u>27</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>0</u> (Where applicable) | | | | | |

Remarks: Wetland vegetation on upland/wetland line

SOIL

Sampling Point: 2013W20-

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | | | | | | | | Organics Fibric |
| 4-14 | 10YR3/2 | | | | | | | Silt loam |
| 14 | | | | | | | | Ice Refusal |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>Ice</u> Depth (inches): <u>14</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
No hydric soil indicators observed

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
No primary hydrology present; one secondary due to ice.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/25/2013
 Applicant/Owner: AGDC Sampling Point: 2013W22
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Terrace
 Local relief (concave, convex, none): Convex Slope (%): 0
 Subregion: Interior Alaska Lowlands Lat: 63.72879 Long: 148.88467 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Remarks: <u>Relic river bed. Very rocky/cobble. Upland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|---------------------------------|-------------------|-------------------------------------|---|--------------------|
| 1. <u>Picea glauca</u> | <u>20</u> | Yes | FACU | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> | (A) |
| 2. <u>Populus balsamifera</u> | <u>20</u> | Yes | FACU | Total Number of Dominant Species Across All Strata: <u>6</u> | (B) |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> | (A/B) |
| 4. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>40</u> | | | | | |
| 50% of total cover: <u>20</u> | 20% of total cover: <u>8</u> | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Prevalence Index worksheet: | |
| 1. <u>Shepherdia canadensis</u> | <u>10</u> | No | FACU | Total % Cover of: <u>0</u> | Multiply by: _____ |
| 2. <u>Populus balsamifera</u> | <u>20</u> | Yes | FACU | OBL species <u>0</u> x 1 = <u>0</u> | |
| 3. <u>Picea glauca</u> | <u>40</u> | Yes | FACU | FACW species <u>0</u> x 2 = <u>0</u> | |
| 4. _____ | <u>0</u> | No | _____ | FAC species <u>5</u> x 3 = <u>15</u> | |
| 5. _____ | <u>0</u> | No | _____ | FACU species <u>156</u> x 4 = <u>624</u> | |
| 6. _____ | <u>0</u> | No | _____ | UPL species <u>0</u> x 5 = <u>0</u> | |
| Total Cover: <u>70</u> | | | | Column Totals: <u>161</u> (A) <u>639</u> (B) | |
| 50% of total cover: <u>35</u> | 20% of total cover: <u>14</u> | | | | |
| | | | | Prevalence Index = B/A = <u>3.96</u> | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: | |
| 1. <u>Lupinus arcticus</u> | <u>15</u> | Yes | FACU | <input type="checkbox"/> Dominance Test is >50% | |
| 2. <u>Mertensia paniculata</u> | <u>1</u> | No | FACU | <input type="checkbox"/> Prevalence Index is ≤3.0 | |
| 3. <u>Epilobium anagallidifolium</u> | <u>5</u> | No | FAC | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 4. <u>Streptopus amplexifolius</u> | <u>30</u> | Yes | FACU | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 5. _____ | <u>0</u> | No | _____ | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>51</u> | | | | | |
| 50% of total cover: <u>25.5</u> | 20% of total cover: <u>10.2</u> | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | | % Bare Ground <u>10</u> | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | | Total Cover of Bryophytes <u>50</u> | | |
| | | | | Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2013W22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|----------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | | | | | | | | Fibric Organic |
| 1-2 | 10YR3/4 | | | | | | | Silt Loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|--|
| Restrictive Layer (if present): Type: <u>Rock/Cobble</u> Depth (inches): <u>2</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|--|--|

Remarks:
 Large rocks from relic channel. Tried several holes. No hydric soil.

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:
 No hydric indicator

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W284
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside
 Local relief (concave, convex, none): _____ Slope (%): 25
 Subregion: Interior Alaska Lowlands Lat: 63.57544 Long: 148.80925 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>In the utility corridor</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | |
|---|------------------|-------------------|------------------|--|--|---|--|
| 1. <u>Picea glauca</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.75</u> (A/B) | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| Total Cover: <u>10</u> | | | | Prevalence Index worksheet: | | | |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | | | | |
| Sapling/Shrub Stratum | | | | Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>125</u> x 3 = <u>375</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>135</u> (A) <u>415</u> (B) | | | |
| 1. <u>Betula glandulosa</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | Prevalence Index = B/A = <u>3.07</u> Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | |
| 2. <u>Ledum groenlandicum</u> | <u>15</u> | <u>No</u> | <u>FAC</u> | | | | |
| 3. <u>Vaccinium vitis-idaea</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | | | | |
| 4. <u>Betula nana</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | | | |
| 5. <u>Vaccinium uliginosum</u> | <u>20</u> | <u>No</u> | <u>FAC</u> | | | | |
| 6. <u>Empetrum nigrum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | | | | |
| Total Cover: <u>105</u> | | | | | | | |
| 50% of total cover: <u>52.5</u> 20% of total cover: <u>21</u> | | | | | | | |
| Herb Stratum | | | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| 1. <u>Ribes triste</u> | <u>10</u> | <u>Yes</u> | <u>FAC</u> | | | | |
| 2. <u>Epilobium ciliatum</u> | <u>10</u> | <u>Yes</u> | <u>FAC</u> | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | | | |
| Total Cover: <u>20</u> | | | | | | | |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | | | |
| % Cover of Wetland Bryophytes <u>15</u> Total Cover of Bryophytes <u>90</u> (Where applicable) | | | | | | | |
| Remarks: | | | | | | | |

SOIL

Sampling Point: 2013W284

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 7.5YR2.5/2 | | | | | | | organic |
| 2-5 | 7.5YR3/1 | | | | | | | clay loam |
| 5-14 | 2.5YR4/4 | | | | | | | silt loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>cobbles</u> Depth (inches): <u>14</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W285
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): slightly concave Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57525 Long: 148.80893 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1/EM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirmed all sections of 2010 datasheet.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--------------|
| 1. <u>Picea glauca</u> | <u>15</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> | (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> | (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.6</u> | (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>15</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u> | | | | OBL species <u>10</u> x 1 = <u>10</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>20</u> x 2 = <u>40</u> | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>35</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>115</u> x 3 = <u>345</u> | |
| 2. <u>Empetrum nigrum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | FACU species <u>25</u> x 4 = <u>100</u> | |
| 3. <u>Picea mariana</u> | <u>20</u> | <u>No</u> | <u>FACW</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Ledum groenlandicum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | Column Totals: <u>170</u> (A) <u>495</u> (B) | |
| 5. <u>Betula glandulosa</u> | <u>40</u> | <u>Yes</u> | <u>FAC</u> | Prevalence Index = B/A = <u>2.91</u> | |
| 6. <u>Andromeda polifolia</u> | <u>10</u> | <u>No</u> | <u>OBL</u> | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>125</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>62.5</u> 20% of total cover: <u>25</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Cornus canadensis</u> | <u>10</u> | <u>Yes</u> | <u>FACU</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Calamagrostis canadensis</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>100</u> (Where applicable) | | | | | |
| Remarks: _____ | | | | | |

SOIL

Sampling Point: 2013W285

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | | | | | | | | organic-sphagnum |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|---|--|--|
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>ice</u> Depth (inches): <u>10</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
sphagnum organic layer down to restrictive layer

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W286
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hummocks
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57499 Long: 148.80833 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirmed. Standing water at ~5 inches</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|-------------------|------------------|------------------------|
| 1. _____ | 0 | No | _____ | |
| 2. _____ | 0 | No | _____ | |
| 3. _____ | 0 | No | _____ | |
| 4. _____ | 0 | No | _____ | |
| Total Cover: 0 | | | | |
| 50% of total cover: 0 | | | | 20% of total cover: 0 |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Salix pulchra</u> | 65 | Yes | <u>FACW</u> | |
| 2. <u>Andromeda polifolia</u> | 10 | No | <u>OBL</u> | |
| 3. _____ | 0 | No | _____ | |
| 4. _____ | 0 | No | _____ | |
| 5. _____ | 0 | No | _____ | |
| 6. _____ | 0 | No | _____ | |
| Total Cover: 75 | | | | |
| 50% of total cover: 37.5 | | | | 20% of total cover: 15 |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Calamagrostis canadensis</u> | 70 | Yes | <u>FAC</u> | |
| 2. <u>Eriophorum vaginatum</u> | 20 | Yes | <u>FACW</u> | |
| 3. _____ | 0 | No | _____ | |
| 4. _____ | 0 | No | _____ | |
| 5. _____ | 0 | No | _____ | |
| 6. _____ | 0 | No | _____ | |
| 7. _____ | 0 | No | _____ | |
| 8. _____ | 0 | No | _____ | |
| 9. _____ | 0 | No | _____ | |
| 10. _____ | 0 | No | _____ | |
| Total Cover: 90 | | | | |
| 50% of total cover: 45 | | | | 20% of total cover: 18 |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground <u>0</u> | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>50</u> (Where applicable) | | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 10 x 1 = 10
 FACW species 85 x 2 = 170
 FAC species 70 x 3 = 210
 FACU species 0 x 4 = 0
 UPL species 0 x 5 = 0
 Column Totals: 165 (A) 390 (B)
 Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
Cannot dig pit due to standing water. Highly tannic water. Assumed Hydric. Fibric

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input checked="" type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W287
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.57870 Long: 148.80760 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS4B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>lat/long may be incorrect</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|-------------------------------------|-------------------|------------------|--|-------|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> | (A) |
| 2. <u>Picea glauca</u> | <u>20</u> | Yes | FACU | Total Number of Dominant Species Across All Strata: <u>7</u> | (B) |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.85</u> | (A/B) |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>260</u> x 3 = <u>780</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>310</u> (A) <u>920</u> (B) Prevalence Index = B/A = <u>2.96</u> | |
| Total Cover: <u>30</u> | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>50</u> | Yes | FAC | | |
| 2. <u>Betula nana</u> | <u>40</u> | Yes | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| 3. <u>Picea mariana</u> | <u>20</u> | No | FACW | | |
| 4. <u>Salix alaxensis</u> | <u>10</u> | No | FAC | | |
| 5. <u>Ledum groenlandicum</u> | <u>60</u> | Yes | FAC | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>180</u> | | | | | |
| 50% of total cover: <u>90</u> 20% of total cover: <u>36</u> | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Festuca altaica</u> | <u>60</u> | Yes | FAC | | |
| 2. <u>Calamagrostis canadensis</u> | <u>40</u> | Yes | FAC | | |
| 3. _____ | <u>0</u> | No | _____ | | |
| 4. _____ | <u>0</u> | No | _____ | | |
| 5. _____ | <u>0</u> | No | _____ | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>100</u> | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | Total Cover of Bryophytes <u>80</u> | | | | |
| Remarks: _____ | | | | | |

SOIL

Sampling Point: 2013W287

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 2.5YR3/4 | | | | | | Fibric | |
| 9-14 | 10YR5/2 | | | | | | | silty loam |
| 14 | frozen | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>ice, frozen soil</u> Depth (inches): <u>14</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> | |
| Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W288
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside
 Local relief (concave, convex, none): depression Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.58343 Long: 148.80582 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM/SS1F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>No photo. Remap to PEM/SS1F. Redraw, does not extend around lake.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
|--|------------------------|--------------------------------------|---------------------|
| 1. _____ | 0 | No | _____ |
| 2. _____ | 0 | No | _____ |
| 3. _____ | 0 | No | _____ |
| 4. _____ | 0 | No | _____ |
| Total Cover: | 0 | | |
| | 50% of total cover: 0 | 20% of total cover: 0 | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. <u>Salix pulchra</u> | 40 | Yes | FACW |
| 2. <u>Betula nana</u> | 40 | Yes | FAC |
| 3. <u>Vaccinium vitis-idaea</u> | 10 | No | FAC |
| 4. _____ | 0 | No | _____ |
| 5. _____ | 0 | No | _____ |
| 6. _____ | 0 | No | _____ |
| Total Cover: | 90 | | |
| | 50% of total cover: 45 | 20% of total cover: 18 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status |
| 1. <u>Calamagrostis canadensis</u> | 20 | No | FAC |
| 2. <u>Eleocharis palustris</u> | 10 | No | OBL |
| 3. <u>Cornus canadensis</u> | 40 | Yes | FACU |
| 4. <u>Comarum palustre</u> | 10 | No | OBL |
| 5. <u>Carex aquatilis</u> | 20 | No | OBL |
| 6. <u>Juncus alpinoarticulatus</u> | 20 | No | OBL |
| 7. _____ | 0 | No | _____ |
| 8. _____ | 0 | No | _____ |
| 9. _____ | 0 | No | _____ |
| 10. _____ | 0 | No | _____ |
| Total Cover: | 120 | | |
| | 50% of total cover: 60 | 20% of total cover: 24 | |
| Plot size (radius, or length x width) | <u>25 feet</u> | | % Bare Ground _____ |
| % Cover of Wetland Bryophytes (Where applicable) | <u>N/A</u> | Total Cover of Bryophytes <u>N/A</u> | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.66 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 60 x 1 = 60
 FACW species 40 x 2 = 80
 FAC species 70 x 3 = 210
 FACU species 40 x 4 = 160
 UPL species 0 x 5 = 0
 Column Totals: 210 (A) 510 (B)
 Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 2013W288

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-1 | 10YR3/2 | | | | | | Fibric | |
| 1-4 | 10YR3/1 | | | | | | silt | |
| 4-12 | 2.5Y3/1 | | | | | | silt | |
| 12 ice | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input checked="" type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>ice</u> Depth (inches): <u>12</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
inundated soil - dark

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|---|---|
| Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe) | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W289
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hummocks
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.61630 Long: 148.78212 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>Posted no trespass signs. Did not enter. Looks to be as mapped.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--------------|
| 1. <u>Picea glauca</u> | <u>70</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> | (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> | (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> | (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>70</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>35</u> 20% of total cover: <u>14</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>0</u> x 2 = <u>0</u> | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | FAC species <u>90</u> x 3 = <u>270</u> | |
| 2. <u>Picea glauca</u> | <u>40</u> | <u>Yes</u> | <u>FACU</u> | FACU species <u>110</u> x 4 = <u>440</u> | |
| 3. <u>Vaccinium ovalifolium</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Empetrum nigrum</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | Column Totals: <u>200</u> (A) <u>710</u> (B) | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index = B/A = <u>3.55</u> | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>130</u> | | | | <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 50% of total cover: <u>65</u> 20% of total cover: <u>26</u> | | | | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| Herb Stratum | | | | Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> | |
| 1. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>80</u> (Where applicable) | | | | | |
| Remarks: | | | | | |

SOIL

Sampling Point: 2013W289

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 5YR3/4 | | | | | | Fibric | |
| 4-9 | 2.5YR5/4 | | | | | | sandy | |
| 9-16 | 10YR4/4 | | | | | | sandy | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u>X</u> _____ |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes _____ No <u>X</u> _____ |
| Surface Water Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Water Table Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Saturation Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ (includes capillary fringe) | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W290
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.65046 Long: 148.81842 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>Confirmed as upland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | |
|---|------------------|-------------------|------------------|---|------------------|--|--|
| 1. <u>Picea glauca</u> | <u>30</u> | <u>Yes</u> | <u>FACU</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | | | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | | | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66</u> (A/B) | | | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| Total Cover: <u>30</u> | | | | Prevalence Index worksheet: | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Total % Cover of: | Multiply by: | | |
| 1. <u>Vaccinium vitis-idaea</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | OBL species <u>0</u> | x 1 = <u>0</u> | | |
| 2. <u>Ledum groenlandicum</u> | <u>30</u> | <u>No</u> | <u>FAC</u> | FACW species <u>50</u> | x 2 = <u>100</u> | | |
| 3. <u>Picea mariana</u> | <u>40</u> | <u>No</u> | <u>FACW</u> | FAC species <u>180</u> | x 3 = <u>540</u> | | |
| 4. <u>Empetrum nigrum</u> | <u>50</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>30</u> | x 4 = <u>120</u> | | |
| 5. <u>Betula glandulosa</u> | <u>30</u> | <u>No</u> | <u>FAC</u> | UPL species <u>0</u> | x 5 = <u>0</u> | | |
| 6. <u>Chamaedaphne calyculata</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | Column Totals: <u>260</u> (A) | <u>760</u> (B) | | |
| Total Cover: <u>230</u> | | | | Prevalence Index = B/A = <u>2.92</u> | | | |
| 50% of total cover: <u>115</u> 20% of total cover: <u>46</u> | | | | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | |
| 1. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 2. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 3. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 4. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 5. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 6. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 7. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 8. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 9. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| 10. _____ | <u>0</u> | <u>No</u> | <u>_____</u> | | | | |
| Total Cover: <u>0</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>75</u> (Where applicable) | | | | | | | |

Remarks: Sphagnum. White spruce are robust and tall.

SOIL

Sampling Point: 2013W290

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 7.5YR2.5/1 | | | | | | Fibric | organic |
| 5-7 | 5YR5/3 | | | | | | sandy | silt |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>seasonal ice</u> Depth (inches): <u>7</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input checked="" type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Ice at 7 inches

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/27/2013
 Applicant/Owner: AGDC Sampling Point: 2013W291
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.65744 Long: 148.85214 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: <u>Confirmed as exposed rock. Remap as upland, not a wetland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|---|------------------|--------------------------------------|------------------|---|--|---|--------------|----------------------|----------------|------------------------|-----------------|-----------------------|-----------------|------------------------|------------------|----------------------|----------------|-------------------------------|----------------|-------------------------------------|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>120</u> (A)</td> <td><u>420</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.5</u></td> </tr> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>20</u> | x 2 = <u>40</u> | FAC species <u>20</u> | x 3 = <u>60</u> | FACU species <u>80</u> | x 4 = <u>320</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>120</u> (A) | <u>420</u> (B) | Prevalence Index = B/A = <u>3.5</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>20</u> | x 2 = <u>40</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>20</u> | x 3 = <u>60</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>80</u> | x 4 = <u>320</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>120</u> (A) | <u>420</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.5</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. <u>Picea mariana</u> | 20 | No | FACW | | | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | |
| 2. <u>Populus balsamifera</u> | 20 | No | FACU | | | | | | | | | | | | | | | | | | |
| 3. <u>Populus tremuloides</u> | 10 | No | FACU | | | | | | | | | | | | | | | | | | |
| 4. <u>Salix alaxensis</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. <u>Salix reticulata</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 6. <u>Shepherdia canadensis</u> | 30 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>100</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>50</u> 20% of total cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | | | | |
| 1. <u>Chamerion angustifolium</u> | 10 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 2. <u>Taraxacum officinale</u> | 10 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>20</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | % Bare Ground <u>40</u> | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | Total Cover of Bryophytes <u>N/A</u> | | | | | | | | | | | | | | | | | | | |
| (Where applicable) | | | | | | | | | | | | | | | | | | | | | |
| Remarks: _____ | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2013W291

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 5YR3/4 | 100 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>cobble</u> Depth (inches): <u>4</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:
Former clear cut corridor

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W292
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67067 Long: 148.82336 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>Top of ridge, exposed rock. Upland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>3</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>10</u> x 1 = <u>10</u> | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | FACW species <u>40</u> x 2 = <u>80</u> | |
| 1. <u>Picea mariana</u> | 10 | No | FACW | FAC species <u>150</u> x 3 = <u>450</u> | |
| 2. <u>Salix reticulata</u> | 30 | Yes | FAC | FACU species <u>20</u> x 4 = <u>80</u> | |
| 3. <u>Salix alaxensis</u> | 20 | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Betula neoalaskana</u> | 10 | No | FACU | Column Totals: <u>220</u> (A) <u>620</u> (B) | |
| 5. <u>Ledum groenlandicum</u> | 10 | No | FAC | Prevalence Index = B/A = <u>2.81</u> | |
| 6. <u>Vaccinium vitis-idaea</u> | 10 | No | FAC | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>90</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Agrostis exarata</u> | 10 | No | FACW | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Equisetum arvense</u> | 60 | Yes | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. <u>Parnassia palustris</u> | 20 | No | FACW | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| 4. <u>Agrostis clavata</u> | 0 | No | OBL | | |
| 5. <u>Chamerion angustifolium</u> | 10 | No | FACU | | |
| 6. <u>Astragalus alpinus</u> | 20 | No | FAC | | |
| 7. <u>Carex pauciflora</u> | 10 | No | OBL | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>130</u> | | | | | |
| 50% of total cover: <u>65</u> 20% of total cover: <u>26</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Remarks: _____

SOIL

Sampling Point: 2013W292

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|---------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-6 | 2.5Y3/3 | | | | | | | sandy organic |
| 6-13 | 2.5Y3/2 | | | | | | | sandy |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u>X</u> _____ |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| <u>Primary Indicators (any one indicator is sufficient)</u> | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes _____ No <u>X</u> _____ |
| Surface Water Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Water Table Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ | |
| Saturation Present? Yes _____ No <u>X</u> _____ Depth (inches): _____ (includes capillary fringe) | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W293
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67783 Long: 148.82509 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirm point upland/wet edge. Remap surrounding.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
|---|------------------|-------------------|-------------------------------|--|--|
| 1. _____ | 0 | No | _____ | | |
| 2. _____ | 0 | No | _____ | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | 20% of total cover: <u>0</u> | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Betula glandulosa</u> | 30 | Yes | FAC | | |
| 2. <u>Populus balsamifera</u> | 10 | No | FACU | | |
| 3. <u>Arctostaphylos rubra</u> | 20 | Yes | FAC | | |
| 4. <u>Populus tremuloides</u> | 10 | No | FACU | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| Total Cover: <u>70</u> | | | | | |
| 50% of total cover: <u>35</u> | | | 20% of total cover: <u>14</u> | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
| 1. <u>Calamagrostis canadensis</u> | 40 | Yes | FAC | | |
| 2. <u>Galium trifidum</u> | 20 | Yes | FACW | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| 5. _____ | 0 | No | _____ | | |
| 6. _____ | 0 | No | _____ | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>60</u> | | | | | |
| 50% of total cover: <u>30</u> | | | 20% of total cover: <u>12</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
 Total Number of Dominant Species Across All Strata: 4 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 20 x 2 = 40
 FAC species 90 x 3 = 270
 FACU species 20 x 4 = 80
 UPL species 0 x 5 = 0
 Column Totals: 130 (A) 390 (B)
 Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 _____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 _____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 2013W293

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|--------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/2 | | | | | | | Fibric |
| 4-8 | 10YR2/2 | | | | | | | Fibric |
| 8-16 | 10YR3/4 | | | | | | | Silty Loam Mineral |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input checked="" type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
On boundary, close to histic epipedon

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> | |
| (includes capillary fringe) | |

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

Remarks:
Assumed saturation due to geomorphic and vegetation and tussocks with stunted spruce

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W294
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.67774 Long: 148.82457 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirm vernal pool area.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|---|------------------|-------------------|------------------|---|--|---|--------------|----------------------|----------------|------------------------|-----------------|------------------------|------------------|-----------------------|----------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>2</u> (B) | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A/B) | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>170</u></td> <td>x 3 = <u>510</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>190</u> (A)</td> <td><u>550</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.89</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>20</u> | x 2 = <u>40</u> | FAC species <u>170</u> | x 3 = <u>510</u> | FACU species <u>0</u> | x 4 = <u>0</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>190</u> (A) | <u>550</u> (B) | Prevalence Index = B/A = <u>2.89</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>20</u> | x 2 = <u>40</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>170</u> | x 3 = <u>510</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>0</u> | x 4 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>190</u> (A) | <u>550</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>2.89</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | | | | | | | | | | | | | | |
| 1. <u>Calamagrostis canadensis</u> | 80 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Polemonium acutiflorum</u> | 20 | No | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Potentilla norvegica</u> | 20 | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. <u>Galium trifidum</u> | 20 | No | FACW | | | | | | | | | | | | | | | | | | |
| 6. <u>Poa arctica</u> | 40 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>190</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>95</u> 20% of total cover: <u>38</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | | | | | | | | | | | | | | | | | |
| Remarks: _____ | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2013W294

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | Texture | Remarks |
|-------------------|---------------|---|----------------|----|-------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | | |
| 0-18 | 10YR2/2 | | 10YR2/1 | 20 | | | organic |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|---|--|--|
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |
| (includes capillary fringe) | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W295
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): 20
 Subregion: Interior Alaska Lowlands Lat: 63.67736 Long: 148.82437 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: Confirm upland. | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|---|------------------|-------------------------------|------------------|--|
| 1. <u>Picea mariana</u> | <u>10</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. _____ | <u>0</u> | <u>No</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>10</u> | | | | |
| 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Betula glandulosa</u> | <u>70</u> | <u>Yes</u> | <u>FAC</u> | |
| 2. <u>Picea mariana</u> | <u>30</u> | <u>Yes</u> | <u>FACW</u> | |
| 3. _____ | <u>0</u> | <u>No</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>100</u> | | | | |
| 50% of total cover: <u>50</u> | | 20% of total cover: <u>20</u> | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Eriophorum vaginatum</u> | <u>30</u> | <u>Yes</u> | <u>FACW</u> | |
| 2. _____ | <u>0</u> | <u>No</u> | | |
| 3. _____ | <u>0</u> | <u>No</u> | | |
| 4. _____ | <u>0</u> | <u>No</u> | | |
| 5. _____ | <u>0</u> | <u>No</u> | | |
| 6. _____ | <u>0</u> | <u>No</u> | | |
| 7. _____ | <u>0</u> | <u>No</u> | | |
| 8. _____ | <u>0</u> | <u>No</u> | | |
| 9. _____ | <u>0</u> | <u>No</u> | | |
| 10. _____ | <u>0</u> | <u>No</u> | | |
| Total Cover: <u>30</u> | | | | |
| 50% of total cover: <u>15</u> | | 20% of total cover: <u>6</u> | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | |

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------------------|------------------|
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>70</u> | x 2 = <u>140</u> |
| FAC species <u>70</u> | x 3 = <u>210</u> |
| FACU species <u>0</u> | x 4 = <u>0</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>140</u> (A) | <u>350</u> (B) |

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

Y Dominance Test is >50%

Y Prevalence Index is ≤3.0

____ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 2013W295

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|-----------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/3 | | | | | | | Fibric |
| 4-12 | 5YR4/4 | | | | | | | sand loam |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|---|--|

Remarks:

HYDROLOGY

| | |
|--|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W296
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside
 Local relief (concave, convex, none): _____ Slope (%): 20
 Subregion: Interior Alaska Lowlands Lat: 63.68212 Long: 148.83409 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>In vernal pool area.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | |
|---|------------------|-------------------|------------------|-------------------------------|--|
| 1. _____ | 0 | No | _____ | | |
| 2. _____ | 0 | No | _____ | | |
| 3. _____ | 0 | No | _____ | | |
| 4. _____ | 0 | No | _____ | | |
| Total Cover: <u>0</u> | | | | | |
| 50% of total cover: <u>0</u> | | | | 20% of total cover: <u>0</u> | |
| Sapling/Shrub Stratum | | | | | |
| 1. <u>Betula glandulosa</u> | 80 | Yes | FAC | | |
| 2. <u>Populus tremuloides</u> | 20 | No | FACU | | |
| 3. <u>Picea mariana</u> | 10 | No | FACW | | |
| 4. <u>Arctostaphylos rubra</u> | 10 | No | FAC | | |
| 5. <u>Salix arctica</u> | 10 | No | FACU | | |
| 6. <u>Dasiphora fruticosa</u> | 10 | No | FAC | | |
| Total Cover: <u>140</u> | | | | | |
| 50% of total cover: <u>70</u> | | | | 20% of total cover: <u>28</u> | |
| Herb Stratum | | | | | |
| 1. <u>Eriophorum vaginatum</u> | 40 | Yes | FACW | | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | | |
| 3. <u>Galium boreale</u> | 10 | No | FACU | | |
| 4. <u>Carex spectabilis</u> | 20 | No | FACW | | |
| 5. <u>Calamagrostis canadensis</u> | 20 | No | FAC | | |
| 6. <u>Poa arctica</u> | 10 | No | FAC | | |
| 7. _____ | 0 | No | _____ | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>110</u> | | | | | |
| 50% of total cover: <u>55</u> | | | | 20% of total cover: <u>22</u> | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| Total % Cover of: | Multiply by: |
|-------------------------------|------------------|
| OBL species <u>0</u> | x 1 = <u>0</u> |
| FACW species <u>70</u> | x 2 = <u>140</u> |
| FAC species <u>140</u> | x 3 = <u>420</u> |
| FACU species <u>40</u> | x 4 = <u>160</u> |
| UPL species <u>0</u> | x 5 = <u>0</u> |
| Column Totals: <u>250</u> (A) | <u>720</u> (B) |

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 2013W296

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR3/2 | | | | | | silty | Fibric |
| 4-14 | 2.5Y4/3 | | | | | | | silt sand Fibric |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input checked="" type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:
greater than or equal to 6" without gleyed matrix

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W297
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68241 Long: 148.83372 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>Confirmed upland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|--|--------------------------------------|-------------------|-------------------------------|--|-------------------|-------------------|--------------|----------------------|----------------|------------------------|-----------------|------------------------|------------------|------------------------|------------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: | <u>3</u> (A) | | | | | | | | | | | | | | | | |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: | <u>4</u> (B) | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: | <u>0.75</u> (A/B) | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>110</u></td> <td>x 3 = <u>330</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>220</u> (A)</td> <td><u>710</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.22</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>30</u> | x 2 = <u>60</u> | FAC species <u>110</u> | x 3 = <u>330</u> | FACU species <u>80</u> | x 4 = <u>320</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>220</u> (A) | <u>710</u> (B) | Prevalence Index = B/A = <u>3.22</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>30</u> | x 2 = <u>60</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>110</u> | x 3 = <u>330</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>80</u> | x 4 = <u>320</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>220</u> (A) | <u>710</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.22</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>10</u> | 50% of total cover: <u>5</u> | | 20% of total cover: <u>2</u> | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. <u>Populus tremuloides</u> | <u>80</u> | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 2. <u>Arctostaphylos rubra</u> | <u>30</u> | No | FAC | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | | | | | | | | | | | | | | | | |
| 3. <u>Salix alaxensis</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Vaccinium vitis-idaea</u> | <u>30</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>150</u> | 50% of total cover: <u>75</u> | | 20% of total cover: <u>30</u> | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Astragalus alpinus</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 2. <u>Eriophorum vaginatum</u> | <u>20</u> | Yes | FACW | | | | | | | | | | | | | | | | | | |
| 3. <u>Calamagrostis canadensis</u> | <u>20</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Senecio lugens</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>60</u> | 50% of total cover: <u>30</u> | | 20% of total cover: <u>12</u> | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | % Bare Ground _____ | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | Total Cover of Bryophytes <u>N/A</u> | | | | | | | | | | | | | | | | | | | | |
| Remarks: <u>Arctostaphylos uva-ursi not on list</u> | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2013W297

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|---|-------------------|------------------|---------|------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 5YR3/1 | | | | | | Fibric | organic |
| 2-12 | 2.5YR4/4 | | | | | | | silt loam matrix |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W298
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68205 Long: 148.83369 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PEM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>In vernal pool area.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
|--|------------------|---------------------------|------------------|--|
| 1. _____ | 0 | No | | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| Total Cover: | 0 | | | |
| 50% of total cover: | 0 | 20% of total cover: | 0 | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Dasiphora fruticosa</u> | 10 | Yes | FAC | |
| 2. _____ | 0 | No | | |
| 3. _____ | 0 | No | | |
| 4. _____ | 0 | No | | |
| 5. _____ | 0 | No | | |
| 6. _____ | 0 | No | | |
| Total Cover: | 10 | | | |
| 50% of total cover: | 5 | 20% of total cover: | 2 | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | |
| 1. <u>Polygonum achoreum</u> | 10 | No | FAC | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | |
| 3. <u>Galium boreale</u> | 10 | No | FACU | |
| 4. <u>Agrostis exarata</u> | 90 | Yes | FACW | |
| 5. <u>Carex magellanica</u> | 10 | No | OBL | |
| 6. <u>Stellaria longifolia</u> | 10 | No | FAC | |
| 7. _____ | 0 | No | | |
| 8. _____ | 0 | No | | |
| 9. _____ | 0 | No | | |
| 10. _____ | 0 | No | | |
| Total Cover: | 140 | | | |
| 50% of total cover: | 70 | 20% of total cover: | 28 | |
| Plot size (radius, or length x width) | <u>25 feet</u> | % Bare Ground | | |
| % Cover of Wetland Bryophytes (Where applicable) | <u>N/A</u> | Total Cover of Bryophytes | <u>N/A</u> | |

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)

Prevalence Index worksheet:

| | | | |
|--------------------------------------|----------------|--------------|----------------|
| Total % Cover of: | | Multiply by: | |
| OBL species | <u>10</u> | x 1 = | <u>10</u> |
| FACW species | <u>90</u> | x 2 = | <u>180</u> |
| FAC species | <u>40</u> | x 3 = | <u>120</u> |
| FACU species | <u>10</u> | x 4 = | <u>40</u> |
| UPL species | <u>0</u> | x 5 = | <u>0</u> |
| Column Totals: | <u>150</u> (A) | | <u>350</u> (B) |
| Prevalence Index = B/A = <u>2.33</u> | | | |

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No _____

Remarks: _____

SOIL

Sampling Point: 2013W298

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 10YR3/2 | | | | | | | Fibric |
| 5-8 | 10YR2/1 | | | | | | | Fibric |
| 8-12 | 10YR2/2 | | | | | | silty | organic |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> | |
| (includes capillary fringe) | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W299
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68463 Long: 148.83727 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1B

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirmed 2010, soil looks more redox than gley.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|---|------------------|-------------------|------------------|---|--------------|
| 1. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> | (A) |
| 2. _____ | <u>0</u> | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> | (B) |
| 3. _____ | <u>0</u> | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> | (A/B) |
| 4. _____ | <u>0</u> | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>10</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>5</u> 20% of total cover: <u>2</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>80</u> x 2 = <u>160</u> | |
| 1. <u>Betula glandulosa</u> | <u>30</u> | Yes | FAC | FAC species <u>120</u> x 3 = <u>360</u> | |
| 2. <u>Picea mariana</u> | <u>10</u> | No | FACW | FACU species <u>10</u> x 4 = <u>40</u> | |
| 3. <u>Arctostaphylos rubra</u> | <u>30</u> | Yes | FAC | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Vaccinium vitis-idaea</u> | <u>30</u> | Yes | FAC | Column Totals: <u>210</u> (A) <u>560</u> (B) | |
| 5. <u>Salix pulchra</u> | <u>10</u> | No | FACW | Prevalence Index = B/A = <u>2.66</u> | |
| 6. <u>Salix arctica</u> | <u>10</u> | No | FACU | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>120</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>60</u> 20% of total cover: <u>24</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Deschampsia caespitosa</u> | <u>10</u> | No | FAC | ____ Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Eriophorum vaginatum</u> | <u>40</u> | Yes | FACW | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. <u>Calamagrostis canadensis</u> | <u>10</u> | No | FAC | | |
| 4. <u>Dasiphora fruticosa</u> | <u>10</u> | No | FAC | | |
| 5. <u>Pedicularis labradorica</u> | <u>10</u> | No | FACW | | |
| 6. _____ | <u>0</u> | No | _____ | | |
| 7. _____ | <u>0</u> | No | _____ | | |
| 8. _____ | <u>0</u> | No | _____ | | |
| 9. _____ | <u>0</u> | No | _____ | | |
| 10. _____ | <u>0</u> | No | _____ | | |
| Total Cover: <u>80</u> | | | | | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |
| Remarks: _____ | | | | | |

SOIL

Sampling Point: 2013W299

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|---|----------------|----|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 7.5YR3/2 | | | | | | | Fibric |
| 5-18 | 10YR3/2 | | GI4/1GY | 10 | | | silt | Fibric |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | |
|---|--|--|
| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils³: | |
| <input checked="" type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|--|---|
| Restrictive Layer (if present): Type: <u>permafrost</u> Depth (inches): <u>18</u> | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|--|---|

Remarks:
gleyed 6-12"

HYDROLOGY

| | |
|---|--|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Microtopographic Relief (D4) |
| | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|---|
| Field Observations: | Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ | |
| Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> | |

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W300
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): 30
 Subregion: Interior Alaska Lowlands Lat: 63.68467 Long: 148.83701 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/> | Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> |
| Remarks: <u>Confirmed upland.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|------------------|---|--|---|--------------|----------------------|----------------|------------------------|-----------------|-----------------------|------------------|------------------------|------------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. <u>Picea glauca</u> | <u>20</u> | Yes | FACU | Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.57</u> (A/B) | | | | | | | | | | | | | | | | | |
| 2. <u>Picea mariana</u> | <u>10</u> | Yes | FACW | | | | | | | | | | | | | | | | | | |
| 3. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>30</u> | | | | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 = <u>270</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>530</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.11</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>30</u> | x 2 = <u>60</u> | FAC species <u>90</u> | x 3 = <u>270</u> | FACU species <u>50</u> | x 4 = <u>200</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>170</u> (A) | <u>530</u> (B) | Prevalence Index = B/A = <u>3.11</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>30</u> | x 2 = <u>60</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>90</u> | x 3 = <u>270</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>50</u> | x 4 = <u>200</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>170</u> (A) | <u>530</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.11</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Betula glandulosa</u> | <u>20</u> | No | FAC | Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | | | |
| 2. <u>Vaccinium vitis-idaea</u> | <u>30</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Empetrum nigrum</u> | <u>30</u> | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Vaccinium ovalifolium</u> | <u>10</u> | No | FAC | | | | | | | | | | | | | | | | | | |
| 5. <u>Shepherdia canadensis</u> | <u>10</u> | No | FACU | | | | | | | | | | | | | | | | | | |
| 6. <u>Salix myrtilifolia</u> | <u>10</u> | No | FACW | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>110</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>55</u> 20% of total cover: <u>22</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | | | | | | | | | | | | | | | | | | |
| 1. <u>Linnaea borealis</u> | <u>10</u> | Yes | FACU | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | | | | | | | | | | | | | | | |
| 2. <u>Chamerion angustifolium</u> | <u>10</u> | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 3. <u>Eriophorum vaginatum</u> | <u>10</u> | Yes | FACW | | | | | | | | | | | | | | | | | | |
| 4. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 5. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | <u>0</u> | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>30</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>15</u> 20% of total cover: <u>6</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>50</u> (Where applicable) | | | | | | | | | | | | | | | | | | | | | |

Remarks: _____

SOIL

Sampling Point: 2013W300

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-4 | 10YR4/3 | | | | | | | Fibric |
| 4-12 | 2.5YR4/6 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u>X</u> |
|---|--|

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

| | |
|--|--|
| Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe) | Wetland Hydrology Present? Yes _____ No <u>X</u> |
|--|--|

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W301
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): hillside
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68806 Long: 148.84196 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|---|---|
| Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u> | Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> |
| Remarks: <u>graded area</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | | | | | | | | | | | | | | | | | |
|--|------------------|-------------------|--------------------------------------|---|--|---|--------------|----------------------|----------------|------------------------|-----------------|-----------------------|------------------|------------------------|------------------|----------------------|----------------|-------------------------------|----------------|--------------------------------------|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) | | | | | | | | | | | | | | | | | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>4</u> (B) | | | | | | | | | | | | | | | | | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B) | | | | | | | | | | | | | | | | | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>450</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.46</u></td> </tr> </tbody> </table> | | Total % Cover of: | Multiply by: | OBL species <u>0</u> | x 1 = <u>0</u> | FACW species <u>10</u> | x 2 = <u>20</u> | FAC species <u>50</u> | x 3 = <u>150</u> | FACU species <u>70</u> | x 4 = <u>280</u> | UPL species <u>0</u> | x 5 = <u>0</u> | Column Totals: <u>130</u> (A) | <u>450</u> (B) | Prevalence Index = B/A = <u>3.46</u> | |
| Total % Cover of: | Multiply by: | | | | | | | | | | | | | | | | | | | | |
| OBL species <u>0</u> | x 1 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| FACW species <u>10</u> | x 2 = <u>20</u> | | | | | | | | | | | | | | | | | | | | |
| FAC species <u>50</u> | x 3 = <u>150</u> | | | | | | | | | | | | | | | | | | | | |
| FACU species <u>70</u> | x 4 = <u>280</u> | | | | | | | | | | | | | | | | | | | | |
| UPL species <u>0</u> | x 5 = <u>0</u> | | | | | | | | | | | | | | | | | | | | |
| Column Totals: <u>130</u> (A) | <u>450</u> (B) | | | | | | | | | | | | | | | | | | | | |
| Prevalence Index = B/A = <u>3.46</u> | | | | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>0</u> | | | | | | | | | | | | | | | | | | | | | |
| Sapling/Shrub Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) | | | | | | | | | | | | | | | | | |
| 1. <u>Picea mariana</u> | 10 | No | FACW | | | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | | | | | | | | | | | | | | | |
| 2. <u>Populus balsamifera</u> | 20 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 3. <u>Salix reticulata</u> | 10 | No | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Shepherdia canadensis</u> | 10 | No | FACU | | | | | | | | | | | | | | | | | | |
| 5. <u>Populus tremuloides</u> | 10 | No | FACU | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>60</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>30</u> | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>12</u> | | | | | | | | | | | | | | | | | | | | | |
| Herb Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Hydrophytic Vegetation Present? Yes _____ No <u>X</u> | | | | | | | | | | | | | | | | | |
| 1. <u>Chamerion angustifolium</u> | 20 | Yes | FACU | | | | | | | | | | | | | | | | | | |
| 2. <u>Festuca altaica</u> | 20 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 3. <u>Calamagrostis canadensis</u> | 20 | Yes | FAC | | | | | | | | | | | | | | | | | | |
| 4. <u>Elymus repens</u> | 10 | No | FACU | | | | | | | | | | | | | | | | | | |
| 5. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 6. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 7. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 8. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 9. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| 10. _____ | 0 | No | _____ | | | | | | | | | | | | | | | | | | |
| Total Cover: <u>70</u> | | | | | | | | | | | | | | | | | | | | | |
| 50% of total cover: <u>35</u> | | | | | | | | | | | | | | | | | | | | | |
| 20% of total cover: <u>14</u> | | | | | | | | | | | | | | | | | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> | | | % Bare Ground _____ | | | | | | | | | | | | | | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> | | | Total Cover of Bryophytes <u>N/A</u> | | | | | | | | | | | | | | | | | | |
| Remarks: _____ | | | | | | | | | | | | | | | | | | | | | |

SOIL

Sampling Point: 2013W301

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-2 | 2.5YR5/4 | | | | | | sandy | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

| | |
|---|--|
| Restrictive Layer (if present): Type: <u>cobble</u> Depth (inches): <u>2</u> | Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
|---|--|

Remarks:
graded area

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|---|
| Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5) |

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

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W302
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): Depression
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.68799 Long: 148.84152 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>Confirmed 2010. Saturation at ~6 inches.</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--------------|
| 1. <u>Picea mariana</u> | <u>20</u> | <u>Yes</u> | <u>FACW</u> | Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> | (A) |
| 2. _____ | <u>0</u> | <u>No</u> | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> | (B) |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> | (A/B) |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>20</u> | | | | Total % Cover of: | Multiply by: |
| 50% of total cover: <u>10</u> 20% of total cover: <u>4</u> | | | | OBL species <u>30</u> x 1 = <u>30</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>30</u> x 2 = <u>60</u> | |
| 1. <u>Picea mariana</u> | <u>10</u> | <u>No</u> | <u>FACW</u> | FAC species <u>90</u> x 3 = <u>270</u> | |
| 2. <u>Betula glandulosa</u> | <u>30</u> | <u>Yes</u> | <u>FAC</u> | FACU species <u>10</u> x 4 = <u>40</u> | |
| 3. <u>Ledum groenlandicum</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Empetrum nigrum</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | Column Totals: <u>160</u> (A) <u>400</u> (B) | |
| 5. <u>Vaccinium vitis-idaea</u> | <u>10</u> | <u>No</u> | <u>FAC</u> | Prevalence Index = B/A = <u>2.5</u> | |
| 6. <u>Salix arctica</u> | <u>10</u> | <u>No</u> | <u>FACU</u> | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>90</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>45</u> 20% of total cover: <u>18</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Glyceria striata</u> | <u>30</u> | <u>Yes</u> | <u>OBL</u> | <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Poa palustris</u> | <u>20</u> | <u>Yes</u> | <u>FAC</u> | ¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. | |
| 3. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 4. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 5. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 6. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 7. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 8. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 9. _____ | <u>0</u> | <u>No</u> | _____ | | |
| 10. _____ | <u>0</u> | <u>No</u> | _____ | | |
| Total Cover: <u>50</u> | | | | | |
| 50% of total cover: <u>25</u> 20% of total cover: <u>10</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>80</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |
| Remarks: _____ | | | | | |

SOIL

Sampling Point: 2013W302

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|-------------------|---------------|---|----------------|---|-------------------|------------------|---------|---------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-12 | 10YR3/2 | | | | | | | Fibric |
| 12-14 | 10YR2/2 | | | | | | silty | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: | Indicators for Problematic Hydric Soils ³ : | |
|--|--|--|
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | |
| <input type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | |

Restrictive Layer (if present):
 Type: N/A
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
|--|--|
| Primary Indicators (any one indicator is sufficient) | <input type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes No _____ Depth (inches): surface

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: AGDC DNP Borough/City: Denali Sampling Date: 6/26/2013
 Applicant/Owner: AGDC Sampling Point: 2013W303
 Investigator(s): JC, RC, SS, NS Landform (hillside, terrace, hummocks, etc.): _____
 Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion: Interior Alaska Lowlands Lat: 63.70056 Long: 148.87511 Datum: NAD83
 Soil Map Unit Name: N/A NWI classification: PSS1/EM1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | |
|--|--|
| Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____ | Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ |
| Remarks: <u>intersection RR & Parks HWY - shrub cut recently</u> | |

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

| Tree Stratum | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test worksheet: | |
|--|------------------|-------------------|------------------|---|--|
| 1. _____ | 0 | No | _____ | Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) | |
| 2. _____ | 0 | No | _____ | Total Number of Dominant Species Across All Strata: <u>5</u> (B) | |
| 3. _____ | 0 | No | _____ | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8</u> (A/B) | |
| 4. _____ | 0 | No | _____ | Prevalence Index worksheet: | |
| Total Cover: <u>0</u> | | | | Total % Cover of: _____ Multiply by: _____ | |
| 50% of total cover: <u>0</u> 20% of total cover: <u>0</u> | | | | OBL species <u>0</u> x 1 = <u>0</u> | |
| Sapling/Shrub Stratum | | | | FACW species <u>90</u> x 2 = <u>180</u> | |
| 1. <u>Salix reticulata</u> | 30 | Yes | FAC | FAC species <u>120</u> x 3 = <u>360</u> | |
| 2. <u>Betula glandulosa</u> | 20 | Yes | FAC | FACU species <u>30</u> x 4 = <u>120</u> | |
| 3. <u>Betula neoalaskana</u> | 20 | Yes | FACU | UPL species <u>0</u> x 5 = <u>0</u> | |
| 4. <u>Picea mariana</u> | 10 | No | FACW | Column Totals: <u>240</u> (A) <u>660</u> (B) | |
| 5. _____ | 0 | No | _____ | Prevalence Index = B/A = <u>2.75</u> | |
| 6. _____ | 0 | No | _____ | Hydrophytic Vegetation Indicators: | |
| Total Cover: <u>80</u> | | | | <input checked="" type="checkbox"/> Dominance Test is >50% | |
| 50% of total cover: <u>40</u> 20% of total cover: <u>16</u> | | | | <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 | |
| Herb Stratum | | | | ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) | |
| 1. <u>Petasites frigidus</u> | 50 | Yes | FACW | ____ Problematic Hydrophytic Vegetation ¹ (Explain) | |
| 2. <u>Aconitum delphiniifolium</u> | 10 | No | FAC | | |
| 3. <u>Chamerion angustifolium</u> | 10 | No | FACU | | |
| 4. <u>Calamagrostis canadensis</u> | 50 | Yes | FAC | | |
| 5. <u>Eriophorum vaginatum</u> | 20 | No | FACW | | |
| 6. <u>Senecio triangularis</u> | 10 | No | FACW | | |
| 7. <u>Polygonum achoreum</u> | 10 | No | FAC | | |
| 8. _____ | 0 | No | _____ | | |
| 9. _____ | 0 | No | _____ | | |
| 10. _____ | 0 | No | _____ | | |
| Total Cover: <u>160</u> | | | | Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ | |
| 50% of total cover: <u>80</u> 20% of total cover: <u>32</u> | | | | | |
| Plot size (radius, or length x width) <u>25 feet</u> % Bare Ground _____ | | | | | |
| % Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable) | | | | | |
| Remarks: <u>Erysimum cheiranthoides not on list</u> | | | | | |

SOIL

Sampling Point: 2013W303

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

| Depth (inches) | Matrix | | Redox Features | | | | Texture | Remarks |
|----------------|---------------|----|----------------|----|-------------------|------------------|---------|--------------------------|
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-5 | 5YR2.5 | | | | | | | Fibric |
| 5-12 | 7.5YR4/2 | 80 | 2.5YR5/6 | 20 | | | | silty clay few/prominent |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | | | |
|--|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol or Histel (A1) | <input type="checkbox"/> Alaska Color Change (TA4) ⁴ | <input type="checkbox"/> Alaska Gleyed Without Hue 5Y or Redder Underlying Layer | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Alaska Alpine Swales (TA5) | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Alaska Redox With 2.5Y Hue | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | | | |
| <input type="checkbox"/> Alaska Gleyed (A13) | ³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic. | | |
| <input checked="" type="checkbox"/> Alaska Redox (A14) | ⁴ Give details of color change in Remarks. | | |
| <input type="checkbox"/> Alaska Gleyed Pores (A15) | | | |

| | |
|---|---|
| Restrictive Layer (if present): Type: <u>N/A</u> Depth (inches): _____ | Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---|---|

Remarks:

HYDROLOGY

| | |
|--|---|
| Wetland Hydrology Indicators: | Secondary Indicators (2 or more required) |
| Primary Indicators (any one indicator is sufficient) | <input checked="" type="checkbox"/> Water-stained Leaves (B9) |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> High Water Table (A2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Salt Deposits (C5) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |
| <input type="checkbox"/> Marl Deposits (B15) | |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | |
| <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Other (Explain in Remarks) | |

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

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

Remarks: