WETLAND DETERMINATION DATA FORM – Alaska Region

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

Applicant/Owner: DOT&PF Sampling Point: 14

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

Local relief (concave, convex, none): none Slope (%): 1

Subregion: Southcentral Alaska Lat: 60 58 04.8 Long: 149 26 54.1 Datum: WGS

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Gently sloped.

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Picea glauca (t)	10	FACU
2. Betula papyrifera (t)	70	FACU
3. Cornus canadensis (h)	70	FACU
4. Pteridium aquilinum (h)	60	FACU
5. Equisetum sylvaticum (h)	25	FACU
6. Salix sp. (s)	40	FAC
7. Picea mariana (t)	35	FACW
8. Calamagrostis canadensis (h)	10	FAC
9. Lycopodium annotinum (h)	25	FAC
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	345	

Plot size 30 foot diameter circle % Bare Ground 100

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 35	x 2 = 70
FAC species 75	x 3 = 225
FACU species 235	x 4 = 940
UPL species _____	x 5 = _____
Column Totals: 345 (A)	1235 (B)

Prevalence Index = B/A = 3.57

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	N/A							Organic
6+	10YR 3/3	100	N/A					Fractured bedrock with fine sand

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

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

Applicant/Owner: DOT&PF Sampling Point: 15

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

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

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Rained hard yesterday and it's also raining today.

Waypoint 48

Closed Mixed Forest

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Betula papyrifera (t)	70	FACU
2. Vaccinium vitis-idaea (h)	<1	FAC
3. Empetrum nigrum (h)	<1	FAC
4. Calamagrostis canadensis (h)	10	FAC
5. Cornus canadensis (h)	10	FAC
6. Picea mariana (t)	30	FACW
7. Menziesia ferruginea (s)	60	UPL
8. Athyrium distentifolium	5	FAC
9. Oplopanax horridus (s)	5	FACU
10. Rubus stellatus	10	FAC
11. Lycopodium annotinum (h)	5	FAC
12.		
13. Sphagnum sp. (h)	10	
14. Foliose lichen	5	
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	222	

Plot size 30 foot diameter circle % Bare Ground 100

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 30	x 2 = 60
FAC species 42	x 3 = 126
FACU species 75	x 4 = 300
UPL species 60	x 5 = 300
Column Totals: 207 (A)	786 (B)

Prevalence Index = B/A = 3.79

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
Ground cover = a lot o f leaf litter.
Ru st and Co ca are patchy.
Pi ma are very happy. A few unhappy on the edge.
Sphagnum is growing on logs.

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	N/A							Roots and organics
2 - 20	7.5YR3/2	100	N/A				sandy loam	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks:
Fluffy dry

WETLAND DETERMINATION DATA FORM – Alaska Region

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

Applicant/Owner: DOT&PF Sampling Point: 16

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

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

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✓ No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Ring of Tall Pima surround this area.

Waypoint 49

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Picea mariana (s)	45	FACW
2. Ledum decumbens (h)	15	FACW
3. Empetrum nigrum (h)	25	FAC
4. Betula nana (s)	30	FAC
5. Eriophorum angustifolium	35	OBL
6. Vaccinium uliginosum (h)	15	FAC
7. Geocaulon lividum (h)	3	FACU
8.		
9.		
10. Sphagnum squarrosum (h)	100	
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	268	

Plot size ____ % Bare Ground 0

% Cover of Wetland Bryophytes 100 Total Cover of Bryophytes 100

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	60	x 2 =	120
FAC species	70	x 3 =	210
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	168 (A)		377 (B)

Prevalence Index = B/A = 2.24

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

✓ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
Most Pima are scrub-shrub; a few are trees.

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	N/A							Peat
10 - 20	10YR2/2	100					silty loam	Organic soil - some org. not broken down

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:
Some small pockets of open water near by.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 11, 2006

Applicant/Owner: DOT&PF Sampling Point: 17

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

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

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Waypoint 50

Open Tall Scrub

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Betula nana (s)	25	FAC
2. Eriophorum angustifolium (h)	60	OBL
3. Eriophorum vaginatum	70	FACW
4. Vaccinium oxycoccos (h)	5	FACW
5. Ledum decumbens (h)	20	FACW
6. Empetrum nigrum (h)	15	FAC
7. Andromeda polifolia (h)	25	OBL
8.		
9.		
10. Sphagnum squarrosum (h)	20	
11. Rusty Sphagnum (h)	80	
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	320	

Plot size 30 foot diameter circle % Bare Ground 0

% Cover of Wetland Bryophytes 20 Total Cover of Bryophytes 100

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85
FACW species	95	x 2 =	190
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	220 (A)		395 (B)

Prevalence Index = B/A = 1.79

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	N/A							Peat

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): 2

Water Table Present? Yes ✓ No ____ Depth (inches): 2

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

Areas where cotton grass dominates surface water is visible.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 11, 2006

Applicant/Owner: DOT&PF Sampling Point: 18

Investigator(s): CAD/RAC Landform (hillside, terrace, hummocks, etc.): slight hills in area

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

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Squirrel habitat

Waypoint 51

Tall Closed Shrub

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Viburnum edule (s)	60	FACU
2. Gymnocarpium dryopteris (h)	30	FACU
3. Athyrium distentifolium (h)	15	FAC
4. Oplopanax horridus (s)	15	FACU
5. Alnus crispa (s)	20	FAC
6. Sambucus racemosa (s)	25	FACU
7. Menziesia ferruginea (s)	35	UPL
8. Chamerion angustifolium (h)	30	FACU
9. Sorbus scopulina (s)	25	NI
10. Picea mariana (t)	20	FACW
11. Galium triflorum (h)	10	FACU
12. Rubus idaeus (s)	30	FAC
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	315	

Plot size 30 foot diameter circle % Bare Ground 100

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	65	x 3 =	195
FACU species	170	x 4 =	680
UPL species	35	x 5 =	175
Column Totals:	260 (A)		1090 (B)

Prevalence Index = B/A = 4.19

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
Thick understory of raspberry. Happy Pima on the edge.

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	N/A							Root wad with organics
6 - 20	10YR4/6	100					sandy loam	some cobbles at 12 feet

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

Second layer is very red/frown. At 12 feet cobbles start.

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks:

Dry

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 11, 2006

Applicant/Owner: DOT&PF Sampling Point: 19

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

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

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

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

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

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

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

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Creek bisects site. Pond near site too.

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Angelica lucida (h)	25	FACU
2. Cicuta mackenziana (h)	5	OBL
3. Achillea millefolium (h)	10	FACU
4. Rumex occidentalis	5	OBL
5. Carex sp.	75	FACW
6. Juncus sp.	20	FACW
7. Ribes sp.	10	FAC
8. Potentilla anserina	20	FACW
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	170	

Plot size 30 foot diameter circle % Bare Ground 100

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	115	x 2 =	230
FAC species	10	x 3 =	30
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	170 (A)		410 (B)

Prevalence Index = B/A = 2.41

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
Ribes sp. - trailing, not in common growth form.

All species except for carex and juncus grow along the creek.

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator.)

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

Hydric soils assumed due to hydrophytic vegetation and inundation.

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): 1 - 2

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

Mucky saturation where surface water is not present.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 11, 2006

Applicant/Owner: DOT&PF Sampling Point: 20

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

Local relief (concave, convex, none): concave Slope (%): 5

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
2006 Precipitation was 5 inches above normal and more rainfall than normal in July (National Weather Service)

This site on a hill that slopes down into a creek, almost like a bowl. This area is different than other hillside areas - it has a very coastal feel to it. The tree trunks are much bigger than average.

Southeast habitats have sloped wetlands - this is an example.

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Picea glauca (t)	55	FACU
2. Equisetum arvense (h)	20	FACU
3. Menziesia ferruginea (s)	45	UPL
4. Sitka sitchensis (t)	25	FACU
5. Oplopanax horridus (s)	15	FACW
6. Athyrium distentifolium (h)	15	FAC
7. Calamagrostis canadensis (h)	15	FAC
8. Ribes sp. (h)	10	FAC
9. Betula papyrifera (saplings)	15	FACU
10. Streptopus amplexifolius (h)	5	FAC
11. Cornus canadensis (h)	15	FACU
12.		
13. Plagiomnium insigne (coastal leafy moss)	100	NI
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	335	

Plot size 30 foot diameter circle % Bare Ground 0

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 100

Prevalence Index:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 15	x 2 =	30
FAC species 45	x 3 =	135
FACU species 130	x 4 =	520
UPL species 45	x 5 =	225
Column Totals: 235	(A)	910 (B)

Prevalence Index = B/A = 3.87

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

✓ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
Very large Pigl and larch.

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	N/A							Roots and organic soil
10 - 16	2.5YR2.5/1	100					silty loam	many cobbles, mucky soil

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

At 16 cobbles are packed too tightly to get through.

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): 10

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 15, 2006

Applicant/Owner: DOT&PF Sampling Point: 21

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

Local relief (concave, convex, none): none Slope (%): 8

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Vegetation is not significantly disturbed, however it looks like it has been cleared in the relatively near future. The site is near a utility corridor.

Broadleaf woodland

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Alnus crispa (s)	40	FAC
2. Salix planifolia (s)	25	FACW
3. Betula papyrifera (t)	40	FACU
4. Chamerion angustifolium (h)	15	FACU
5. Calamagrostis canadensis (h)	10	FAC
6. Achillea millefolium (h)	5	FACU
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	135	

Plot size 30 foot diameter circle % Bare Ground 0

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	25
FAC species	50	x 3 =	150
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	135 (A)		415 (B)

Prevalence Index = B/A = 3.07

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
Some type of grass covers the ground . There is no seed head and it resembles lawn grass. Only about 8 inches high.

SOIL

Sampling Point: 21

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 1	N/A							Root matter
1 - 9	7.5YR4/1	100					sandy	Coarse. a lot of sand and gravel
9 +	N/A							Fractured bedrock

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:
Dry

WETLAND DETERMINATION DATA FORM – Alaska Region

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

Applicant/Owner: DOT&PF Sampling Point: 22

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

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

Subregion: Southcentral Alaska Lat: Long: Datum:

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

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

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

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

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Site is adjacent to the relatively recent trail. The area may have been previously disturbed as the areas away from the trail are tall birch forests.

Upland vegetation dominated wetland

Broadleaf woodland

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Betula papyrifera (t)	15	FACU
2. Calamagrostis canadensis (h)	75	FAC
3. Spiraea beauverdiana (s)	<1	FAC
4. Alnus crispa (s)	<1	FAC
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	92	

Plot size 20 foot diameter circle % Bare Ground 60

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	77	x 3 =	231
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	92 (A)		291 (B)

Prevalence Index = B/A = 3.16

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

✓ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes ____ No ____

Remarks:
Bepa is very stressed.

SOIL

Sampling Point: 22

Profile Description: (Describe to the depth needed to document the indicator.)

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

Hydric soils assumed due to hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): 2-3

Water Table Present? Yes ____ No ____ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 15, 2006

Applicant/Owner: DOT&PF Sampling Point: 23

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

Local relief (concave, convex, none): none Slope (%): 1

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

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

Similar to site 9.

Closed Tall Scrub

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Alnus crispa (s)	80	FAC
2. Galium triflorum (h)	10	FACU
3. Taraxacum officinale (h)	15	FACU
4. Osmorhiza depauperata (h)	10	NI
5. Bromus inermis (h)	5	NI
6. Carex microchaeta (h)	5	FACU
7. Calamagrostis purpurascens (h)	3	NI
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	128	

Plot size 30 foot diameter circle % Bare Ground 100

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 0

Prevalence Index:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	30	x 4 =	120
UPL species		x 5 =	
Column Totals:	110 (A)		360 (B)

Prevalence Index = B/A = 3.27

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 23

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	7.5YR3/1	100					sandy loam	not organic soil/gravel
6+	N/A							Fractured bedrock

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
- ___ Alaska Redox With 2.5Y Hue
- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks:
Dry

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Seward Highway MP 99 - 105 Borough/City: Anchorage Sampling Date: August 15, 2006

Applicant/Owner: DOT&PF Sampling Point: 24

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

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

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

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:
Hydrology - the winter storage this year is half of the average, so wetland areas may be drier compared to last year.

53 degrees F, raining hard.

VEGETATION

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status
1. Picea glauca (t)	45	FACU
2. Betula papyrifera (t)	30	FACU
3. Cornus canadensis (h)	15	FACU
4. Achillea millefolium (h)	<1	FACU
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12. Sphagnum sp. (h)	20	
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
Total Cover:	111	

Plot size 30 foot diameter circle % Bare Ground 70

% Cover of Wetland Bryophytes 0 Total Cover of Bryophytes 30

Prevalence Index:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 0	x 3 = 0
FACU species 91	x 4 = 364
UPL species 0	x 5 = 0
Column Totals: 91 (A)	364 (B)

Prevalence Index = B/A = 4.0

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

___ Wetland Cryptogams (record species and cover at left)

___ Morphological Adaptations

___ Problematic Hydrophytic Vegetation (Explain)

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:
Coca is patchy. There is no shrub layer.

SOIL

Sampling Point: 24

Profile Description: (Describe to the depth needed to document the indicator.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	N/A							Root wad/decaying wood
4 - 6	7.5YR4/1	100					sandy loam	
6 - 18	N/A							huge rocks with ash in between.

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

Hydric Soil Indicators:

- ___ Histosol or Histel (A1)
- ___ Histic Epipedon (A2)
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Indicators for Problematic Hydric Soils[3]:

- ___ Alaska Color Change (TA4)[4]
- ___ Alaska Alpine Swales (TA5)
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- ___ Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- ___ Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present.

[4]Give details of color change in Remarks.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:
Huge rocks!

HYDROLOGY

Wetland Hydrology Indicators:

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)
- ___ Mat or Crust of Algae or Marl (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Dry-Season Water Table (C2)
- ___ Other (Explain in Remarks)

Secondary Indicators (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): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:
Crumbly dry.