

Datasheets

Data Collected: 2013

(Year of Report: October 2013)

APPENDIX B

FULL AND PHOTO POINTS

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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				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				<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"/>
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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>	<u>15</u>	Yes	FACU	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>5</u>	(B)
3. _____	<u>0</u>	No	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.6</u>	(A/B)
4. _____	<u>0</u>	No	_____	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>	Yes	FAC	FAC species <u>115</u> x 3 = <u>345</u>	
2. <u>Empetrum nigrum</u>	<u>10</u>	No	FAC	FACU species <u>25</u> x 4 = <u>100</u>	
3. <u>Picea mariana</u>	<u>20</u>	No	FACW	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Ledum groenlandicum</u>	<u>10</u>	No	FAC	Column Totals: <u>170</u> (A) <u>495</u> (B)	
5. <u>Betula glandulosa</u>	<u>40</u>	Yes	FAC	Prevalence Index = B/A = <u>2.91</u>	
6. <u>Andromeda polifolia</u>	<u>10</u>	No	OBL	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>	Yes	FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Calamagrostis canadensis</u>	<u>20</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. _____	<u>0</u>	No	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> 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>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>		
(Where applicable)					
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"/>
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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) <u>15 feet</u> % Bare Ground <u>0</u>					
% Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>50</u> (Where applicable)					
Remarks:					

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 _____

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: <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	Absolute % Cover	Dominant Species?	Indicator Status	FACW species <u>90</u> x 2 = <u>180</u>	
1. <u>Ledum decumbens</u>	<u>60</u>	Yes	FACW	FAC species <u>200</u> x 3 = <u>600</u>	
2. <u>Vaccinium vitis-idaea</u>	<u>50</u>	Yes	FAC	FACU species <u>20</u> x 4 = <u>80</u>	
3. <u>Betula nana</u>	<u>40</u>	Yes	FAC	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Picea mariana</u>	<u>20</u>	No	FACW	Column Totals: <u>310</u> (A) <u>860</u> (B)	
5. <u>Salix alaxensis</u>	<u>10</u>	No	FAC	Prevalence Index = B/A = <u>2.77</u>	
6. _____	<u>0</u>	No	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>180</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>90</u> 20% of total cover: <u>36</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>Festuca altaica</u>	<u>60</u>	Yes	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Calamagrostis canadensis</u>	<u>40</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. _____	<u>0</u>	No	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> 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) _____ % Bare Ground _____					
% 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"/>
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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: <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>70</u> x 1 = <u>70</u>	
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	FACW species <u>40</u> x 2 = <u>80</u>	
1. <u>Salix pulchra</u>	40	Yes	FACW	FAC species <u>70</u> x 3 = <u>210</u>	
2. <u>Betula nana</u>	40	Yes	FAC	FACU species <u>40</u> x 4 = <u>160</u>	
3. <u>Vaccinium vitis-idaea</u>	10	No	FAC	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	0	No	_____	Column Totals: <u>220</u> (A) <u>520</u> (B)	
5. _____	0	No	_____	Prevalence Index = B/A = <u>2.36</u>	
6. _____	0	No	_____	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>Cornus canadensis</u>	40	Yes	FACU	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Comarum palustre</u>	20	No	OBL	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. <u>Carex aquatilis</u>	20	No	OBL	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
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>					
50% of total cover: <u>65</u> 20% of total cover: <u>26</u>					
Plot size (radius, or length x width) _____ % Bare Ground _____					
% 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"/>
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Remarks:
Inundated soil - dark

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 checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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	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 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 = <u>3.55</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	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>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>				Hydrophytic Vegetation Present? Yes _____ No <u>X</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)					
Remarks:					

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"/>
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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? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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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		
1. <u>Picea glauca</u>	30	Yes	FACU		
2. _____	0	No	_____		
3. _____	0	No	_____		
4. _____	0	No	_____		
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>	70	Yes	FAC		
2. <u>Ledum groenlandicum</u>	30	No	FAC		
3. <u>Picea mariana</u>	40	No	FACW		
4. <u>Empetrum nigrum</u>	50	Yes	FAC		
5. <u>Betula glandulosa</u>	30	No	FAC		
6. <u>Chamaedaphne calyculata</u>	10	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		
1. <u>Calamagrostis canadensis</u>	1	Yes	FAC		
2. <u>Eriophorum angustifolium</u>	1	Yes	OBL		
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>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 _____					
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>75</u> (Where applicable)					
Remarks:					

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.8 (A/B)

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 = 2.91

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 _____

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"/>
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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: <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																		
1. <u>Picea mariana</u>	20	No	FACW																		
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																		
1. <u>Chamerion angustifolium</u>	10	Yes	FACU	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>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>				Hydrophytic Vegetation Present? Yes _____ No <u>X</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"/>
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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	
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>Picea mariana</u>	10	No	FACW	
2. <u>Salix reticulata</u>	30	Yes	FAC	
3. <u>Salix alaxensis</u>	20	Yes	FAC	
4. <u>Betula neoalaskana</u>	10	No	FACU	
5. <u>Ledum groenlandicum</u>	10	No	FAC	
6. <u>Vaccinium vitis-idaea</u>	10	No	FAC	
Total Cover: 90				
50% of total cover: 45				20% of total cover: 18
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Equisetum arvense</u>	60	Yes	FAC	
2. <u>Parnassia palustris</u>	20	No	FACW	
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: 100				
50% of total cover: 50				20% of total cover: 20
Plot size (radius, or length x width) _____ % Bare Ground _____				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (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 30 x 2 = 60
 FAC species 130 x 3 = 390
 FACU species 20 x 4 = 80
 UPL species 0 x 5 = 0
 Column Totals: 190 (A) 540 (B)
 Prevalence Index = B/A = 2.84

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: 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	
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>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: 70				
50% of total cover: 35		20% of total cover: 14		
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: 60				
50% of total cover: 30		20% of total cover: 12		
Plot size (radius, or length x width) _____ % Bare Ground _____				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes <u>30</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:
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 _____

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"/>
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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"/> 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:	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 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>10</u>	Yes	FACU		
2. _____	<u>0</u>	No			
3. _____	<u>0</u>	No			
4. _____	<u>0</u>	No			
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>	Yes	FAC		
2. <u>Picea glauca</u>	<u>30</u>	Yes	FACU		
3. _____	<u>0</u>	No			
4. _____	<u>0</u>	No			
5. _____	<u>0</u>	No			
6. _____	<u>0</u>	No			
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>	Yes	FACW		
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			
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) _____ % 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>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> (B)

Prevalence Index = B/A = 3.07

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: 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"/> 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: _____	
Depth (inches): _____	
	Hydric Soil Present? Yes _____ 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 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:	
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): _____	
	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: 7/27/2010
 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: <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				FACW species <u>50</u> x 2 = <u>100</u>	
1. <u>Betula glandulosa</u>	80	Yes	FAC	FAC species <u>140</u> x 3 = <u>420</u>	
2. <u>Populus tremuloides</u>	20	No	FACU	FACU species <u>30</u> x 4 = <u>120</u>	
3. <u>Dasiphora fruticosa</u>	10	No	FAC	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Picea mariana</u>	10	No	FACW	Column Totals: <u>230</u> (A) <u>650</u> (B)	
5. <u>Arctostaphylos rubra</u>	10	No	FAC	Prevalence Index = B/A = <u>2.82</u>	
6. <u>Salix arctophila</u>	10	No	OBL	Hydrophytic Vegetation Indicators:	
Total Cover: <u>140</u>				<u>Y</u> Dominance Test is >50%	
50% of total cover: <u>70</u> 20% of total cover: <u>28</u>				<u>Y</u> Prevalence Index is ≤3.0	
Herb Stratum				____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Eriophorum vaginatum</u>	40	Yes	FACW	____ Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Aconitum delphiniifolium</u>	10	No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
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"/>
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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 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 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>Populus tremuloides</u>	<u>80</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Arctostaphylos rubra</u>	<u>30</u>	<u>No</u>	<u>FAC</u>	
3. <u>Vaccinium vitis-idaea</u>	<u>30</u>	<u>No</u>	<u>FAC</u>	
4. <u>Salix alaxensis</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
5. _____	<u>0</u>	<u>No</u>		
6. _____	<u>0</u>	<u>No</u>		
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>	<u>No</u>	<u>FAC</u>	
2. <u>Eriophorum vaginatum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. <u>Calamagrostis canadensis</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	
4. <u>Senecio lugens</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>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)				

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)

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>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 = 3.22

Hydrophytic Vegetation Indicators:

Y 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

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 = <u>2.83</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

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"/>
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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"/>
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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		
1. <u>Picea mariana</u>	<u>10</u>	Yes	FACW		
2. _____	<u>0</u>	No	_____		
3. _____	<u>0</u>	No	_____		
4. _____	<u>0</u>	No	_____		
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>30</u>	Yes	FAC		
2. <u>Picea mariana</u>	<u>10</u>	No	FACW		
3. <u>Arctostaphylos rubra</u>	<u>30</u>	Yes	FAC		
4. <u>Vaccinium vitis-idaea</u>	<u>30</u>	Yes	FAC		
5. <u>Salix pulchra</u>	<u>10</u>	No	FACW		
6. <u>Salix arctophila</u>	<u>10</u>	No	OBL		
Total Cover: <u>120</u>					
50% of total cover: <u>60</u>			20% of total cover: <u>24</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status		
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>					
50% of total cover: <u>40</u>			20% of total cover: <u>16</u>		
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: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (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>80</u>	x 2 =	<u>160</u>
FAC species <u>120</u>	x 3 =	<u>360</u>
FACU species <u>0</u>	x 4 =	<u>0</u>
UPL species <u>0</u>	x 5 =	<u>0</u>
Column Totals: <u>210</u> (A)		<u>530</u> (B)

Prevalence Index = B/A = 2.52

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: 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"/>
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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"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" 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 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"/>
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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	Dominance Test worksheet:																	
1. <u>Picea glauca</u>	<u>20</u>	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u>	(A)																
2. <u>Picea mariana</u>	<u>10</u>	Yes	FACW	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>0.57</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>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></td> <td>(A) <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>																					
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 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>20</u>	No	FAC																		
2. <u>Vaccinium vitis-idaea</u>	<u>30</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																	
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			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>															
1. <u>Linnaea borealis</u>	<u>10</u>	Yes	FACU																		
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>15 feet</u>			% Bare Ground <u>5</u>																		
% Cover of Wetland Bryophytes <u>N/A</u>			Total Cover of Bryophytes <u>50</u>																		
(Where applicable)																					
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"/>
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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 <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"/>
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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: 0
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Picea mariana</u>	10	No	FACW	
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: 60				
50% of total cover: 30				20% of total cover: 12
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
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. _____	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: 12
Plot size (radius, or length x width) _____ % Bare Ground _____				
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (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>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 <u>X</u>
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Remarks:

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"/>
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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? (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"/>
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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 <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>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: <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>40</u></td> <td>x 1 = <u>40</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>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>160</u></td> <td>(A) <u>370</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.31</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>90</u>	x 3 = <u>270</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>370</u> (B)	Prevalence Index = B/A = <u>2.31</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>40</u>	x 1 = <u>40</u>																				
FACW species <u>30</u>	x 2 = <u>60</u>																				
FAC species <u>90</u>	x 3 = <u>270</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>370</u> (B)																				
Prevalence Index = B/A = <u>2.31</u>																					
Total Cover: <u>20</u>																					
50% of total cover: <u>10</u>	20% of total cover: <u>4</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>Picea mariana</u>	<u>10</u>	No	FACW																		
2. <u>Betula glandulosa</u>	<u>30</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																	
3. <u>Ledum groenlandicum</u>	<u>10</u>	No	FAC																		
4. <u>Empetrum nigrum</u>	<u>20</u>	Yes	FAC																		
5. <u>Vaccinium vitis-idaea</u>	<u>10</u>	No	FAC																		
6. <u>Salix arctophila</u>	<u>10</u>	No	OBL																		
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 <input checked="" type="checkbox"/> No _____															
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"/>
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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		
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 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:	80				
	50% of total cover: 40	20% of total cover: 16			
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Petasites frigidus</u>	50	Yes	FACW		
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:	160				
	50% of total cover: 80	20% of total cover: 32			
Plot size (radius, or length x width) _____ % Bare Ground _____					
% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (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: 5 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0.8 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 20 x 1 = 20
 FACW species 70 x 2 = 140
 FAC species 120 x 3 = 360
 FACU species 30 x 4 = 120
 UPL species 0 x 5 = 0
 Column Totals: 240 (A) 640 (B)
 Prevalence Index = B/A = 2.66

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 _____

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"/> 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 checked="" 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):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____ Depth (inches): _____	

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	Dominance Test worksheet:																																
1. _____	0	No	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.5</u> (A/B)																																
2. _____	0	No	_____																																	
3. _____	0	No	_____																																	
4. _____	0	No	_____																																	
Total Cover: <u>0</u>				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>x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>0</u></td> <td>x 2 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>100</u></td> <td>x 3 =</td> <td align="center"><u>300</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>30</u></td> <td>x 4 =</td> <td align="center"><u>120</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>0</u></td> <td>x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>130</u> (A)</td> <td></td> <td align="center"><u>420</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>3.23</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>100</u>	x 3 =	<u>300</u>	FACU species	<u>30</u>	x 4 =	<u>120</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>130</u> (A)		<u>420</u> (B)	Prevalence Index = B/A = <u>3.23</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>100</u>	x 3 =	<u>300</u>																																	
FACU species	<u>30</u>	x 4 =	<u>120</u>																																	
UPL species	<u>0</u>	x 5 =	<u>0</u>																																	
Column Totals:	<u>130</u> (A)		<u>420</u> (B)																																	
Prevalence Index = B/A = <u>3.23</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. _____	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>																																	
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:																																
1. <u>Calamagrostis canadensis</u>	100	Yes	FAC	<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 checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																																
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: <u>130</u>				<input type="checkbox"/> Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																																
50% of total cover: <u>65</u>			20% of total cover: <u>26</u>																																	
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>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																
Remarks: <u>Transition area; seep has dried up</u>																																				

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"/>
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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"/>
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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>	_____	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>0.33</u> (A/B)	
4. _____	<u>0</u>	<u>No</u>	_____	Prevalence Index worksheet:	
Total Cover: <u>80</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>40</u> 20% of total cover: <u>16</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>Vaccinium vitis-idaea</u>	<u>90</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>130</u> x 3 = <u>390</u>	
2. <u>Rhododendron lapponicum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	FACU species <u>132</u> x 4 = <u>528</u>	
3. <u>Empetrum nigrum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Salix barclayi</u>	<u>20</u>	<u>No</u>	<u>FAC</u>	Column Totals: <u>262</u> (A) <u>918</u> (B)	
5. <u>Populus tremuloides</u>	<u>1</u>	<u>No</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.5</u>	
6. <u>Populus balsamifera</u>	<u>1</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:	
Total Cover: <u>132</u>				<input type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>66</u> 20% of total cover: <u>26.4</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>Mertensia paniculata</u>	<u>50</u>	<u>Yes</u>	<u>FACU</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>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"/>
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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"/>
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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	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>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>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
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)					

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 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>Ice</u> Depth (inches): <u>10 Inches</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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>					
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>					
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Vaccinium uliginosum</u>	<u>65</u>	<u>Yes</u>	<u>FAC</u>	Total % Cover of: <u>3</u> Multiply by: _____	
2. <u>Ledum groenlandicum</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	OBL species <u>3</u> x 1 = <u>3</u>	
3. <u>Betula nana</u>	<u>20</u>	<u>No</u>	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>	
4. <u>Salix candida</u>	<u>3</u>	<u>No</u>	<u>OBL</u>	FAC species <u>128</u> x 3 = <u>384</u>	
5. <u>Alnus rubra</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	FACU species <u>50</u> x 4 = <u>200</u>	
6. _____	<u>0</u>	<u>No</u>	_____	UPL species <u>0</u> x 5 = <u>0</u>	
Total Cover: <u>131</u>				Column Totals: <u>181</u> (A) <u>587</u> (B)	
50% of total cover: <u>65.5</u> 20% of total cover: <u>26.2</u>				Prevalence Index = B/A = <u>3.24</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>				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"/>
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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? 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"/>
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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
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>Picea mariana</u>	20	No	FACW
2. <u>Betula glandulosa</u>	80	Yes	FAC
3. <u>Salix candida</u>	80	Yes	OBL
4. <u>Vaccinium uliginosum</u>	10	No	FAC
5. _____	0	No	_____
6. _____	0	No	_____
Total Cover: _____	190		
50% of total cover: _____	95	20% of total cover: _____	38
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: _____	1		
50% of total cover: _____	0.5	20% of total cover: _____	0.2
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)			

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 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 = 2.04

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		
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 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>Ice</u> Depth (inches): <u>9</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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"/> 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 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 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>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>	_____	Prevalence Index worksheet:	
Total Cover: <u>60</u>				Total % Cover of: _____ Multiply by: _____	
50% of total cover: <u>30</u> 20% of total cover: <u>12</u>				OBL species <u>5</u> x 1 = <u>5</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>70</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>120</u> x 3 = <u>360</u>	
2. <u>Vaccinium vitis-idaea</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	FACU species <u>60</u> x 4 = <u>240</u>	
3. <u>Empetrum nigrum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Salix arctophila</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	Column Totals: <u>185</u> (A) <u>605</u> (B)	
5. _____	<u>0</u>	<u>No</u>	_____	Prevalence Index = B/A = <u>3.27</u>	
6. _____	<u>0</u>	<u>No</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 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>	_____	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>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)					

Remarks: Hydrophytic based on FAC vegetation

SOIL

Sampling Point: 2013W05

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"/>
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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"/>
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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"/>
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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"/>
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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 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>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>	<u>Yes</u>	<u>FACU</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)	
2. <u>Picea glauca</u>	<u>80</u>	<u>Yes</u>	<u>FACU</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>			
Total Cover: <u>170</u>				Prevalence Index worksheet:	
50% of total cover: <u>85</u> 20% of total cover: <u>34</u>				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species <u>0</u> x 1 = <u>0</u>	
1. <u>Vaccinium vitis-idaea</u>	<u>90</u>	<u>Yes</u>	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>	
2. _____	<u>0</u>	<u>No</u>		FAC species <u>105</u> x 3 = <u>315</u>	
3. _____	<u>0</u>	<u>No</u>		FACU species <u>180</u> x 4 = <u>720</u>	
4. _____	<u>0</u>	<u>No</u>		UPL species <u>0</u> x 5 = <u>0</u>	
5. _____	<u>0</u>	<u>No</u>		Column Totals: <u>285</u> (A) <u>1035</u> (B)	
6. _____	<u>0</u>	<u>No</u>		Prevalence Index = B/A = <u>3.63</u>	
Total Cover: <u>90</u>				Hydrophytic Vegetation Indicators:	
50% of total cover: <u>45</u> 20% of total cover: <u>18</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)	
Herb Stratum				¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
1. <u>Geocaulon lividum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>		
2. <u>Calamagrostis canadensis</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>		
3. <u>Lupinus arcticus</u>	<u>5</u>	<u>No</u>	<u>FACU</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>25</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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"/>
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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? 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"/>
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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>	_____				
Total Cover:	<u>30</u>			Prevalence Index worksheet:			
50% of total cover:	<u>15</u>	20% of total cover:	<u>6</u>	Total % Cover of:	Multiply by:		
Sapling/Shrub Stratum				OBL species	<u>0</u> x 1 = <u>0</u>		
1. <u>Betula nana</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	FACW species	<u>0</u> x 2 = <u>0</u>		
2. <u>Vaccinium vitis-idaea</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	FAC species	<u>40</u> x 3 = <u>120</u>		
3. _____	<u>0</u>	<u>No</u>	_____	FACU species	<u>30</u> x 4 = <u>120</u>		
4. _____	<u>0</u>	<u>No</u>	_____	UPL species	<u>0</u> x 5 = <u>0</u>		
5. _____	<u>0</u>	<u>No</u>	_____	Column Totals:	<u>70</u> (A) <u>240</u> (B)		
6. _____	<u>0</u>	<u>No</u>	_____	Prevalence Index = B/A = <u>3.42</u>			
Total Cover:	<u>40</u>			Hydrophytic Vegetation Indicators:			
50% of total cover:	<u>20</u>	20% of total cover:	<u>8</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>10</u>				
% Cover of Wetland Bryophytes (Where applicable)	<u>N/A</u>	Total Cover of Bryophytes	<u>50</u>				

Remarks: Only hydric due to FAC

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"/>
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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"/>
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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 = <u>1.22</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: 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"/>
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Remarks:
Histic epipedon (saturation) assumed based on secondary indicators.

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 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 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: 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"/>
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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>	_____	Total Number of Dominant Species Across All Strata: <u>2</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>	_____		
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>	_____	FACW species <u>0</u> x 2 = <u>0</u>	
4. _____	<u>0</u>	<u>No</u>	_____	FAC species <u>96</u> x 3 = <u>288</u>	
5. _____	<u>0</u>	<u>No</u>	_____	FACU species <u>5</u> x 4 = <u>20</u>	
6. _____	<u>0</u>	<u>No</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>	_____	<input 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 <u>5</u>					
% Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>N/A</u> (Where applicable)					
Remarks: _____					

Hydrophytic Vegetation Present? Yes No

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 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/Gravel</u> Depth (inches): <u>18</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
No indicators of hydric soils 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? (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"/>
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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:	
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>4</u> (A)
2. _____	<u>0</u>	<u>No</u>	<u>_____</u>	Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
3. _____	<u>0</u>	<u>No</u>	<u>_____</u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.8</u> (A/B)
4. _____	<u>0</u>	<u>No</u>	<u>_____</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				FACW species <u>10</u> x 2 = <u>20</u>	
1. <u>Betula glandulosa</u>	<u>90</u>	<u>Yes</u>	<u>FAC</u>	FAC species <u>290</u> x 3 = <u>870</u>	
2. <u>Ledum groenlandicum</u>	<u>80</u>	<u>Yes</u>	<u>FAC</u>	FACU species <u>5</u> x 4 = <u>20</u>	
3. <u>Vaccinium vitis-idaea</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Rubus chamaemorus</u>	<u>10</u>	<u>No</u>	<u>FACW</u>	Column Totals: <u>305</u> (A) <u>910</u> (B)	
5. _____	<u>0</u>	<u>No</u>	<u>_____</u>	Prevalence Index = B/A = <u>2.98</u>	
6. _____	<u>0</u>	<u>No</u>	<u>_____</u>	Hydrophytic Vegetation Indicators:	
Total Cover: <u>250</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>125</u> 20% of total cover: <u>50</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>Rhododendron lapponicum</u>	<u>50</u>	<u>Yes</u>	<u>FAC</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>		
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>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: 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"/>
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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"/>
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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"/>
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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 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>None</u> Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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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 checked="" 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? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
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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>	
Sapling/Shrub Stratum				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	
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>	<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>		
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> (Where applicable)					

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 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>Ice</u> Depth (inches): <u>9</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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 checked="" 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 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"/>
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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: <u>40</u>				Total % Cover of:	Multiply by:
50% of total cover: <u>20</u> 20% of total cover: <u>8</u>				OBL species <u>0</u> x 1 = <u>0</u>	
Sapling/Shrub Stratum				FACW species <u>115</u> x 2 = <u>230</u>	
1. <u>Betula glandulosa</u>	<u>40</u>	<u>No</u>	<u>FAC</u>	FAC species <u>280</u> x 3 = <u>840</u>	
2. <u>Ledum groenlandicum</u>	<u>60</u>	<u>No</u>	<u>FAC</u>	FACU species <u>0</u> x 4 = <u>0</u>	
3. <u>Rubus chamaemorus</u>	<u>70</u>	<u>No</u>	<u>FACW</u>	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Vaccinium vitis-idaea</u>	<u>80</u>	<u>Yes</u>	<u>FAC</u>	Column Totals: <u>395</u> (A) <u>1070</u> (B)	
5. <u>Empetrum nigrum</u>	<u>60</u>	<u>No</u>	<u>FAC</u>	Prevalence Index = B/A = <u>2.7</u>	
6. <u>Vaccinium uliginosum</u>	<u>40</u>	<u>No</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
Total Cover: <u>350</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>175</u> 20% of total cover: <u>70</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>Equisetum palustre</u>	<u>5</u>	<u>Yes</u>	<u>FACW</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>5</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>					
% 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"/>
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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>	_____		
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"/> 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 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? (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:
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>	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</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>0.33</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>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>167</u></td> <td>x 4 = <u>668</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>252</u> (A)</td> <td><u>918</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.64</u></td> </tr> </tbody> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>167</u>	x 4 = <u>668</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>252</u> (A)	<u>918</u> (B)	Prevalence Index = B/A = <u>3.64</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>5</u>	x 2 = <u>10</u>																				
FAC species <u>80</u>	x 3 = <u>240</u>																				
FACU species <u>167</u>	x 4 = <u>668</u>																				
UPL species <u>0</u>	x 5 = <u>0</u>																				
Column Totals: <u>252</u> (A)	<u>918</u> (B)																				
Prevalence Index = B/A = <u>3.64</u>																					
Total Cover: <u>90</u>																					
50% of total cover: <u>45</u>			20% of total cover: <u>18</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>Rosa acicularis</u>	<u>20</u>	Yes	FACU																		
2. <u>Vaccinium uliginosum</u>	<u>25</u>	Yes	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																	
3. <u>Ledum groenlandicum</u>	<u>5</u>	No	FAC																		
4. <u>Salix richardsonii</u>	<u>5</u>	No	FACW																		
5. <u>Betula neoalaskana</u>	<u>2</u>	No	FACU																		
6. _____	<u>0</u>	No	_____																		
Total Cover: <u>57</u>																					
50% of total cover: <u>28.5</u>			20% of total cover: <u>11.4</u>																		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status																		
1. <u>Equisetum sylvaticum</u>	<u>50</u>	Yes	FAC																		
2. <u>Cornus canadensis</u>	<u>40</u>	Yes	FACU																		
3. <u>Mertensia paniculata</u>	<u>5</u>	No	FACU																		
4. <u>Hedysarum alpinum</u>	<u>10</u>	No	FACU																		
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>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 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"/>
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Remarks:
No hydric soil indicators observed

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 _____ 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:
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		
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		
1. <u>Calamagrostis canadensis</u>	<u>100</u>	<u>Yes</u>	<u>FAC</u>	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.	
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 _____				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>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"/>
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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"/> 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? (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:
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																										
1. <u>Picea glauca</u>	<u>20</u>	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																									
2. <u>Populus balsamifera</u>	<u>20</u>	Yes	FACU																										
3. _____	<u>0</u>	No	_____																										
4. _____	<u>0</u>	No	_____																										
Total Cover: <u>40</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>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 =</td> <td><u>15</u></td> </tr> <tr> <td>FACU species <u>156</u></td> <td>x 4 =</td> <td><u>624</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>161</u> (A)</td> <td></td> <td><u>639</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: center;">Prevalence Index = B/A = <u>3.96</u></td> </tr> </tbody> </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>5</u>	x 3 =	<u>15</u>	FACU species <u>156</u>	x 4 =	<u>624</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>161</u> (A)		<u>639</u> (B)	Prevalence Index = B/A = <u>3.96</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>5</u>	x 3 =	<u>15</u>																											
FACU species <u>156</u>	x 4 =	<u>624</u>																											
UPL species <u>0</u>	x 5 =	<u>0</u>																											
Column Totals: <u>161</u> (A)		<u>639</u> (B)																											
Prevalence Index = B/A = <u>3.96</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>Shepherdia canadensis</u>	<u>10</u>	No	FACU	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>Populus balsamifera</u>	<u>20</u>	Yes	FACU																										
3. <u>Picea glauca</u>	<u>40</u>	Yes	FACU																										
4. _____	<u>0</u>	No	_____																										
5. _____	<u>0</u>	No	_____																										
6. _____	<u>0</u>	No	_____																										
Total Cover: <u>70</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																									
50% of total cover: <u>35</u> 20% of total cover: <u>14</u>																													
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status																										
1. <u>Lupinus arcticus</u>	<u>15</u>	Yes	FACU	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																									
2. <u>Mertensia paniculata</u>	<u>1</u>	No	FACU																										
3. <u>Epilobium anagallidifolium</u>	<u>5</u>	No	FAC																										
4. <u>Streptopus amplexifolius</u>	<u>30</u>	Yes	FACU																										
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>																													
% Cover of Wetland Bryophytes <u>N/A</u> Total Cover of Bryophytes <u>50</u>																													
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"/>
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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"/>
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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>					
50% of total cover: <u>5</u>			20% of total cover: <u>2</u>		
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. <u>Betula glandulosa</u>	<u>20</u>	<u>No</u>	<u>FAC</u>	Total % Cover of: _____	Multiply by: _____
2. <u>Ledum groenlandicum</u>	<u>15</u>	<u>No</u>	<u>FAC</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Vaccinium vitis-idaea</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	FACW species <u>0</u> x 2 = <u>0</u>	
4. <u>Betula nana</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	FAC species <u>125</u> x 3 = <u>375</u>	
5. <u>Vaccinium uliginosum</u>	<u>20</u>	<u>No</u>	<u>FAC</u>	FACU species <u>10</u> x 4 = <u>40</u>	
6. <u>Empetrum nigrum</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	UPL species <u>0</u> x 5 = <u>0</u>	
Total Cover: <u>105</u>				Column Totals: <u>135</u> (A) <u>415</u> (B)	
50% of total cover: <u>52.5</u>			20% of total cover: <u>21</u>	Prevalence Index = B/A = <u>3.07</u>	
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Ribes triste</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Epilobium ciliatum</u>	<u>10</u>	<u>Yes</u>	<u>FAC</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>	_____		
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>			
Remarks: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	

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"/>
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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>	<u>_____</u>	Total Number of Dominant Species Across All Strata: <u>5</u> (B)	
3. _____	<u>0</u>	<u>No</u>	<u>_____</u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.6</u> (A/B)	
4. _____	<u>0</u>	<u>No</u>	<u>_____</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	Absolute % Cover	Dominant Species?	Indicator Status	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	Absolute % Cover	Dominant Species?	Indicator Status	<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>	<u>_____</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
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>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 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"/>
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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 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: 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	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				FACW species <u>85</u> x 2 = <u>170</u>	
1. <u>Salix pulchra</u>	65	Yes	FACW	FAC species <u>70</u> x 3 = <u>210</u>	
2. <u>Andromeda polifolia</u>	10	No	OBL	FACU species <u>0</u> x 4 = <u>0</u>	
3. _____	0	No	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	0	No	_____	Column Totals: <u>165</u> (A) <u>390</u> (B)	
5. _____	0	No	_____	Prevalence Index = B/A = <u>2.36</u>	
6. _____	0	No	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>75</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>37.5</u> 20% of total cover: <u>15</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>Calamagrostis canadensis</u>	70	Yes	FAC	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Eriophorum vaginatum</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 <input checked="" type="checkbox"/> 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>90</u>					
50% of total cover: <u>45</u> 20% of total cover: <u>18</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>50</u> (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		

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

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: 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: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">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>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>260</u></td> <td>x 3 = <u>780</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>310</u></td> <td style="text-align: right;">(A) <u>920</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.96</u></td> </tr> </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>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>	Prevalence Index = B/A = <u>2.96</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>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>																				
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																		
3. <u>Picea mariana</u>	<u>20</u>	No	FACW	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																	
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			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____															
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"/>
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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? 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: 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 <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: 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.

Remarks: _____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
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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"/>
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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): <u>0</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: 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%	
50% of total cover: <u>65</u> 20% of total cover: <u>26</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 _____					
% 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>
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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>
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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"/>
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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>	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>Picea mariana</u>	20	No	FACW																		
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																		
1. <u>Chamerion angustifolium</u>	10	Yes	FACU	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>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)				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>																	
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"/> 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 Gleyed Without Hue 5Y or Redder Underlying Layer
<input type="checkbox"/> Alaska Redox (A14)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Alaska Gleyed Pores (A15)	

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>cobble</u> Depth (inches): <u>4</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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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:
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				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				<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"/> 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: 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: _____			0	
50% of total cover: _____			0	20% of total cover: _____
Sapling/Shrub Stratum				
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: _____			70	
50% of total cover: _____			35	20% of total cover: _____
Herb Stratum				
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: _____			60	
50% of total cover: _____			30	20% of total cover: _____
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>20</u>	x 2 = <u>40</u>
FAC species <u>90</u>	x 3 = <u>270</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>130</u> (A)	<u>390</u> (B)
Prevalence Index = B/A = <u>3</u>	

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: 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"/>
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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;"> <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>x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td> <td align="center"><u>20</u></td> <td>x 2 =</td> <td align="center"><u>40</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>170</u></td> <td>x 3 =</td> <td align="center"><u>510</u></td> </tr> <tr> <td>FACU species</td> <td align="center"><u>0</u></td> <td>x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td align="center"><u>0</u></td> <td>x 5 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>190</u> (A)</td> <td></td> <td align="center"><u>550</u> (B)</td> </tr> <tr> <td colspan="4">Prevalence Index = B/A = <u>2.89</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>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																																				
1. _____	0	No	_____	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)																																
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>																																		
Herb Stratum																																				
1. <u>Calamagrostis canadensis</u>	<u>80</u>	Yes	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																																
2. <u>Aconitum delphiniifolium</u>	<u>10</u>	No	<u>FAC</u>																																	
3. <u>Polemonium acutiflorum</u>	<u>20</u>	No	<u>FAC</u>																																	
4. <u>Potentilla norvegica</u>	<u>20</u>	No	<u>FAC</u>																																	
5. <u>Galium trifidum</u>	<u>20</u>	No	<u>FACW</u>																																	
6. <u>Poa arctica</u>	<u>40</u>	Yes	<u>FAC</u>																																	
7. _____	0	No	_____																																	
8. _____	0	No	_____																																	
9. _____	0	No	_____																																	
10. _____	0	No	_____																																	
Total Cover: <u>190</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____																																
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>																																		
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	Loc ²		
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 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:

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 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): <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: <p align="center">Confirm upland.</p>	

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>4</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>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>70</u> x 2 = <u>140</u>	
1. <u>Betula glandulosa</u>	<u>70</u>	Yes	FAC	FAC species <u>70</u> x 3 = <u>210</u>	
2. <u>Picea mariana</u>	<u>30</u>	Yes	FACW	FACU species <u>0</u> x 4 = <u>0</u>	
3. _____	<u>0</u>	No	_____	UPL species <u>0</u> x 5 = <u>0</u>	
4. _____	<u>0</u>	No	_____	Column Totals: <u>140</u> (A) <u>350</u> (B)	
5. _____	<u>0</u>	No	_____	Prevalence Index = B/A = <u>2.5</u>	
6. _____	<u>0</u>	No	_____	Hydrophytic Vegetation Indicators:	
Total Cover: <u>100</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>50</u> 20% of total cover: <u>20</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>Eriophorum vaginatum</u>	<u>30</u>	Yes	FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	<u>0</u>	No	_____	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
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>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:					

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"/> 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>N/A</u> Depth (inches): _____	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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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	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:	
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>70</u> x 2 = <u>140</u>	
1. <u>Betula glandulosa</u>	80	Yes	FAC	FAC species <u>140</u> x 3 = <u>420</u>	
2. <u>Populus tremuloides</u>	20	No	FACU	FACU species <u>40</u> x 4 = <u>160</u>	
3. <u>Picea mariana</u>	10	No	FACW	UPL species <u>0</u> x 5 = <u>0</u>	
4. <u>Arctostaphylos rubra</u>	10	No	FAC	Column Totals: <u>250</u> (A) <u>720</u> (B)	
5. <u>Salix arctica</u>	10	No	FACU	Prevalence Index = B/A = <u>2.88</u>	
6. <u>Dasiphora fruticosa</u>	10	No	FAC	Hydrophytic Vegetation Indicators:	
Total Cover: <u>140</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
50% of total cover: <u>70</u> 20% of total cover: <u>28</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>Eriophorum vaginatum</u>	40	Yes	FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Aconitum delphiniifolium</u>	10	No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
3. <u>Galium boreale</u>	10	No	FACU	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
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)					

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"/>
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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 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>	

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	<u>FACW</u>	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></td> </tr> <tr> <td colspan="2" style="text-align: right;">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>	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>																				
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	<u>FACU</u>																		
2. <u>Arctostaphylos rubra</u>	<u>30</u>	No	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.																	
3. <u>Salix alaxensis</u>	<u>10</u>	No	<u>FAC</u>																		
4. <u>Vaccinium vitis-idaea</u>	<u>30</u>	No	<u>FAC</u>																		
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			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____															
1. <u>Astragalus alpinus</u>	<u>10</u>	No	<u>FAC</u>																		
2. <u>Eriophorum vaginatum</u>	<u>20</u>	Yes	<u>FACW</u>																		
3. <u>Calamagrostis canadensis</u>	<u>20</u>	Yes	<u>FAC</u>																		
4. <u>Senecio lugens</u>	<u>10</u>	No	<u>FAC</u>																		
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? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
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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: <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>	10	Yes	FAC		
2. _____	0	No	_____		
3. _____	0	No	_____		
4. _____	0	No	_____		
5. _____	0	No	_____		
6. _____	0	No	_____		
Total Cover: <u>10</u>					
50% of total cover: <u>5</u>			20% of total cover: <u>2</u>		
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: <u>140</u>					
50% of total cover: <u>70</u>			20% of total cover: <u>28</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: _____					

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:	Result
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 = 2.33

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: 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"/>
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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	Absolute % Cover	Dominant Species?	Indicator Status	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	Absolute % Cover	Dominant Species?	Indicator Status	____ 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	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
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"/>
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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>
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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>
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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	
1. _____	0	No	_____	
2. _____	0	No	_____	
3. _____	0	No	_____	
4. _____	0	No	_____	
Total Cover: _____		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>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: <u>30</u>		20% of total cover: <u>12</u>		
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
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. <u>Elymus repens</u>	10	No	<u>FACU</u>	
5. _____	0	No	_____	
6. _____	0	No	_____	
7. _____	0	No	_____	
8. _____	0	No	_____	
9. _____	0	No	_____	
10. _____	0	No	_____	
Total Cover: _____		70		
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> (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 0 x 1 = 0
 FACW species 10 x 2 = 20
 FAC species 50 x 3 = 150
 FACU species 70 x 4 = 280
 UPL species 0 x 5 = 0
 Column Totals: 130 (A) 450 (B)
 Prevalence Index = B/A = 3.46

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

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 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>2</u>	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
graded area

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? (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:

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>	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	
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				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
1. <u>Petasites frigidus</u>	50	Yes	FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Aconitum delphiniifolium</u>	10	No	FAC	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.	
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>					
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: Erysimum cheiranthoides not on list

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"/>
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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>	

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

Remarks: