

Appendix A

Wetland Determination Forms and Site Photography

DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/11/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Open black spruce bog
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 1

Describe Location: Near waypoint 4 (c1), Near Post Office off Snug Harbor Road and Sterling Highway

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Picea mariana</i> *	T	17	FACW	9. <i>Parnassia palustris</i>	H	Tr	
2. <i>Vaccinium uliginosum</i> *	S	25	FAC	10. <i>Calamagrostis canadensis</i> *	H	15	FAC
3. <i>Betula nana</i> *	S	15	FAC	11. <i>Equisetum variegatum</i> *	H	25	FACW
4. <i>Vaccinium vitis-idaea</i>	S	7		12. <i>Equisetum arvense</i> *	H	15	FACU
5. <i>Salix</i> sp.	S	5		13. <i>Empetrum nigrum</i>	H	10	
6. <i>Ledum palustre decumbens</i>	S	5		14. <i>Carex 1</i>	H	Tr	
7. <i>Rubus chamaemorus</i>	S	5		15. <i>Carex 2</i>	H	Tr	
8. <i>Comarum palustre</i>	S	6		16. <i>Sphagnum</i> sp.	B		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **83%**

Remarks : Shrub sized black spruce.
* Indicates dominants using 50/20 method.

Describe Vegetation Type: Open, shrubby black spruce 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 checked="" 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)
Depth to Free Water in Pit	N/a (in)
Depth to Saturated Soil	8 (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 checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)

Remarks: Area seems drier than normal.

SOILS

Map Unit Name (Series and Phase):				Drainage Class:	
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.
0-8	Oi	-			-
8-14	Oe	-			-
14-18	Oa	-			-
HYDRIC SOIL INDICATORS:					
<input checked="" 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 checked="" type="checkbox"/> Sulfidic Odor (mild)		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" 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:					
Major root zone: upper 18 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: Trimble plot 1 Topography: flat NWI Class: PSS1/EM1B HGM Type: flat Photos: yes (1-3) Functions: see function form		

Site: Plot 1

Date: 8/11/03

NWI Class: PSS1/EM1B



Site: Plot 1

Date: 8/11/03

NWI Class PSS1/EM1B



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/12/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Black 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 2

Describe Location: Near waypoint C2, off of Sterling Highway east of grocery store.

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Picea mariana</i> *	T	20	FACW	9.			
2. <i>Comarum palustre</i>	H	5		10.			
3. <i>Equisetum pratense</i> *	H	50	FACW	11.			
4. <i>Calamagrostis canadensis</i>	H	5		12.			
5. <i>Rubus chamaemorus</i> *	H	15	FACW	13.			
6. <i>Empetrum nigrum</i> *	S	5	FAC	14.			
7. <i>Vaccinium vitis-idaea</i> *	S	5	FAC	15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **100%**

Remarks :

* Indicates dominants using 50/20 method.

Describe Vegetation Type: black spruce forest with horsetail understory. Adjacent areas have more black spruce.

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 checked="" 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)
Depth to Free Water in Pit		N/a	(in)
Depth to Saturated Soil		6	(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 checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)	

Remarks:

SOILS

Map Unit Name (Series and Phase):				Drainage Class:	
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.
0-6	Oi	-			-
6-7.5	Oe	-			-
7.5-8	A	10YR2/2			Clay loam with organics mixed in.
8-16	B	4/10Y	10YR3/4	Coarse, common	Silty clay loam
			5N	Fine, few	
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 checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					
Major root zone:					

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: Trimble plot 2 Topography: hummocky NWI Class: PFO4/EM2B HGM Type: flat Photos: yes Functions: see function form		



Site: Plot 2

Date: 8/12/03

NWI Class: PFO4/EM2B



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/12/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Black spruce bog
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 3

Describe Location: Near waypoint c10, where Cooper Crk Alt returns to Sterling Highway

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Picea mariana</i> *	T	25	FACW	9. <i>Comarum palustre</i>	H	Tr	
2. <i>Empetrum nigrum</i> *	S	30	FAC	10. <i>Calamagrostis canadensis</i>	H	Tr	
3 <i>Ledum palustre decumbens</i> *	S	15	FACW	11. <i>Carex1</i>	H	Tr	
4. <i>Equisetum arvense</i> *	H	20	FACU	12. <i>Carex 2</i>	H	Tr	
5. <i>Rubus chamaemorus</i>	S	12		13. <i>Carex utriculata</i>	H	Tr	
6. <i>Betula nana</i>	S	5		14. <i>Eriphorum angustifolium</i>	H	Tr	
7. <i>Vaccinium uliginosum</i>	S	12		15. <i>Salix</i> sp.	S	Tr	
8. <i>Vaccinium vitis-idaea</i>	S	5		16. <i>Alnus viridis sinuata</i>	S	Tr	

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

Remarks : Shrub sized black spruce
* Indicates dominants using 50/20 method.

Describe Vegetation Type: Black spruce 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 checked="" 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 (adjacent creek)	
FIELD OBSERVATIONS			
Depth of Surface Water		N/a	(in)
Depth to Free Water in Pit		16	(in)
Depth to Saturated Soil		3	(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 checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)	

Remarks:

SOILS

Map Unit Name (Series and Phase):				Drainage Class:	
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.
0-18	Oi	-			-
HYDRIC SOIL INDICATORS:					
<input checked="" 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 checked="" type="checkbox"/> Sulfidic Odor (mild)		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" 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:					
Major root zone: upper 18"					

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: Trimble plot 3 Topography: slightly hummocky NWI Class: PSS1/4B HGM Type: flat Photos: yes Functions: see function form		





DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60		Date	8/12/03
Applicant / Owner: ADOT&PF		Borough	KPB
Investigators: JDS & MB		State	AK
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Birch/spruce 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 4

Describe Location: Near waypoint c9, off of transmission line, close to where Cooper Crk Alt returns to hwy
VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Betula papyrifera</i> *	T	10	FACU	9. <i>Equisetum arvense</i> *	H	10	FACU
2. <i>Picea lutzii</i> *	T	15	NI	10. <i>Linnaea borealis</i>	S	8	
3. <i>Salix</i> sp.	T	Tr		11. <i>Calamagrostis canadensis</i>	H	5	
4. <i>Rosa acicularis</i> *	S	20	FACU	12. <i>Chamerion angustifolium</i> *	H	7	FACU
5. <i>Geocaulon lividum</i>	H	5		13. <i>Cornus canadensis</i>	H	5	
6. <i>Vaccinium vitis-idaea</i> *	S	10	FAC	14. <i>Lycopodium annotinum</i> *	H	7	FAC
7. <i>Empetrum nigrum</i>	S	7		15. <i>Rubus spectabilis</i>	S	Tr	
8. <i>Ledum palustre decumbens</i>	S	Tr		16.			

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

Remarks : Several cut down trees (for the t line)
* Indicates dominants using 50/20 method.

Describe Vegetation Type: open paper birch, lutz 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)
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:

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
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.
0-3	Oi	-			-
3-4	A	7.5YR3/3			loam
4-12	B1	2.5Y4/2 (80%)			Clay loam
		2.5Y4/3 (15%)			
		10YR4/2 (5%)			
12-16	B2	2.5Y4/3			Very gravelly clay loam with rocks and cobbles
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:					
Major root zone:					

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:		
Bald eagle, and evidence of moose browse		
GPS: Trimble plot 4		
Topography:		
NWI Class: U		
HGM Type: U		
Photos: yes		
Functions: wildlife habitat		

Site: Plot 4

Date: 8/12/03

NWI Class: Upland



Site: Plot 4

Date: 8/12/03

NWI Class: Upland



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/12/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Black spruce, emergent bog
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 5

Describe Location: no waypoint, near where G alts return to highway

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Picea mariana</i> *	T	17	FACW	9. <i>Rubus chamaemorus</i>	S	Tr	
2. <i>Alnus viridis sinuata</i> *	S	7	FAC	10. <i>Ledum palustre decumbens</i>	S	Tr	
3. <i>Equisetum arvense</i> *	H	45	FACU	11. <i>Vaccinium uliginosum</i>	S	Tr	
4. <i>Carex aquatilis</i> *	H	12	OBL	12. <i>Vaccinium vitis-idaea</i>	S	Tr	
5. <i>Betula nana</i>	S	5		13. <i>Calamagrostis canadensis</i>	H	Tr	
6. <i>Salix barclayi</i> *	S	10	FAC	14.			
7. <i>Comarum palustre</i>	H	Tr		15			
8. <i>Empetrum nigrum</i>	S	5		16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **80%**

Remarks : Shrub sized black spruce
* Indicates dominants using 50/20 method.

Describe Vegetation Type: shrubby black spruce and equisetum.

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 checked="" 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 (small creek running nearby)	
FIELD OBSERVATIONS			
Depth of Surface Water		N/a	(in)
Depth to Free Water in Pit		3	(in)
Depth to Saturated Soil		0	(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 checked="" type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)	

Remarks:

SOILS

Map Unit Name (Series and Phase):				Drainage Class:	
Taxonomy (Subgroup)			Field Observations Confirm Mapped Type? YES <input type="checkbox"/> NO <input type="checkbox"/>		
PROFILE DESCRIPTION					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-18	Oi	-			-
HYDRIC SOIL INDICATORS:					
<input checked="" 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 checked="" type="checkbox"/> Sulfidic Odor (strong)		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" 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:					
Major root zone: upper 18"					

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: Trimble plot 5 Topography: hummocky NWI Class: PSS4/EM2B HGM Type: flat/riverine (Kenai River) Photos: yes Functions: see form		

Site: Plot 5

Date: 8/12/03

NWI Class: PSS4/EM2B



Site: Plot 5

Date: 8/12/03

NWI Class: PSS4/EM2B



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/13/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Hemlock 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 6

Describe Location: Near waypoint c6, in forest off dam access road

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Tsuga mertensiana</i> *	T	30	FAC	9.			
2. <i>Rubus pedatus</i>	H	Tr		10.			
3. <i>Vaccinium vitis-idaea</i> *	S	10	FAC	11.			
4. <i>Ledum palustre decumbens</i> *	S	5	FACW	12.			
5. <i>Geocaulon lividum</i> *	H	20	FACU	13.			
6. <i>Empetrum nigrum</i> *	S	10	FAC	14.			
7. <i>Betula papyrifera</i> *	T	10	FACU	15.			
8.				16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **66%**

Remarks : Several downed trees.
* Indicates dominants using 50/20 method.

Describe Vegetation Type: hemlock 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:

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
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.
0-4	Oi	-			-
4-5	A	7.5YR2.5/1			Loam
5-8	E	10YR4/2			Sandy clay loam
8-14	B	7.5YR3/4			Sandy loam
14-18	B/C	2.5Y3/3			Gravelly sandy loam
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: small to medium sized cobbles in B and B/C horizons.					
Major root zone:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> YES <input 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: Trimble plot 6 Topography: slope NWI Class: U HGM Type: U Photos: yes Functions:		



Site: Plot 6

Date: 8/13/03

NWI Class: Upland



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/13/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Paper 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 7

Describe Location: No waypoint, on ridge top off of dam access road (Cooper Crk Alt)

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Betula papyrifera</i> *	T	15	FACU	9. <i>Tsuga heterophylla</i> *	T	5	FAC
2. <i>Picea lutzii</i>	T	Tr		10.			
3. <i>Lupinus nootkatensis</i> *	H	15	FAC	11.			
4. <i>Empetrum nigrum</i> *	S	20	FAC	12.			
5. <i>Arctostaphylos uva-ursi</i> *	S	50	np	13.			
6. <i>Vaccinium vitis-idaea</i>	S	15		14.			
7. <i>Linnaea borealis</i>	S	10		15			
8. <i>Geocaulon lividum</i> *	H	20	FACU	16. feather moss	B		

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

Remarks : several dead stumps – several fallen trees.
* Indicates dominants using 50/20 method.

Describe Vegetation Type: Open 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:

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
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.
0-2	Oi	-			-
2-2.5	A	10YR2/1			loam
2.5-5.5	E	10YR4/2			Sandy clay loam
5.5-13.5	B	7.5YR3/4			Gravelly loam
13.5-16	B/C	2.5Y3/2			Very gravelly loam
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: lots of small and medium sized cobbles in B and B/C horizons. Low chroma color in A horizon is due to organics.					
Major root zone: upper 11"					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (50 %)	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: Trimble plot 7 Topography: top of slope NWI Class: U HGM Type: U Photos: yes Functions:		

Site: Plot 7

Date: 8/13/03

NWI Class: Upland



Site: Plot 7

Date: 8/13/03

NWI Class: Upland



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/13/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	hemlock 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 8

Describe Location: Near waypoint c5, off T line (Cooper Creek Alt)

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Geocaulon lividum</i> *	H	15	FACU	9. <i>Chamerion angustifolium</i>	H	Tr	
2. <i>Vaccinium vitis-idaea</i> *	S	25	FAC	10. <i>Orthilia secunda</i>	H	5	
3. <i>Tsuga mertensiana</i> *	T	20	FAC	11. <i>Cornus canadensis</i>	H	Tr	
4. <i>Empetrum nigrum</i> *	S	10	FAC	12. <i>Salix</i> sp.	T	Tr	
5. <i>Menziesia ferruginea</i>	S	7		13. <i>Betula papyrifera</i>	T	Tr	
6. <i>Ledum palustre decumbens</i>	S	5		14.			
7. <i>Lycopodium annotinum</i> *	H	15	FAC	15.			
8. <i>Alnus viridis sinuata</i>	S	5		16.			

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **80%**

Remarks : Many dead trees – fallen and cut down
* Indicates dominants using 50/20 method.

Describe Vegetation Type: hemlock 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:

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
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.
0-5	Oi	-			-
5-6	A	10YR2/2			loam
6-9	E	10YR4/2			Sandy clay loam
9-15	B	10YR3/4			Gravelly loam
15-18	B/C	2.5Y4/4			Very gravelly loam
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: small and medium sized cobbles in B and B/C horizons.					
Major root zone: upper 11"					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> YES <input 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: Trimble plot 8 Topography: slight slope NWI Class: U HGM Type: U Photos: yes Functions: Aspect: 4 degrees		



Site: Plot 8

Date: 8/13/03

NWI Class: Upland



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60		Date	8/13/03
Applicant / Owner: ADOT&PF		Borough	KPB
Investigators: JDS & MB		State	AK
Do Normal Circumstances exist on the site?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Fern horsetail 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 9

Describe Location: Near waypoint c8, on bench away from Cooper Creek campground (next pullout)

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Betula papyrifera</i> *	T	10	FACU	9. <i>Calamagrostis canadensis</i>	H	10	
2. <i>Picea sitchensis</i> *	T	12	FACU	10. <i>Equisetum arvense</i> *	H	30	FACU
3. <i>Tsuga mertensiana</i>	T	Tr		11. <i>Rosa acicularis</i>	S	Tr	
4. <i>Alnus viridis sinuata</i> *	S	5	FAC	12. <i>Cornus canadensis</i>	H	Tr	
5. <i>Chamerion angustifolium</i>	H	15		13. <i>Gymnocarpium dryopteris</i> *	H	50	FACU
6. <i>Linnaea borealis</i> *	S	5	FACU	14. <i>Rubus pedatus</i>	H	Tr	
7. <i>Vaccinium vitis-idaea</i>	S	Tr		15. <i>Lycopodium annotinum</i>	H	Tr	
8. <i>Sanguisorba stipulata</i>	H	5		16. <i>Trientalis europaea</i>	H	Tr	
				17. <i>Oplopanax horridus</i>	H	Tr	

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **17%**

Remarks : Lots of downed trees, Sitka spruce appear to be planted (beetle mitigation?)
* Indicates dominants using 50/20 method.

Describe Vegetation Type: Oak fern, horsetail upland with paper birch and Sitka spruce

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)
Depth to Free Water in Pit		N/a	(in)
Depth to Saturated Soil		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)	

Remarks:

SOILS

Map Unit Name (Series and Phase):			Drainage Class:		
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.
0-4	Oi	-			-
4-6	E	10YR4/2			loam
6-12	B1	10YR3/3			loam
12-18	B2	2.5Y4/3			loam
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:					
Major root zone: upper 12"					

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: Trimble plot 9 Topography: NWI Class: U HGM Type: U Photos: yes Functions:		

Site: Plot 9

Date: 8/13/03

NWI Class: Upland



Site: Plot 9

Date: 8/13/03

NWI Class: Upland



DATA FORM

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

Project/Site: Sterling Highway Project MP 45 - 60	Date	8/14/03
Applicant / Owner: ADOT&PF	Borough	KPB
Investigators: JDS & MB	State	AK
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Community ID	Fireweed, grass, birch meadow
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 10

Describe Location: Near waypoint c4 along Cooper Creek Alt. Near Transmission line.

VEGETATION

Plant Species	Stratum	%	Indicator	Plant Species	Stratum	%	Indicator
1. <i>Betula papyrifera</i> *	T	15	FACU	9. <i>Linnaea borealis</i> *	S	5	FACU
2. <i>Alnus viridis sinuata</i> *	S	10	FAC	10. <i>Sambucus racemosa</i>	S	Tr	
3. <i>Chamerion angustifolium</i> *	H	20	FACU	11. <i>Rubus pedatus</i>	S	5	
4. <i>Rosa acicularis</i> *	S	5	FACU	12. <i>Trientalis europaea</i>	H	5	
5. <i>Picea lutzii</i>	T	Tr		13. <i>Gymnocarpium dryopteris</i> *	H	15	FACU
6. <i>Streptopus amplexifolius</i>	H	Tr		14. <i>Cornus canadensis</i>	H	Tr	
7. <i>Equisetum arvense</i> *	H	15	FACU	15. <i>Orthilia secunda</i>	H	Tr	
8. <i>Calamagrostis Canadensis</i> *	H	15	FAC	16. <i>Athyrium filix-femina</i>	H	Tr	

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) **25%**

Remarks :

* Indicates dominants using 50/20 method.

Describe Vegetation Type: upland meadow

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	
FIELD OBSERVATIONS		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	
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: