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DATA FORM

**ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: Sterling Highway Project MP 45 - 60	Date	08/26/04
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: J. D. Sivils, A.B. Jones	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Lutz spruce/birch upland
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Transect ID	-
Is the area a potential Problem Area? (If needed, explain on reverse) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Plot ID	Plot 49

Describe Location:

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1 <i>Betula papyrifera</i> *	T	8	FACU	9. <i>Chamerion angustifolium</i>	H	10	
2 <i>Picea lutzii</i> *	T	40	NI	10. <i>Calamagrostis canadensis</i>	H	Tr.	
3. <i>Vaccinium vitis-idaea</i> *	S	25	FAC	11 <i>Lupinus nootkatensis</i>	H	Tr.	
4. <i>Arctostaphylos uva-ursi</i> *	S	15	UPL	12. <i>Linnaea borealis</i>	H	Tr.	
5. <i>Salix barclayi</i>	S	2		13. other moss			
6 <i>Empetrum nigrum</i> *	S	30	FAC	14.			
7. <i>Geocaulon lividum</i> *	H	25	FACU	15			
8. <i>Cornus canadensis</i> *	H	18	FACU	16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **33%**

Remarks : Other moss is present (not *Sphagnum*)
* Indicates dominants using 50/20 method.

Describe Vegetation Type: open Lutz spruce and paper birch forest

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<p align="center">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands
FIELD OBSERVATIONS	
Depth of Surface Water	N/A (in)
Depth to Free Water in Pit	N/A (in)
Depth to Saturated Soil	N/A (in)
	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Remarks: Wetland hydrology not observed.

SOILS

Map Unit Name (Series and Phase):			Drainage Class: SWED		
Taxonomy (Subgroup)		Field Observations Confirm Mapped Type? <input type="checkbox"/> YES <input type="checkbox"/> NO			
PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4-0	Oi				
0-1	E	10YR5/1			Sandy loam, SABL
1-7	B ₁	10YR4/4			Loamy sand with 70% gravels, SABL
7-14+	B ₂	5Y2.5/1			Gravelly loamy sand with 95% gravels, GR
HYDRIC SOIL INDICATORS:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: no saturation, no hydric soil indicators.					
Major root zone: 8 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Is this Sampling Point Within a Wetland? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Wetland Hydrology Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Hydric Soils Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Remarks:		
GPS: N 60 degrees, 28.909' W 149 degrees, 43.804'		
Topography: undulating/slightly hummocky		
NWI Class: U		
HGM Type: U		
Photos: 1 soil, 2 vegetation		
Functions:		

Site: Plot 49

Date: 8/26/04

NWI Class: Upland





DATA FORM

**ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: Sterling Highway Project MP 45 - 60	Date	08/26/04
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: J. D. Sivils, A.B. Jones	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Lutz spruce/birch upland
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Transect ID	-
Is the area a potential Problem Area? (If needed, explain on reverse) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Plot ID	Plot 50

Describe Location: 40-50' from horse and foot path

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Picea lutzii</i> *	T	25	NI	9. <i>Cornus canadensis</i> *	H	20	FACU
2. <i>Betula papyrifera</i> *	T	15	FACU	10. <i>Chamerion angustifolium</i>	H	3	
3. <i>Empetrum nigrum</i> *	S	50	FAC	11. <i>Lycopodium</i> sp.	H	Tr	
4. <i>Vaccinium vitis-idaea</i> *	S	25	FAC	12.			
5. <i>Linnaea borealis</i> *	S	20	FACU	13.			
6. <i>Viburnum edule</i>	S	Tr		14.			
7. <i>Salix</i> sp.	S	Tr		15			
8. <i>Geocaulon lividum</i> *	H	20	FACU	16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **33%**

Remarks : moss (not sphagnum) present
* Indicates dominants using 50/20 method.

Describe Vegetation Type: open Lutz spruce and paper birch forest

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available		WETLAND HYDROLOGY INDICATORS Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	
FIELD OBSERVATIONS			
Depth of Surface Water		N/A (in)	Secondary Indicators (2 or more Required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth to Free Water in Pit		N/A (in)	
Depth to Saturated Soil		N/A (in)	

Remarks: Wetland hydrology not observed.

SOILS

Map Unit Name (Series and Phase):				Drainage Class: WD	
Taxonomy (Subgroup)			Field Observations Confirm Mapped Type? <input type="checkbox"/> YES <input type="checkbox"/> NO		
PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4-0	Oi				
0-1	E/B1	10YR3/1			Loam, SABL
1-15+	B2	2.5Y5/3			Clay loam with 25% small cobbles, SABL
HYDRIC SOIL INDICATORS:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors*		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Soil is very compacted.					
Major root zone: 7 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Is this Sampling Point Within a Wetland? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Wetland Hydrology Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Hydric Soils Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Remarks:		
GPS: N 60 degrees, 29.033' W 149 degrees, 43.198' Topography: overall flat but somewhat hummocky or undulating NWI Class: U HGM Type: U Photos: 1 soil, 2 vegetation Functions:		

Site: Plot 50

Date: 8/26/04

NWI Class: Upland





DATA FORM

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(1987 COE Wetlands Delineation Manual)**

Project/Site: Sterling Highway Project MP 45 - 60	Date	08/26/04
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: J. D. Sivils, A.B. Jones	State	AK
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID
Is the site significantly disturbed (Atypical Situation)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Transect ID
Is the area a potential Problem Area? (If needed, explain on reverse)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Plot ID
		Shrub bog
		-
		Plot 51

Describe Location:

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1 <i>Picea lutzii</i> *	T	10	NI	9. <i>Ledum groenlandicum</i>	S	Tr	
2. <i>Ledum palustre</i> spp. <i>decumbens</i> *	S	40	FACW	10. <i>Calamagrostis canadensis</i> *	H	7	FAC
3. <i>Vaccinium uliginosum</i> *	S	30	FAC	11. <i>Equisetum arvense</i> *	H	7	FACU
4. <i>Empetrum nigrum</i>	S	20		12. <i>Chamerion angustifolium</i>	H	Tr	
5. <i>Vaccinium vitis-idaea</i>	S	18		13.			
6. <i>Salix barclayi</i>	S	15		14.			
7. <i>Betula nana</i>	S	10		15			
8. <i>Rubus chamaemorus</i>	S	Tr		16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **75%**

Remarks : Very small (<8") *Betula papyrifera* present. Sphagnum moss present.
* Indicates dominants using 50/20 method.

Describe Vegetation Type: Shrub bog

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available		<p align="center">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands	
FIELD OBSERVATIONS			
Depth of Surface Water		N/A (in)	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth to Free Water in Pit		N/A (in)	
Depth to Saturated Soil		N/A (in)	

Remarks:

Soil moist at 3". Soil is not saturated but weather has been very dry.

SOILS

Map Unit Name (Series and Phase):				Drainage Class: SWPD	
Taxonomy (Subgroup)			Field Observations Confirm Mapped Type? <input type="checkbox"/> YES <input type="checkbox"/> NO		
PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
8-0	Oi				
0-3	B1	10YR3/2	7.5YR3/4	Few, coarse, Distinct	Silty clay loam with 5% gravels, SABL
3-18+	B2	2.5Y5/2	10YR3/4	Common, coarse, Distinct	Silty clay, Platy/SABL
HYDRIC SOIL INDICATORS:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input checked="" type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Histic epipedon was assumed to be saturated under normal weather conditions. Low-chroma colors also with mottles.					
Major root zone: 4.5 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Wetland Hydrology Present?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Hydric Soils Present?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Remarks:		
GPS: N 60 degrees 29.253' W 149 degrees 43.105' Topography: slightly hummocky NWI Class: PSS4/1B HGM Type: depressional Photos: 1 soil, 2 vegetation Functions: see fxn form		





DATA FORM

**ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)**

Project/Site: Sterling Highway Project MP 45 - 60	Date	08/26/04
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: J. D. Sivils, A.B. Jones	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Open spruce forest
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Transect ID	-
Is the area a potential Problem Area? (If needed, explain on reverse) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Plot ID	Plot 52

Describe Location: End of runway. Near small trail which is visible from air photo.

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1 <i>Picea lutzii</i> *	T	30	NI	9. <i>Geocaulon lividum</i> *	H	5	FACU
2. <i>Picea mariana</i>	T	5		10 <i>Chamerion angustifolium</i> *	H	5	FACU
3. <i>Empetrum nigrum</i> *	S	45	FAC	11. <i>Cornus canadensis</i>	H	Tr	
4. <i>Ledum palustre</i> spp. <i>decumbens</i> *	S	30	FACW	12. <i>Calamagrostis canadensis</i>	H	Tr	
5. <i>Vaccinium vitis-idaea</i>	S	10		13. Feathermoss	B	55	
6. <i>Betula papperifera</i> spp. <i>kenaica</i>	S	7		14. Lichen (<i>Peltigera</i>)	B	Tr	
7 <i>Salix barclayi</i>	S	Tr		15			
8. <i>Salix</i> sp.	S	Tr		16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **50%**

Remarks :

* Indicates dominants using 50/20 method.

Describe Vegetation Type: Open Lutz and black spruce forest.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available		<p align="center">WETLAND HYDROLOGY INDICATORS</p> <p>Primary Indicators:</p> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands	
FIELD OBSERVATIONS			
Depth of Surface Water		N/A (in)	<p>Secondary Indicators (2 or more Required):</p> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Depth to Free Water in Pit		N/A (in)	
Depth to Saturated Soil		N/A (in)	

Remarks: Wetland hydrology not present.

SOILS

Map Unit Name (Series and Phase):				Drainage Class: WD	
Taxonomy (Subgroup)			Field Observations Confirm Mapped Type? <input type="checkbox"/> YES <input type="checkbox"/> NO		
PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
4-0	Oi				
0-1.5	E	5Y4/1			Gravelly Sandy loam, Gr/SABL,
1.5-6.5	B1	5Y5/3			Sandy clay loam, Gr/SABL
6.5-16	B2	5Y5/3			Sandy clay loam with 1% cobbles and 30% gravels, ABL,
HYDRIC SOIL INDICATORS:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil indicators not observed.					
Major root zone: 6 inches					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Is this Sampling Point Within a Wetland? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Wetland Hydrology Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Hydric Soils Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Remarks: This area is upland, but there is a small pocket of wetlands at the northern tip of the airstrip. Similar to area in Plot 51. Moose pellets in plot area.		
GPS: N 60 degrees, 29.213' W 149 degrees, 42.928' wgs 84 datum, elevation 477'		
Topography: Flat		
NWI Class: Upland		
HGM Type: Upland		
Photos: 1 soil, 2 vegetation		
Functions:		





WETLAND DETERMINATION FORM - Alaska Region

Project: Stirling Hwy Borough/City: KPB Date: 09.29.09
 Applicant/Owner: DOT & PF Plot: A1
 Investigator(s): Jeff Schively George Haden Target: _____
 Lat. 60.49474 Long. -149.96472 Datum: WGS84 Slope (%): 2 Aspect: SW
 Landform: Bench Feature: _____ NWI classification: J
 Shape across slope: linear / convex / concave Shape up/downslope: linear / convex / concave Vegetation Type: Disturbed tall shrub
 Photo #s/descriptions: 2 soil 2 veg HGM Type: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: X No: _____ (if no, explain in Remarks)
 Are Vegetation Y / N Soil Y / N or Hydrology Y / N significantly disturbed? Are normal circumstances present? Yes X No _____
 Are Vegetation Y / N, Soil Y / N, or Hydrology Y / N naturally problematic? (If needed, explain 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:

VEGETATION

<p><u>Tree Stratum</u> (Use scientific names.)</p> <table border="1"> <thead> <tr> <th></th> <th>Cov.%</th> <th>Dom</th> <th>Ind.</th> <th></th> <th>Cov.%</th> <th>Dom</th> <th>Ind.</th> </tr> </thead> <tbody> <tr> <td>1. <u>Pop. bal (tr.)</u></td> <td><u>5</u></td> <td><u>X</u></td> <td><u>FACU</u></td> <td>5. <u>Pop. bal</u></td> <td><u>7</u></td> <td><u>X</u></td> <td><u>FAC</u></td> </tr> <tr> <td>2. <u>Tsu. mer</u></td> <td><u>3</u></td> <td></td> <td><u>FAC</u></td> <td>6. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. <u>Bet. psp</u></td> <td><u>7</u></td> <td><u>X</u></td> <td><u>FACU</u></td> <td>7. _____</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u>Pic. gla</u></td> <td><u>3</u></td> <td></td> <td><u>FACU</u></td> <td>8. _____</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Total Cover: <u>25</u> 50% of total cover: <u>12.5</u> 20% of total cover: <u>5</u></p>								Cov.%	Dom	Ind.		Cov.%	Dom	Ind.	1. <u>Pop. bal (tr.)</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	5. <u>Pop. bal</u>	<u>7</u>	<u>X</u>	<u>FAC</u>	2. <u>Tsu. mer</u>	<u>3</u>		<u>FAC</u>	6. _____				3. <u>Bet. psp</u>	<u>7</u>	<u>X</u>	<u>FACU</u>	7. _____				4. <u>Pic. gla</u>	<u>3</u>		<u>FACU</u>	8. _____				<p><u>Dominance Test worksheet:</u></p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>7</u> (B)</p> <p>Percent of Dominant Species That are OBL, FACW, or FAC: <u>42.9</u> (A/B)</p>																																																									
	Cov.%	Dom	Ind.		Cov.%	Dom	Ind.																																																																																																	
1. <u>Pop. bal (tr.)</u>	<u>5</u>	<u>X</u>	<u>FACU</u>	5. <u>Pop. bal</u>	<u>7</u>	<u>X</u>	<u>FAC</u>																																																																																																	
2. <u>Tsu. mer</u>	<u>3</u>		<u>FAC</u>	6. _____																																																																																																				
3. <u>Bet. psp</u>	<u>7</u>	<u>X</u>	<u>FACU</u>	7. _____																																																																																																				
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SOIL

Sampling Point: A1

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

Depth (inches)	Horizon Name	Soil Matrix		Redox Features				Alpha (pos/neg)	Remarks
		Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	A	7.5YR 3/1	100					SIL	
4-7	E	2.5Y 4/2	100					SIL	
7-15	B ₁	2.5Y 4/4	60					VFSAL	5 20
		7.5YR 4/6	40					VFSAL	
15-20*	B ₂	7.5YR 4/4	100					VFSAL	5 20

¹Type: C = Concentration, D = Depletions, RM = Reduced Matrix. ²Location: PL = Pore Lining, RC = Root Channel, M = Matrix

Hydric Soil Indicators (check ones that apply):

- Histosol of Histel (A1)
- Histic Epipedon (A2)
- Hydrogen Sulfide (A4) _____" from top
- Thick Dark Surface (A12)
- Alaska Gleyed (A13)
- Alaska Redox (A14)
- Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

- Alaska Color Change (TA4)
- Alaska Alpine Swales (TA5)
- Alaska Redox with 2.5Y Hue
- 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.

⁴Give details of color change in Remarks.

Restrictive Layer (if present)

Type: NA
Depth (inches): _____

Drainage Class:

WD

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (check ones that apply):

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Image (B7)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1) _____" from top
- Dry-Season Water Table (C2)
- Other (explain in Remarks)

Secondary Indicators (at least 2 or more required)

- Water Stained Leaves (B9)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Salt Deposits (C5)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches) _____
 Water Table Present? Yes _____ No Depth (inches) _____
 Seeping in at that depth but not yet filled: Y / N
 Saturation Present? Yes _____ No Depth (inches) _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks:

Site: A1

Date: 9/29/09

NWI Class: U



Site: A1

Date: 9/29/09

NWI Class: U



Project: STERLING HIGHWAY Borough/City: KPTB Date: 09.29.09
 Applicant/Owner: DOT & PF Plot: A5
 Investigator(s): JEFF SCHIVELY GEORGE HODEN Target: _____
 Lat. 60.49277 Long. 149.96939 Datum: NAD 84 Slope (%): 12 Aspect: S
 Landform: HILLSIDE Feature: _____ NWI classification: U
 Shape across slope: linear (convex) concave Shape up/downslope: linear / convex / concave Vegetation Type: OPEN MIXED FOREST
 Photo #s/descriptions: 2 SOIL 2 VEG HGM Type: NIA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: No: _____ (if no, explain in Remarks)
 Are Vegetation Y/, Soil Y/ or Hydrology Y/ significantly disturbed? Are normal circumstances present? Yes No _____
 Are Vegetation Y/, Soil Y/ or Hydrology Y/ naturally problematic? (If needed, explain answers in Remarks)

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: _____

VEGETATION

Tree Stratum (Use scientific names.)

	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.
1. <u>PIC GLA</u>	<u>17</u>	<u>X</u>	<u>FACU</u>	5. _____	_____	_____	_____
2. <u>BET PAP</u>	<u>5</u>	_____	<u>FACU</u>	6. _____	_____	_____	_____
3. <u>POP BAL</u>	<u>17</u>	<u>X</u>	<u>FACU</u>	7. _____	_____	_____	_____
4. _____	_____	_____	_____	8. _____	_____	_____	_____

Total Cover: 39
 50% of total cover: 19.5 20% of total cover: 7.8

Sapling/Shrub Stratum

	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.
1. <u>VIB EDU</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	7. _____	_____	_____	_____
2. <u>ROS ACI</u>	<u>3</u>	_____	<u>FACU</u>	8. _____	_____	_____	_____
3. <u>ALN SIN</u>	<u>4</u>	_____	<u>FAC</u>	9. _____	_____	_____	_____
4. <u>EMP NIG</u>	<u>1</u>	_____	<u>FAC</u>	10. _____	_____	_____	_____
5. <u>POP BAL</u>	<u>7</u>	<u>X</u>	<u>FACU</u>	11. _____	_____	_____	_____
6. _____	_____	_____	_____	12. _____	_____	_____	_____

Total Cover: 30
 50% of total cover: 15 20% of total cover: 6

Herb Stratum

	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.
1. <u>EPI ANG</u>	<u>12</u>	_____	<u>FACU</u>	12. _____	_____	_____	_____
2. <u>CDR CAN</u>	<u>17</u>	<u>X</u>	<u>FACU</u>	13. _____	_____	_____	_____
3. <u>PYR ASA</u>	<u>17</u>	<u>X</u>	<u>FAC</u>	14. _____	_____	_____	_____
4. <u>PYR SEC</u>	<u>2</u>	_____	<u>UPL</u>	15. _____	_____	_____	_____
5. <u>CEO LIV</u>	<u>24</u>	_____	<u>FACU</u>	16. _____	_____	_____	_____
6. <u>LIN BOR</u>	<u>17</u>	<u>X</u>	<u>UPL</u>	17. _____	_____	_____	_____
7. <u>CAL CAN</u>	<u>7</u>	_____	<u>FAC</u>	18. _____	_____	_____	_____
8. <u>ERI ACR</u>	<u>1</u>	_____	<u>FAC</u>	19. _____	_____	_____	_____
9. <u>LYC COM</u>	<u>1</u>	_____	<u>NL</u>	20. _____	_____	_____	_____
10. <u>LYC ANN</u>	<u>1</u>	_____	<u>FAC</u>	21. _____	_____	_____	_____
11. _____	_____	_____	_____	22. _____	_____	_____	_____

Total Cover: 79
 50% of total cover: 39.5 20% of total cover: 15.8

Plot size (radius, or length x width) 0.1 acre % bare ground: 0
 % Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 3
 (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: 7 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 14.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	X1 = <u>0</u>
FACW species <u>0</u>	X2 = <u>0</u>
FAC species <u>31</u>	X3 = <u>93</u>
FACU species <u>98</u>	X4 = <u>392</u>
UPL species <u>19</u>	X5 = <u>95</u>
Column Totals: <u>148</u> (A)	<u>580</u> (B)

Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators:

N Dominance Test is >50%
N Prevalence Index is ≤3.0

N Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
N Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No

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

Depth (inches)	Horizon Name	Soil Matrix		Redox Features				Alpha (pos/ neg)	Remarks
		Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	A	7.5YR 3/3	100					SIL	
2-4	E	2.5Y 5/2	100					VFSAL	
4-15	B ₁	2.5Y 5/4	50					VFSAL	G15 C5
		10YR 5/6	50					VFSAL	
15-20	B ₂	10YR 5/4	100					FSAL	G20 C5

¹Type: C = Concentration, D = Depletions, RM = Reduced Matrix. ²Location: PL = Pore Lining, RC = Root Channel, M = Matrix

Hydric Soil Indicators (check ones that apply):

- Histosol or Histel (A1)
- Histic Epipedon (A2)
- Hydrogen Sulfide (A4) _____" from top
- Thick Dark Surface (A12)
- Alaska Gleyed (A13)
- Alaska Redox (A14)
- Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils³:

- Alaska Color Change (TA4)
- Alaska Alpine Swales (TA5)
- Alaska Redox with 2.5Y Hue
- 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.

⁴Give details of color change in Remarks.

Restrictive Layer (if present)

Type: N/A
Depth (inches): N/A

Drainage Class:

WD

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (check ones that apply):

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Image (B7)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1) _____" from top
- Dry-Season Water Table (C2)
- Other (explain in Remarks)

Secondary Indicators (at least 2 or more required)

- Water Stained Leaves (B9)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Salt Deposits (C5)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches) _____
 Water Table Present? Yes _____ No Depth (inches) _____
 Seeping in at that depth but not yet filled: Y / N
 Saturation Present? Yes _____ No Depth (inches) _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks:



Site: A5

Date: 9/29/09

NWI Class: U



WETLAND DETERMINATION FORM - Alaska Region

Project: Stirling Hwy Borough/City: KPB Date: 9-29-2009
 Applicant/Owner: DST E&F Plot: A9
 Investigator(s): Jeff Schively George Haden Target: _____
 Lat. 60.49123 Long. -149.97772 Datum: WGS84 Slope (%): 5 Aspect: S
 Landform: Bench Feature: _____ NWI classification: U
 Shape across slope: linear / convex / concave Shape up/downslope: linear / convex / concave Vegetation Type: Open mixed Forest
 Photo #s/descriptions: 2 soil 2 veg HGM Type: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: X No: _____ (if no, explain in Remarks)
 Are Vegetation Y / N, Soil Y / N, or Hydrology Y / N significantly disturbed? Are normal circumstances present? Yes X No _____
 Are Vegetation Y / N, Soil Y / N, or Hydrology Y / N naturally problematic? (If needed, explain answers in Remarks)

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	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: <u>many downed Pic. gla. trees</u>					

VEGETATION

Tree Stratum (Use scientific names.)								Dominance Test worksheet:			
	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.	Number of Dominant Species That are OBL, FACW, or FAC:			
1. <u>Pic. gla.</u>	<u>30</u>	<u>X</u>	<u>FACU</u>	5. _____	_____	_____	_____	<u>2</u> (A)			
2. <u>Pop. bals</u>	<u>5</u>	_____	<u>FACU</u>	6. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:		<u>3</u> (B)	
3. _____	_____	_____	_____	7. _____	_____	_____	_____	Percent of Dominant Species That are OBL, FACW, or FAC:		<u>67%</u> (A/B)	
4. _____	_____	_____	_____	8. _____	_____	_____	_____	Prevalence Index worksheet:			
Total Cover: <u>35</u>				50% of total cover: <u>17.5</u>				20% of total cover: <u>7</u>			
Sapling/Shrub Stratum								Total % Cover of:		Multiply by:	
	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.	OBL species	X1=		
1. <u>Vac. vit.</u>	<u>30</u>	<u>X</u>	<u>FAC</u>	7. _____	_____	_____	_____	<u>0</u>	<u>0</u>		
2. <u>Lin. bor.</u>	<u>2</u>	_____	<u>UPL</u>	8. _____	_____	_____	_____	<u>0</u>	<u>0</u>		
3. <u>Sal. bab</u>	<u>5</u>	_____	<u>FAC</u>	9. _____	_____	_____	_____	<u>78</u>	<u>234</u>		
4. <u>Bet. pap</u>	<u>7</u>	_____	<u>FACU</u>	10. _____	_____	_____	_____	<u>53</u>	<u>212</u>		
5. <u>Vib. edw.</u>	<u>2</u>	_____	<u>FACU</u>	11. _____	_____	_____	_____	<u>3</u>	<u>15</u>		
6. <u>Aln. spae</u>	<u>6</u>	_____	<u>FAC</u>	12. _____	_____	_____	_____	Column Totals:	<u>134</u> (A)	<u>461</u> (B)	
Total Cover: <u>52</u>				50% of total cover: <u>26</u>				20% of total cover: <u>10.4</u>			
Prevalence Index = B/A = <u>3.4</u>											
Herb Stratum								Hydrophytic Vegetation Indicators:			
	Cov. %	Dom	Ind.		Cov. %	Dom	Ind.	<u>Y</u> Dominance Test is >50%			
1. <u>Lyc. ann</u>	<u>8</u>	_____	<u>FAC</u>	12. _____	_____	_____	_____	<u>N</u> Prevalence Index is ≤3.0			
2. <u>Lup. acc.</u>	<u>20</u>	<u>X</u>	<u>FAC</u>	13. _____	_____	_____	_____	<u>N</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
3. <u>Epi. ang.</u>	<u>4</u>	_____	<u>FACU</u>	14. _____	_____	_____	_____	<u>N</u> Problematic Hydrophytic Vegetation ¹ (Explain)			
4. <u>Cal. can.</u>	<u>4</u>	_____	<u>FAC</u>	15. _____	_____	_____	_____				
5. <u>Geo. lrx</u>	<u>3</u>	_____	<u>FACU</u>	16. _____	_____	_____	_____				
6. <u>Pic. sca</u>	<u>1</u>	_____	<u>UPL</u>	17. _____	_____	_____	_____				
7. <u>Cor. can.</u>	<u>2</u>	_____	<u>FACU</u>	18. _____	_____	_____	_____				
8. _____	_____	_____	_____	19. _____	_____	_____	_____				
9. _____	_____	_____	_____	20. _____	_____	_____	_____				
10. _____	_____	_____	_____	21. _____	_____	_____	_____				
11. _____	_____	_____	_____	22. _____	_____	_____	_____				
Total Cover: <u>47</u>				50% of total cover: <u>23.5</u>				20% of total cover: <u>9.4</u>			
Plot size (radius, or length x width) <u>0.1 acre</u>								% bare ground: <u>0</u>			
% Cover of Wetland Bryophytes <u>0</u>								Total Cover of Bryophytes <u>75</u>			
Hydrophytic Vegetation Present?								Yes <u>X</u>		No _____	
Remarks:											

SOIL

Sampling Point: A9

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

Depth (inches)	Horizon Name	Soil Matrix		Redox Features				Alpha (pos/ neg)	Remarks
		Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	A	7.5YR 2.5/2	100					SIL	
2-3	E	10YR 4/2	100					SIL	DISCONTINUOUS
3-14	B ₁	2.5Y 4/4	60					FSAL	
		10YR 5/4	40					FSAL	
14-20+	B ₂	10YR 4/3	100					SAL	G30SS

¹Type: C = Concentration, D = Depletions, RM = Reduced Matrix. ²Location: PL = Pore Lining, RC = Root Channel, M = Matrix

Hydric Soil Indicators (check ones that apply):	Indicators for Problematic Hydric Soils ³ :
<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input checked="" type="checkbox"/> Alaska Color Change (TA4)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Alaska Alpine Swales (TA5)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4) _____" from top	<input checked="" type="checkbox"/> Alaska Redox with 2.5Y Hue
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	
<input checked="" type="checkbox"/> Alaska Gleyed (A13)	
<input checked="" type="checkbox"/> Alaska Redox (A14)	
<input checked="" 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.
⁴Give details of color change in Remarks.

Alaska Gleyed without Hue 5Y or Redder Underlying Layer
 Other (explain in Remarks)

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

HYDROLOGY

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

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) _____	
Seeping in at that depth but not yet filled: Y / N	
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:

Site: A9

Date: 9/29/09

NWI Class: U



Site: A9

Date: 9/29/09

NWI Class: U



WETLAND DETERMINATION FORM - Alaska Region

Project: Sterling Hwy Borough/City: KPB Date: 9-29-2009
 Applicant/Owner: DOT, PF Plot: A13
 Investigator(s): Jeff Schively George Hoden Target: _____
 Lat. 60.49086 Long. -149.98154 Datum: WGS84 Slope (%): 7 Aspect: S
 Landform: Swale / GW discharge Feature: _____ NWI classification: PEM1C
 Shape across slope: linear / convex / concave Shape up/downslope: linear / convex / concave Vegetation Type: Forb / Graminoid meadow
 Photo #s/descriptions: 2 soil 2 VEG HGM Type: Slope
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: X No: _____ (if no, explain in Remarks)
 Are Vegetation Y / N, Soil Y / N, or Hydrology Y / N significantly disturbed? Are normal circumstances present? Yes X No _____
 Are Vegetation Y / N, Soil Y / N, or Hydrology Y / N naturally problematic? (if needed, explain answers in Remarks)

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	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 _____			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)

	Cov.%	Dom	Ind.		Cov.%	Dom	Ind.
1. _____	_____	_____	_____	5. _____	_____	_____	_____
2. _____	_____	_____	_____	6. _____	_____	_____	_____
3. _____	_____	_____	_____	7. _____	_____	_____	_____
4. _____	_____	_____	_____	8. _____	_____	_____	_____
Total Cover: _____				50% of total cover: _____ 20% of total cover: _____			

Sapling/Shrub Stratum

	Cov.%	Dom	Ind.		Cov.%	Dom	Ind.
1. <u>Rub. ida.</u>	<u>7</u>	<u>X</u>	<u>FAC</u>	7. <u>Opl. hor</u>	<u>1</u>	_____	<u>FACU</u>
2. <u>Ros. acf.</u>	<u>5</u>	_____	<u>FACU</u>	8. _____	_____	_____	_____
3. <u>Bet. pap.</u>	<u>2</u>	_____	<u>FACU</u>	9. _____	_____	_____	_____
4. <u>Aln. sin.</u>	<u>15</u>	<u>X</u>	<u>FAC</u>	10. _____	_____	_____	_____
5. <u>Vib. cdo.</u>	<u>1</u>	_____	<u>FACU</u>	11. _____	_____	_____	_____
6. <u>Bet. pap.</u>	<u>3</u>	_____	<u>FACU</u>	12. _____	_____	_____	_____
Total Cover: <u>34</u>				50% of total cover: <u>17</u> 20% of total cover: <u>6.8</u>			

Herb Stratum

	Cov.%	Dom	Ind.		Cov.%	Dom	Ind.
1. <u>Cal. can.</u>	<u>60</u>	<u>X</u>	<u>FAC</u>	12. <u>Gym dry</u>	<u>3</u>	_____	<u>FACU</u>
2. <u>Egu. pa</u>	<u>20</u>	<u>X</u>	<u>FACU</u>	13. _____	_____	_____	_____
3. <u>Aln. bor.</u>	<u>1</u>	_____	<u>FACU</u>	14. _____	_____	_____	_____
4. <u>Vib. epi.</u>	<u>1</u>	_____	<u>NI</u>	15. _____	_____	_____	_____
5. <u>Mec. par.</u>	<u>3</u>	_____	<u>FACU</u>	16. _____	_____	_____	_____
6. <u>Str. sit</u>	<u>1</u>	_____	<u>FAC</u>	17. _____	_____	_____	_____
7. <u>San. sti.</u>	<u>4</u>	_____	<u>FACU</u>	18. _____	_____	_____	_____
8. <u>Gal. bor.</u>	<u>2</u>	_____	<u>FACU</u>	19. _____	_____	_____	_____
9. <u>Epi. pal</u>	<u>1</u>	_____	<u>OBL</u>	20. _____	_____	_____	_____
10. <u>Ran. hyp.</u>	<u>1</u>	_____	<u>OBL</u>	21. _____	_____	_____	_____
11. <u>Pol. acu.</u>	<u>1</u>	_____	<u>FAC</u>	22. _____	_____	_____	_____
Total Cover: <u>98</u>				50% of total cover: <u>49</u> 20% of total cover: <u>19.6</u>			

Plot size (radius, or length x width) 30 x 75 % bare ground: 12 (water)
 % Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 15
 (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: 4 (B)

Percent of Dominant Species That are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

	Total % Cover of:	Multiply by:
OBL species	<u>2</u>	X1= <u>2</u>
FACW species	<u>24</u>	X2= <u>48</u>
FAC species	<u>84</u>	X3= <u>252</u>
FACU species	<u>21</u>	X4= <u>84</u>
UPL species	<u>0</u>	X5= <u>0</u>
Column Totals:	<u>131</u> (A)	<u>386</u> (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:

Y Dominance Test is >50%
Y Prevalence Index is ≤3.0

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

N 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: A13

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

Depth (inches)	Horizon Name	Soil Matrix		Redox Features				Texture	Alpha (pos/ neg)	Remarks
		Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-20	A	7.5YR 2.5/1	100					SIL		ORGANICS THROUGHOUT

¹Type: C = Concentration, D = Depletions, RM = Reduced Matrix. ²Location: PL = Pore Lining, RC = Root Channel, M = Matrix

Hydric Soil Indicators (check ones that apply):

<input checked="" type="checkbox"/> Histosol or Histel (A1)	<input checked="" type="checkbox"/> Alaska Color Change (TA4)	<input checked="" type="checkbox"/> Alaska Gleyed without Hue 5Y or Redder Underlying Layer
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Alaska Alpine Swales (TA5)	<input checked="" type="checkbox"/> Other (explain in Remarks)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <u>7</u> " from top	<input checked="" type="checkbox"/> Alaska Redox with 2.5Y Hue	
<input checked="" type="checkbox"/> Thick Dark Surface (A12)		
<input checked="" 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.	
<input checked="" type="checkbox"/> Alaska Redox (A14)	⁴ Give details of color change in Remarks.	
<input checked="" type="checkbox"/> Alaska Gleyed Pores (A15)		

Restrictive Layer (if present) Type: <u>N/A</u> Depth (inches): _____	Drainage Class: <u>VPD</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
ORGANICS THROUGHOUT, LIKELY SLOUGHING SOIL DOWN SLOPE, MIXED ORGANIC/MINERAL SOIL

HYDROLOGY

<p>Wetland Hydrology Indicators (check ones that apply):</p> <p>Primary Indicators (any one indicator is sufficient)</p> <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Inundation Visible on Aerial Image (B7) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <u>7</u> " from top <input checked="" type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Other (explain in Remarks) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input checked="" type="checkbox"/> Iron Deposits (B5)	<p>Secondary Indicators (at least 2 or more required)</p> <input checked="" type="checkbox"/> Water Stained Leaves (B9) <input checked="" type="checkbox"/> Drainage Patterns (B10) <u>GW DISCHARGE</u> <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Salt Deposits (C5) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <u>DISCHARGE SLOPE</u> <input checked="" type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC Neutral Test (D5)
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<p>Field Observations:</p> <p>Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches) <u>0-3</u></p> <p>Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches) <u>-7"</u></p> <p>Seeping in at that depth but not yet filled: Y / N</p> <p>Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches) <u>0"</u></p> <p>(includes capillary fringe)</p>	<p>Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Numerous GW seeps throughout - flowing water



Site: A13

Date: 9/29/09

NWI Class: PEM1C



WETLAND DETERMINATION FORM - Alaska Region

Project: Stirling Hwy Borough/City: KPB Date: 9/9/2009
 Applicant/Owner: DOT & PF Plot: A16
 Investigator(s): Jeff Schively George Hoden Target: _____
 Lat. 60.489862 Long. -149.98471 Datum: NAD83 Slope (%): 3 Aspect: S
 Landform: swale (dry) Feature: _____ NWI classification: U
 Shape across slope: linear / convex / concave Shape up/downslope: linear / convex / concave Vegetation Type: Forb/grassland dry
 Photo #s/descriptions: 2 soil 2 VEG HGM Type: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes: X No: _____ (if no, explain in Remarks)
 Are Vegetation Y / N Soil Y / N or Hydrology Y / N significantly disturbed? Are normal circumstances present? Yes X No _____
 Are Vegetation Y / N Soil Y / N or Hydrology Y / N naturally problematic? (If needed, explain answers in Remarks)

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

VEGETATION

Tree Stratum (Use scientific names.)							Dominance Test worksheet:		
Cov.%	Dom	Ind.	Cov.%	Dom	Ind.	Number of Dominant Species That are OBL, FACW, or FAC:			
1. <u>Pic. gla.</u>	<u>7</u>	<u>X</u>	<u>FACW</u>			<u>3</u>	<u>(A)</u>		
2. <u>Bet. ppa.</u>	<u>10</u>	<u>(E) X</u>	<u>FACW</u>						
3. <u>Pop. bal (tri)</u>	<u>15</u>	<u>(E) X</u>	<u>FACW</u>			<u>6</u>	<u>(B)</u>		
4. _____									
Total Cover: <u>32</u>						Percent of Dominant Species That are OBL, FACW, or FAC:	<u>50%</u> <u>(A/B)</u>		
50% of total cover: <u>16</u>						Prevalence Index worksheet:			
20% of total cover: <u>6.4</u>						Total % Cover of:		Multiply by:	
Sapling/Shrub Stratum							OBL species	<u>0</u>	X1= <u>0</u>
Cov.%	Dom	Ind.	Cov.%	Dom	Ind.	FACW species	<u>3</u>	X2= <u>6</u>	
1. <u>Ros. ac.</u>	<u>5</u>		<u>FACW</u>	7. <u>Aln. ten</u>	<u>4</u>	FAC species	<u>91</u>	X3= <u>273</u>	
2. <u>Rub. id.</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	8. _____		FACU species	<u>100</u>	X4= <u>400</u>	
3. <u>Opl. hor.</u>	<u>2</u>		<u>FACW</u>	9. _____		UPL species	<u>0</u>	X5= <u>0</u>	
4. <u>Vib. edun</u>	<u>5</u>		<u>FACW</u>	10. _____		Column Totals:	<u>194</u> <u>(A)</u>	<u>679</u> <u>(B)</u>	
5. <u>Pop. bal</u>	<u>2</u>		<u>FACW</u>	11. _____		Prevalence Index = B/A = <u>3.5</u>			
6. <u>Aln. sin.</u>	<u>10</u>	<u>X</u>	<u>FAC</u>	12. _____					
Total Cover: <u>36</u>									
50% of total cover: <u>18</u>									
20% of total cover: <u>7.2</u>									
Herb Stratum							Hydrophytic Vegetation Indicators:		
Cov.%	Dom	Ind.	Cov.%	Dom	Ind.	<u>N</u> Dominance Test is >50%			
1. <u>Cal. can.</u>	<u>65</u>	<u>X</u>	<u>FAC</u>	12. <u>Stc. amp</u>	<u>1</u>	<u>N</u> Prevalence Index is ≤3.0			
2. <u>Mer. pan.</u>	<u>4</u>		<u>FACW</u>	13. <u>Vio. epi.</u>	<u>1</u>	<u>N</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
3. <u>Del. gla.</u>	<u>2</u>		<u>FACW</u>	14. <u>Egu. arv</u>	<u>35</u>	<u>N</u> Problematic Hydrophytic Vegetation ¹ (Explain)			
4. <u>Anc. pil.</u>	<u>1</u>		<u>FACW</u>	15. <u>Gal. triflorum</u>	<u>1</u>	¹ Indicators of hydric soil and wetland hydrology must be present unless disturbed or problematic.			
5. <u>San. sti.</u>	<u>1</u>		<u>FACW</u>	16. <u>Gal. bar</u>	<u>1</u>				
6. <u>Her. lan.</u>	<u>2</u>		<u>FACW</u>	17. _____					
7. <u>Gym. dry.</u>	<u>7</u>		<u>FACW</u>	18. _____					
8. <u>Aro. del</u>	<u>1</u>		<u>FAC</u>	19. _____					
9. <u>Act. rub.</u>	<u>1</u>		<u>NL</u>	20. _____					
10. <u>Epi. ang.</u>	<u>2</u>		<u>FACW</u>	21. _____					
11. <u>Tha. spa.</u>	<u>1</u>		<u>FACW</u>	22. _____					
Total Cover: <u>126</u>									
50% of total cover: <u>63</u>									
20% of total cover: <u>25.2</u>									
Plot size (radius, or length x width) <u>30' x 100'</u>						Hydrophytic Vegetation Present? Yes _____ No <u>X</u>			
% bare ground: <u>5</u>									
% Cover of Wetland Bryophytes <u>0</u>									
Total Cover of Bryophytes <u>3</u>									
Remarks:									

SOIL

Sampling Point: A16

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

Depth (inches)	Horizon Name	Soil Matrix		Redox Features				Texture	Alpha (pos/ neg)	Remarks
		Color (moist)	%	Color (moist)	%	Type ¹	Loc ²			
0-14	A	7.5YR 3/2	100					SIL		
14-20+	B	2.5Y 3/3	100					SAL		G 30 C 5

¹Type: C = Concentration, D = Depletions, RM = Reduced Matrix. ²Location: PL = Pore Lining, RC = Root Channel, M = Matrix

Hydric Soil Indicators (check ones that apply): <input checked="" type="checkbox"/> Histosol or Histel (A1) <input checked="" type="checkbox"/> Histic Epipedon (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide (A4) _____" from top <input checked="" type="checkbox"/> Thick Dark Surface (A12) <input checked="" type="checkbox"/> Alaska Gleyed (A13) <input checked="" type="checkbox"/> Alaska Redox (A14) <input checked="" type="checkbox"/> Alaska Gleyed Pores (A15)	Indicators for Problematic Hydric Soils ³ : <input checked="" type="checkbox"/> Alaska Color Change (TA4) <input checked="" type="checkbox"/> Alaska Alpine Swales (TA5) <input checked="" type="checkbox"/> Alaska Redox with 2.5Y Hue	<input checked="" type="checkbox"/> Alaska Gleyed without Hue 5Y or Redder Underlying Layer <input checked="" type="checkbox"/> Other (explain in Remarks)
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³One indicator of Hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.
⁴Give details of color change in Remarks.

Restrictive Layer (if present) Type: <u>N/A</u> Depth (inches): <u>N/A</u>	Drainage Class: <u>WD</u>	Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>
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Remarks:
SOIL PIT DUG IN DRAINAGE BOTTOM

HYDROLOGY

Wetland Hydrology Indicators (check ones that apply): Primary Indicators (any one indicator is sufficient) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input checked="" type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Inundation Visible on Aerial Image (B7) <input checked="" type="checkbox"/> Marl Deposits (B15) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) _____" from top <input checked="" type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Other (explain in Remarks)	Secondary Indicators (at least 2 or more required) <input checked="" type="checkbox"/> Water Stained Leaves (B9) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Salt Deposits (C5) <input checked="" 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)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches) _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches) _____ Seeping in at that depth but not yet filled: Y / N 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:
LIKELY AN EPHEMERAL DRAINAGE



Site: A16

Date: 9/29/09

NWI Class: U



Appendix B

List of Plant Species

List of dominant plant species

Common Name	Latin Name (former name)
Barclay's willow	<i>Salix barclayi</i>
Beaked sedge	<i>Carex utriculata (Carex rostrata)</i>
Black cottonwood	<i>Populus balsamifera</i>
Black spruce	<i>Picea mariana</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>
Bog blueberry	<i>Vaccinium uliginosum</i>
Chamisso's cotton grass	<i>Eriophorum russeolum</i>
Cloudberry	<i>Rubus chamaemorus</i>
Crowberry	<i>Empetrum nigrum</i>
Dwarf birch	<i>Betula nana</i>
Dwarf dogwood	<i>Cornus canadensis</i>
Field horsetail	<i>Equisetum arvense</i>
Fireweed	<i>Chamerion angustifolium (Epilobium angustifolium)</i>
Five-leaved bramble	<i>Rubus pedatus</i>
High bush cranberry	<i>Viburnum edule</i>
Lady fern	<i>Athyrium filix-femina</i>
Low bush cranberry	<i>Vaccinium vitis-idaea</i>
Lutz spruce	<i>Picea lutzii</i>
Rusty menziesia	<i>Menziesia ferruginea</i>
Meadow horsetail	<i>Equisetum pratense</i>
Mountain hemlock	<i>Tsuga mertensiana</i>
Narrow-leaved cotton grass	<i>Eriophorum angustifolium</i>
Northern Labrador tea	<i>Ledum decumbens</i>
Northern scouring rush	<i>Equisetum variegatum</i>
Oak fern	<i>Gymnocarpium dryopteris</i>
Paper birch	<i>Betula papyrifera</i>
Pink wintergreen	<i>Pyrola asarifolia</i>
Prickly rose	<i>Rosa acicularis</i>
Pumpkinberry	<i>Geocaulon lividum</i>
Quaking aspen	<i>Populus tremuloides</i>
Shrubby cinquefoil	<i>Dasiphora floribunda (Potentilla fruticosa)</i>
Sitka alder	<i>Alnus sinuata</i>
Sitka spruce	<i>Picea sitchensis</i>
Soapberry	<i>Shepherdia canadensis</i>
Spiraea	<i>Spiraea stevenii (Spiraea beauverdiana)</i>
Stiff clubmoss	<i>Lycopodium annotinum</i>
Sweet gale	<i>Myrica gale</i>
Twinflower	<i>Linnaea borealis</i>
Water sedge	<i>Carex aquatilis</i>
Western hemlock	<i>Tsuga heterophylla</i>