

APPENDIX A

Data Sheets and Sample Site Photographs

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006
 Applicant/Owner: DOT&PF Sampling Point: 1
 Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none
 Local relief (concave, convex, none): none Slope (%):
 Subregion: Southcentral Alaska Lat: Long: Datum:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes _____ No <u>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes _____ No <u>✓</u>		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. The site is adjacent to a bike path and the highway. There is a creek approximately 20 feet away. Creek is deep cut.			

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. <i>Populus balsamifera</i> (t)	65	FACU
2. <i>Gymnocarpium dryopteris</i> (h)	30	FACU
3. <i>Heracleum maximum</i>	35	FACU
4. <i>Equisetum arvense</i> (h)	15	FACU
5. <i>Calamagrostis canadensis</i> (h)	10	FAC
6. <i>Aconitum delphinifolium</i> (h)	<1	FAC
7. <i>Viburnum edule</i> (s)	45	FACU
8. <i>Rosa acicularis</i> (s)	10	FACU
9. <i>Actaea rubra</i> (s)	30	NI
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
15. _____	_____	_____
16. _____	_____	_____
17. _____	_____	_____
18. _____	_____	_____
19. _____	_____	_____
20. _____	_____	_____
Total Cover: 241		
Plot size 30-foot circle	% Bare Ground 100	
% Cover of Wetland Bryophytes 0	Total Cover of Bryophytes 0	
Remarks: Ground is covered in leaf litter.		

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 11	x 3 = 33
FACU species 230	x 4 = 920
UPL species _____	x 5 = _____
Column Totals: 241 (A)	953 (B)

Prevalence Index = B/A = 3.95

Other Indicators of Hydrophytic Vegetation:
 (Record supporting data in Remarks or on a separate sheet.)

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes _____ No ☒

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6								Root wad with decomposed wood.
6-19	10YR 2/1	100	N/A				Sandy loam	
19-20								Hard packed pebbles and cobbles.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks.	

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

Remarks:
Very loamy, fully soil. Can't hold water.

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"/> Surface Soil Cracks (B6) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <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"/> Mat or Crust of Algae or Marl (B4) <input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Dry		



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 2

Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): hillside

Local relief (concave, convex, none): none Slope (%): 30

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
<p>Remarks:</p> <p>hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p> <p>Approximately 20 feet from site the hill starts to get very steep. Tall cottonwoods are along the edge of the beach.</p> <p>Waypoint 37</p> <p>Closed Tall Shrub. 80% cover.</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
1. <u>Sambucus racemosa (s)</u>	<u>65</u>	<u>FACU</u>	Total % Cover of:	Multiply by:
2. <u>Sorbus scopulina (s)</u>	<u>25</u>	<u>NI</u>	OBL species _____	x 1 = _____
3. <u>Alnus crispa (s)</u>	<u>40</u>	<u>FAC</u>	FACW species _____	x 2 = _____
4. <u>Calamagrostis canadensis (h)</u>	<u>25</u>	<u>FAC</u>	FAC species <u>95</u>	x 3 = <u>285</u>
5. <u>Ribes triste (s)</u>	<u>30</u>	<u>FAC</u>	FACU species <u>106</u>	x 4 = <u>424</u>
6. <u>Gymnocarpium dryopteris</u>	<u>10</u>	<u>FACU</u>	UPL species _____	x 5 = _____
7. <u>Oplopanax horridus</u>	<u>10</u>	<u>FACU</u>	Column Totals: <u>201</u> (A)	<u>709</u> (B)
8. <u>Chamerion angustifolium (h)</u>	<u>10</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.53</u>	
9. <u>Rosa acicularis (s)</u>	<u>10</u>	<u>FACU</u>	<p>Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.)</p> <p>___ Wetland Cryptogams (record species and cover at left)</p> <p>___ Morphological Adaptations</p> <p>___ Problematic Hydrophytic Vegetation (Explain)</p>	
10. <u>Galium boreale (h)</u>	<u><1</u>	<u>FACU</u>		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____		
19. _____	_____	_____	<p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>	
20. _____	_____	_____		
Total Cover: <u>226</u>				
Plot size <u>30-foot circle</u>	% Bare Ground <u>100</u>			
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>			

Remarks:

SOIL Sampling Point: 2

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-7							Root wad with decomposed wood.
7-20	2.5Y4/3	100	N/A			Sandy loam	spongy. some cobbles, some gravel.
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ² Location: PL=Pore Lining, RC=Root Channel, 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		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Alaska Alpine Swales (TA5)		<input type="checkbox"/> Underlying Layer		
<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,				
<input type="checkbox"/> Alaska Redox (A14)			and an appropriate landscape position must be present.				
<input type="checkbox"/> Alaska Gleyed Pores (A15)			⁴ Give details of color change in Remarks.				
Restrictive Layer (if present):							
Type: _____							
Depth (inches): _____							
						Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks:							
Really red soil.							

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <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"/> Mat or Crust of Algae or Marl (B4) <input type="checkbox"/> Iron Deposits (B5)			Secondary Indicators (2 or more required) <input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Salt Deposits (C5) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)		
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					



Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006
 Applicant/Owner: DOT&PF Sampling Point: 3
 Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): hummocks
 Local relief (concave, convex, none): none Slope (%): _____
 Subregion: Southcentral Alaska Lat: 60 58 52.4 Long: 149 29 7.6 Datum: WGS
 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.)

Hydrophytic Vegetation 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"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. Site is adjacent to the highway. Waypoint 39 Shrub low open					

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. <i>Alnus crispa</i> (s)	30	FAC
2. <i>Betula nana</i> (s)	35	FAC
3. <i>Potentilla fruticosa</i>	30	FAC
4. <i>Andromeda polifolia</i>	20	OBL
5. <i>Empetrum nigrum</i>	15	FAC
6. <i>Equisetum hyemale</i>	35	FACW
7. <i>Chamaedaphne calyculata</i>	25	FACW
8. <i>Myrica gale</i>	20	OBL
9. <i>Menyanthes trifoliata</i>	5	OBL
10. <i>Parnassia palustris</i>	10	FACW
11. <i>Picea Mariana</i> (s)	5	FACW
12. <i>Carex aquatilis</i>	30	OBL
13. <i>Vaccinium cespitosum</i>	15	FACW
14. <i>Vaccinium vitis-idaea</i>	10	FAC
15. <i>Equisetum fluviatile</i>	15	OBL
16. <i>Ledum decumbens</i>	10	FACW
17. <i>Salix monticola</i>	20	FAC
18. <i>Carex canescens</i>	15	OBL
19. <i>Eriophorum angustifolium</i>	10	OBL
20. _____	_____	_____
Total Cover: 355		
Plot size 30-foot circle _____	% Bare Ground 0	
% Cover of Wetland Bryophytes 0	Total Cover of Bryophytes 0	
Remarks: Alders are growing on hummocks.		

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	115	x 1 =	115
FACW species	100	x 2 =	200
FAC species	140	x 3 =	420
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	355	(A)	735 (B)

Prevalence Index = B/A = 2.07

Other Indicators of Hydrophytic Vegetation:
(Record supporting data in Remarks or on a separate sheet.)

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present?

Yes ☒ No ☐

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks.	

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

Remarks:
Hydric soils assumed due to hydrophytic vegetation and hydrology.

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"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-stained Leaves (B9)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input checked="" 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): 0 - 6 Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 - 6 Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

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

Remarks:



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 4

Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: 60 58 54.4 Long: 149 29 15.3 Datum:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ✓ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation N, Soil N, or Hydrology N naturally 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>✓</u> No <u></u>	Is the Sampled Area within a Wetland?	Yes <u>✓</u> No <u></u>
Hydric Soil Present?	Yes <u>✓</u> No <u></u>		
Wetland Hydrology Present?	Yes <u>✓</u> No <u></u>		
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. Site is adjacent to the highway. Open low shrub. 35% cover. Waypoint 41			

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
			Total % Cover of:	Multiply by:
1. <u>Myrica gale (s)</u>	<u>35</u>	<u>OBL</u>	OBL species <u>105</u>	x 1 = <u>105</u>
2. <u>Equisetum pratense (h)</u>	<u>15</u>	<u>FACW</u>	FACW species <u>55</u>	x 2 = <u>110</u>
3. <u>Potentilla fruticosa (s)</u>	<u>30</u>	<u>FAC</u>	FAC species <u>75</u>	x 3 = <u>225</u>
4. <u>Andromeda polifolia (s)</u>	<u>20</u>	<u>OBL</u>	FACU species <u></u>	x 4 = <u></u>
5. <u>Oxycoccus microcarpus (s)</u>	<u>10</u>	<u>NI</u>	UPL species <u></u>	x 5 = <u></u>
6. <u>Parnassia palustris (h)</u>	<u>10</u>	<u>FACW</u>	Column Totals: <u>235</u> (A)	<u>440</u> (B)
7. <u>Carex aquatilis (h)</u>	<u>20</u>	<u>OBL</u>	Prevalence Index = B/A = <u>1.87</u>	
8. <u>Viola palustris (h)</u>	<u>5</u>	<u>NI</u>	Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.) <u></u> Wetland Cryptogams (record species and cover at left) <u></u> Morphological Adaptations <u></u> Problematic Hydrophytic Vegetation (Explain)	
9. <u>Ledum groenlandicum (s)</u>	<u>10</u>	<u>FAC</u>		
10. <u>Rubus chamaemorus (h)</u>	<u>15</u>	<u>FACW</u>		
11. <u>Rubus arctica (h)</u>	<u>5</u>	<u>NI</u>		
12. <u>Betula papyrifera (saplings) (s)</u>	<u>15</u>	<u>FAC</u>		
13. <u>Calamagrostis canadensis (h)</u>	<u>5</u>	<u>FAC</u>		
14. <u>Equisetum fluviatile (h)</u>	<u>10</u>	<u>OBL</u>		
15. <u>Sanguisorba stipulata (h)</u>	<u>10</u>	<u>NI</u>		
16. <u>Salix commutata (s)</u>	<u>15</u>	<u>FAC</u>		
17. <u>Carex canescens (h)</u>	<u>20</u>	<u>OBL</u>		
18. <u>Picea mariana (sapling)</u>	<u>15</u>	<u>FACW</u>		
19. <u></u>	<u></u>	<u></u>		
20. <u></u>	<u></u>	<u></u>		
Total Cover: <u>265</u>				
Plot size <u>30-foot circle</u>	% Bare Ground <u>0</u>			
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>			

Remarks:
Tussocks. No bare ground - plants occupying every space available.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks.	

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

Remarks:
Hydric soils are assumed due to the hydrophytic vegetation and hydrology.

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"/> Surface Soil Cracks (B6) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <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"/> Mat or Crust of Algae or Marl (B4) <input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Water-stained Leaves (B9) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on 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): 0-6 Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks: Tributary has very clear water. Area adjacent to creek is very saturated and spongy. Water between tussocks.		



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 5

Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): slightly concave Slope (%): 3

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
<p>Remarks:</p> <p>Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p> <p>Site is adjacent to a trail.</p> <p>Forest broadleaf closed. 65-70% cover. Weak shrub layer.</p> <p>Waypoint 42</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
1. <u>Betula papyrifera (t)</u>	<u>65</u>	<u>FACU</u>	Total % Cover of:	Multiply by:
2. <u>Calamagrostis canadensis (h)</u>	<u>40</u>	<u>FAC</u>	OBL species _____	x 1 = _____
3. <u>Chamerion angustifolium (h)</u>	<u>25</u>	<u>FACU</u>	FACW species _____	x 2 = _____
4. <u>Rosa acicularis (s)</u>	<u>30</u>	<u>FACU</u>	FAC species <u>100</u>	x 3 = <u>300</u>
5. <u>Athyrium filix-femina</u>	<u>10</u>	<u>FAC</u>	FACU species <u>135</u>	x 4 = <u>540</u>
6. <u>Cornus canadensis (h)</u>	<u>35</u>	<u>FAC</u>	UPL species _____	x 5 = _____
7. <u>Alnus crispa</u>	<u>15</u>	<u>FAC</u>	Column Totals: <u>235</u> (A)	<u>840</u> (B)
8. <u>Sambucus racemosa</u>	<u>15</u>	<u>FACU</u>	Prevalence Index = B/A = <u>3.57</u>	
9. _____	_____	_____	<p>Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.)</p> <p>___ Wetland Cryptogams (record species and cover at left)</p> <p>___ Morphological Adaptations</p> <p>___ Problematic Hydrophytic Vegetation (Explain)</p>	
10. _____	_____	_____		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____		
19. _____	_____	_____		
20. _____	_____	_____		
Total Cover: <u>235</u>			<p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>	
Plot size <u>30-foot circle</u>	% Bare Ground <u>100</u>			
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>			
Remarks:				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3								O layer - root wad
3-4	10YR 3/2	100					silty loam	ash layer
4-7	10YR3/4	100					sandy loam	tightly packed cobbles with interstitial red soil
7-20	10YR3/4	100					sandy loam	some gravel

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give details of color change in Remarks.	

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

Remarks:
Dry

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

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

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

Remarks:
Dry



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 6

Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
<p>Remarks:</p> <p>Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p> <p>This point seems to provide seasonal drainage, as evidenced by a culvert nearby under the trail. Water stained leaves and other hydrologic indicators suggest a wetland, but no hydric soils have developed and with the exception of the sedge, the plants are upland indicators. BPJ is that the trail (<10 years old) impounds water and is directing flow into a drainage channel.</p> <p>across Waypoint 44</p> <p>Closed Mixed Forest</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
			Total % Cover of:	Multiply by:
1. Sitka sitchensis (t)	20	FACU	OBL species 40	x 1 = 40
2. Equisetum sylvaticum (h)	10	FACU	FACW species 0	x 2 = 0
3. Cornus canadensis (h)	15	FAC	FAC species 65	x 3 = 195
4. Calamagrostis canadensis (h)	40	FAC	FACU species 85	x 4 = 340
5. Betula papyrifera (t)	45	FACU	UPL species _____	x 5 = _____
6. Athyrium distentifolium	10	FAC	Column Totals: 190 (A)	575 (B)
7. Equisetum arvense (h)	10	FACU	Prevalence Index = B/A = 3.02	
8. Carex canescens (h)	40	OBL		
9. _____	_____	_____		
10. _____	_____	_____		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____		
19. _____	_____	_____		
20. _____	_____	_____		
Total Cover: 190				
Plot size 30 foot swath	% Bare Ground 40			
% Cover of Wetland Bryophytes 0	Total Cover of Bryophytes 0			
<p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____</p>				
<p>Remarks:</p> <p>Water stained leaves covered the bare ground. The larch are on the peripheral and on hummocks. The birch are going in the middle of the site on hummocks.</p>				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0 - 2							Root wad
2 - 20	10YR 2/1	100	N/A			silty loam	organic soil

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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 checked="" type="checkbox"/> Water-stained Leaves (B9)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)		<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 <input checked="" type="checkbox"/> No _____ Depth (inches): 0 _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	--

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

Remarks: _____



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 7

Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
<p>Remarks:</p> <p>Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p> <p>The site is a swath of Bepa and Caca that connects to site 6.</p> <p>Waypoint 46</p> <p>This site does not have hydrophytic vegetation, however due to the strong hydric soils and hydrology it is professional opinion that this site is located within a wetland.</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
1. <u>Betula papyrifera (t)</u>	<u>55</u>	<u>FACU</u>	Total % Cover of:	Multiply by:
2. <u>Calamagrostis canadensis (h)</u>	<u>75</u>	<u>FAC</u>	OBL species _____	x 1 = _____
3. <u>Viola adunca</u>	<u>20</u>	<u>FAC</u>	FACW species _____	x 2 = _____
4. <u>Equisetum sylvaticum (h)</u>	<u>25</u>	<u>FACU</u>	FAC species <u>130</u>	x 3 = <u>390</u>
5. <u>Athyrium distentifolium</u>	<u>35</u>	<u>FAC</u>	FACU species <u>95</u>	x 4 = <u>380</u>
6. <u>Equisetum arvense (h)</u>	<u>15</u>	<u>FACU</u>	UPL species _____	x 5 = _____
7. _____	_____	_____	Column Totals: <u>225</u> (A)	<u>770</u> (B)
8. _____	_____	_____	Prevalence Index = B/A = <u>3.42</u>	
9. _____	_____	_____	<p>Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.)</p> <p>___ Wetland Cryptogams (record species and cover at left)</p> <p>___ Morphological Adaptations</p> <p>___ Problematic Hydrophytic Vegetation (Explain)</p>	
10. _____	_____	_____		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____		
19. _____	_____	_____		
20. _____	_____	_____		
<p>Total Cover: <u>225</u></p> <p>Plot size <u>20 foot diameter circle</u> % Bare Ground <u>15</u></p> <p>% Cover of Wetland Bryophytes <u>0</u> Total Cover of Bryophytes <u>0</u></p>			<p>Remarks:</p> <p>Water stained leaves covered the ground. The viola is patchy.</p>	

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0 - 8							root matter. accoridian.
8 - 20	10YR 2/1	100	N/A				organic soil

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <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"/> Mat or Crust of Algae or Marl (B4) <input type="checkbox"/> Iron Deposits (B5)		<input checked="" type="checkbox"/> Water-stained Leaves (B9) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Oxidized Rhizospheres on 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 <input checked="" type="checkbox"/> No _____ Depth (inches): 2 _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006
 Applicant/Owner: DOT&PF Sampling Point: 8
 Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none
 Local relief (concave, convex, none): none Slope (%): 0
 Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation N, Soil N, or Hydrology N naturally 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. Waypoint 47 The area perhaps serves as a temporary storage area in times of high precipitation, and the summer of 2006 had high rainfall amounts.	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. <u>Menyanthes trifoliata</u>	80	OBL
2. <u>Calamagrostis canadensis (h)</u>	25	FAC
3. <u>Carex lyngbyei</u>	65	OBL
4. _____		
5. _____		
6. _____		
7. _____		
8. _____		
9. _____		
10. _____		
11. _____		
12. _____		
13. _____		
14. _____		
15. _____		
16. _____		
17. _____		
18. _____		
19. _____		
20. _____		
Total Cover: <u>170</u>		
Plot size <u>30 foot swath</u>	% Bare Ground <u>0</u>	
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>	

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species <u>145</u>	x 1 = <u>145</u>
FACW species _____	x 2 = _____
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>170</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>1.29</u>	

Other Indicators of Hydrophytic Vegetation:
 (Record supporting data in Remarks or on a separate sheet.)

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks:
 Grounds was cover in water stained leaves.

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0 - 7							Root wad with organics
7 - 20	10YR 2/1	100	N/A			silty loam	organic soil

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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 checked="" type="checkbox"/> Water-stained Leaves (B9)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)		<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 <input checked="" type="checkbox"/> No _____ Depth (inches): 0 _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	--

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

Remarks:



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006
 Applicant/Owner: DOT&PF Sampling Point: 9
 Investigator(s): RAC/EMC Landform (hillside, terrace, hummocks, etc.): none
 Local relief (concave, convex, none): none Slope (%): 0
 Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. Shrub tall closed	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
			Total % Cover of:	Multiply by:
1. <u>Alnus crispa (s)</u>	<u>90</u>	<u>FAC</u>	OBL species _____	x 1 = _____
2. <u>Heracleum lanatum (h)</u>	<u>50</u>	<u>FACU</u>	FACW species _____	x 2 = _____
3. <u>Galium triflorum (h)</u>	<u>30</u>	<u>FACU</u>	FAC species <u>90</u>	x 3 = <u>270</u>
4. <u>Galeopsis tetrahit (h)</u>	<u>30</u>	<u>NI</u>	FACU species <u>80</u>	x 4 = <u>320</u>
5. _____	_____	_____	UPL species _____	x 5 = _____
6. _____	_____	_____	Column Totals: <u>170</u> (A)	<u>590</u> (B)
7. _____	_____	_____	Prevalence Index = B/A = <u>3.47</u>	
8. <u>sphagnum</u>	_____	_____	Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.) ___ Wetland Cryptogams (record species and cover at left) ___ Morphological Adaptations ___ Problematic Hydrophytic Vegetation (Explain)	
9. _____	_____	_____		
10. _____	_____	_____		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>	
19. _____	_____	_____		
20. _____	_____	_____		
Total Cover: <u>200</u>				
Plot size <u>30-foot circle</u> % Bare Ground <u>80</u>				
% Cover of Wetland Bryophytes <u>0</u> Total Cover of Bryophytes <u>20</u>				
Remarks:				

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0 - 6	10YR2/2	100	N/A				mixed organics
6+							fractured bedrock

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)		<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"/>	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		
Dry		



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 10

Investigator(s): CAD/SPT Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. Forest broadleaf open	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. <u>Betula papyrifera (t)</u>	<u>80</u>	<u>FACU</u>
2. <u>Alnus crispa (s)</u>	<u>40</u>	<u>FAC</u>
3. <u>Achillea millefolium (h)</u>	<u>40</u>	<u>FACU</u>
4. <u>Calamagrostis canadensis (h)</u>	<u>70</u>	<u>FAC</u>
5. <u>Trientalis arctica</u>	<u>20</u>	<u>FAC</u>
6. <u>Viburnum edule (s)</u>	<u>10</u>	<u>FACU</u>
7. <u>Cornus canadensis (h)</u>	<u>10</u>	<u>FAC</u>
8. <u>Picea mariana</u>	<u>5</u>	<u>FACW</u>
9. _____	_____	_____
10. _____	_____	_____
11. <u>Sphagnum sp. (h)</u>	<u>10</u>	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
15. _____	_____	_____
16. _____	_____	_____
17. _____	_____	_____
18. _____	_____	_____
19. _____	_____	_____
20. _____	_____	_____
Total Cover: <u>285</u>		
Plot size <u>30 foot diameter circle</u>	% Bare Ground <u>90</u>	
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>10</u>	

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species _____ x 1 = _____	
FACW species <u>5</u> x 2 = <u>10</u>	
FAC species <u>140</u> x 3 = <u>420</u>	
FACU species <u>130</u> x 4 = <u>520</u>	
UPL species _____ x 5 = _____	
Column Totals: <u>275</u> (A) <u>950</u> (B)	
Prevalence Index = B/A = <u>3.45</u>	

Other Indicators of Hydrophytic Vegetation:
(Record supporting data in Remarks or on a separate sheet.)

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes _____ No ☒

Remarks:

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 3								Root wad.
3 - 12	10YR4/6	100	N/A				sandy loam	fine sand mixed with ash
12 - 20	10YR4/6	100	N/A				sandy loam	same, with mixed cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

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

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

Remarks:
Dry



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 11

Investigator(s): CAD/SPT Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
<p>Remarks:</p> <p>Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p> <p>Immediately at base of shoulder and a few feet before the community changes into a herbaceous wet graminoid with stream.</p> <p>This is a transition zone where it appears road side weeds have dominated the vegetation. Since the site has very strong hydric soils and hydrology this site is considered to be located within a wetland.</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:	
			Total % Cover of:	Multiply by:
1. <u>Calamagrostis canadensis (h)</u>	<u>90</u>	<u>FAC</u>	OBL species _____	x 1 = _____
2. <u>Achillea millefolium (h)</u>	<u>10</u>	<u>FACU</u>	FACW species _____	x 2 = _____
3. <u>Equisetum arvense (h)</u>	<u>25</u>	<u>FACU</u>	FAC species <u>135</u>	x 3 = <u>405</u>
4. <u>Salix sp. (s)</u>	<u>10</u>	<u>FAC</u>	FACU species <u>60</u>	x 4 = <u>240</u>
5. <u>Trifolium pratense (h)</u>	<u>30</u>	<u>FAC</u>	UPL species _____	x 5 = _____
6. <u>Chamerion angustifolium (h)</u>	<u>20</u>	<u>FACU</u>	Column Totals: <u>195</u> (A)	<u>645</u> (B)
7. <u>Rhinanthus arcticus (h)</u>	<u>5</u>	<u>FAC</u>	Prevalence Index = B/A = <u>3.30</u>	
8. <u>Heracleum maximum (h)</u>	<u>5</u>	<u>FACU</u>	<p>Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.)</p> <p>___ Wetland Cryptogams (record species and cover at left)</p> <p>___ Morphological Adaptations</p> <p>___ Problematic Hydrophytic Vegetation (Explain)</p>	
9. _____	_____	_____		
10. _____	_____	_____		
11. _____	_____	_____		
12. _____	_____	_____		
13. _____	_____	_____		
14. _____	_____	_____		
15. _____	_____	_____		
16. _____	_____	_____		
17. _____	_____	_____		
18. _____	_____	_____		
19. _____	_____	_____		
20. _____	_____	_____		
Total Cover: <u>195</u>			<p>Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/></p>	
Plot size <u>20 foot swath</u>	% Bare Ground <u>0</u>			
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>			
Remarks:				

Sampling Point: 11

HYDROLOGYAppendix C - Page 73



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 12

Investigator(s): CAD/SPT Landform (hillside, terrace, hummocks, etc.): none

Local relief (concave, convex, none): none Slope (%): 0

Subregion: Southcentral Alaska Lat: _____ Long: _____ Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

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

<p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____</p> <p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____</p> <p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____</p>	<p>Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____</p>
<p>Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.</p>	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. <u>Picea mariana (t)</u>	20	FACW
2. <u>Betula papyrifera (t)</u>	40	FACU
3. <u>Equisetum arvense (h)</u>	60	FACU
4. <u>Calamagrostis canadensis (h)</u>	20	FAC
5. <u>Picea sitchensis (t)</u>	10	FACU
6. <u>Alnus crispa (s)</u>	50	FAC
7. <u>Ledum decumbens (h)</u>	50	FACW
8. <u>Myrica gale (s)</u>	60	OBL
9. <u>Betula nana (s)</u>	60	FAC
10. <u>Potentilla fruticosa (s)</u>	30	FAC
11. _____		
12. _____		
13. <u>Sphagnum sp. (h)</u>	20	
14. _____		
15. _____		
16. _____		
17. _____		
18. _____		
19. _____		
20. _____		
Total Cover: <u>420</u>		
Plot size <u>20 foot diameter circle</u>	% Bare Ground <u>80</u>	
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>20</u>	

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>110</u>	x 4 = <u>440</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>300</u> (A)	<u>850</u> (B)
Prevalence Index = B/A = <u>2.8</u>	

Other Indicators of Hydrophytic Vegetation:
(Record supporting data in Remarks or on a separate sheet.)

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks:

Sampling Point:

HYDROLOGY

Appendix C - Page 76



WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 8, 2006

Applicant/Owner: DOT&PF Sampling Point: 13

Investigator(s): CAD/SPT Landform (hillside, terrace, hummocks, etc.): hillside

Local relief (concave, convex, none): concave on macro scale Slope (%): 2

Subregion: Southcentral Alaska Lat: 60 57 59.4 Long: 149 26 44.8 Datum: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ☒ (If no, explain in Remarks.)

Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation N, Soil N, or Hydrology N naturally 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"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year. The site is located on a hill that slopes down towards the inlet.	

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:
1. <u>Betula papyrifera (t)</u>	<u>50</u>	<u>FACU</u>	Prevalence Index: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>205</u> x 4 = <u>820</u> UPL species _____ x 5 = _____ Column Totals: <u>255</u> (A) <u>970</u> (B) Prevalence Index = B/A = <u>3.80</u>
2. <u>Alnus crispa (s)</u>	<u>30</u>	<u>FAC</u>	
3. <u>Chamerion angustifolium (h)</u>	<u>70</u>	<u>FACU</u>	
4. <u>Sambucus racemosa (s)</u>	<u>30</u>	<u>FACU</u>	
5. <u>Pteridium aquilinum (h)</u>	<u>40</u>	<u>FACU</u>	
6. <u>Ribes triste (s)</u>	<u>10</u>	<u>FAC</u>	
7. <u>Picea glauca (t)</u>	<u>5</u>	<u>FACU</u>	
8. <u>Trientalis arctica (h)</u>	<u>10</u>	<u>FAC</u>	
9. <u>Galium triflorum (h)</u>	<u>10</u>	<u>FACU</u>	
10. _____	_____	_____	
11. _____	_____	_____	Other Indicators of Hydrophytic Vegetation: (Record supporting data in Remarks or on a separate sheet.) _____ Wetland Cryptogams (record species and cover at left) _____ Morphological Adaptations _____ Problematic Hydrophytic Vegetation (Explain)
12. _____	_____	_____	
13. _____	_____	_____	
14. _____	_____	_____	
15. _____	_____	_____	
16. _____	_____	_____	
17. _____	_____	_____	
18. _____	_____	_____	
19. _____	_____	_____	
20. _____	_____	_____	
Total Cover: <u>255</u>			Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Plot size <u>30 foot diameter circle</u>	% Bare Ground <u>100</u>		
% Cover of Wetland Bryophytes <u>0</u>	Total Cover of Bryophytes <u>0</u>		
Remarks:			

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0 - 4	N/A							Root mat
4 - 14								dry organics
14 - 16								ash
16								fractured bedrock

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Alaska Alpine Swales (TA5)	<input type="checkbox"/> Underlying Layer
<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,	
<input type="checkbox"/> Alaska Redox (A14)	and an appropriate landscape position must be present.	
<input type="checkbox"/> Alaska Gleyed Pores (A15)	⁴ Give 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)
Primary Indicators (any one indicator is sufficient)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Water-stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Salt Deposits (C5)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Mat or Crust of Algae or Marl (B4)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

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

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

Remarks: