WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Rich Harris - 4700 Glacier Hwy Site Borough/City: CBJ Sampling Date: 7/21/2015

Applicant/Owner Rich Harris Sampling Point: 1

Investigator(s): Koren Bosworth - BBC Landform: Hillside/ toe of slope - glaciomarine deposits

Local relief (concave, convex, none): _____ Slope (%): 2%

Subregion: SE Alaska Lat: _____ Long: _____ Datum: NAD83

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.** Large roadcut below has dried this area out.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Pisi - Picea sitchensis	15	✓	FU
2. Tahe Tsuga heterophylla	20	✓	F
3.			
4.			

Total Cover: 35%

50% of total cover: 16.5 20% of total cover: 7

Sapling/Shrub Stratum			
1. Vaov - Vaccinium ovalifolium	40%	✓	F
2. Mefe - Menziesia ferruginea	20%	✓	FU
3. Oplopanax horridum - OpHo	5%		FU
4.			
5.			
6.			

Total Cover: 65%

50% of total cover: 32.5 20% of total cover: 13

Herb Stratum			
1. Gydr - Gymnocarpium dryopteris	30%	✓	FU
2. Drdi - Dryopteris dilatata	10%	✓	FU
3. Stam - Streptopus amplexifolius	2%		F
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Total Cover: 42%

50% of total cover: 21 20% of total cover: 8.4

Plot size (radius, or length x width) 15' diam. % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	62	x 3 =	186
FACU species	80	x 4 =	320
UPL species		x 5 =	
Column Totals:	142	(A)	506 (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: **1**

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

Local relief (concave, convex, (none)): _____ Slope (%): 2%

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation ___ _, Soil __ __, or Hydrology __✓__ significantly disturbed? Are "Normal Circumstances" present? Yes_____ No ✓

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.** Large roadcut below has dried this area out.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Pisi - Picea sitchensis	15	✓	FU
2. Tahe Tsuga heterophylla	20	✓	F
3.			
4.			
Total Cover: 35%			
50% of total cover: 16.5	20% of total cover: 7		
Sapling/Shrub Stratum			
1. Vaov - Vaccinium ovalifolium	40%	✓	F
2. Mefe - Menziesia ferruginea	20%	✓	FU
3. Oplopanax horridum - OpHo	5%		FU
4.			
5.			
6.			
Total Cover: 65%			
50% of total cover: 32.5	20% of total cover: 13		
Herb Stratum			
1. Gydr - Gymnocarpium dryopteris	30%	✓	FU
2. Drdi - Dryopteris dilatata	10%	✓	FU
3. Stam - Streptopus amplexifolius	2%		F
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 42%			
50% of total cover: 21	20% of total cover: 8.4		

Plot size (radius, or length x width) 15' diam. % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 62	x 3 = 186
FACU species 80	x 4 = 320
UPL species _____	x 5 = _____
Column Totals: 142 (A)	506 (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: 2

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

Local relief (concave, convex, none): _____ Slope (%): 20%

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: PFO4

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

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

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.**

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	30	✓	F
2.			
3.			
4.			
Total Cover:	30		
50% of total cover: _____	20% of total cover: _____		
Sapling/Shrub Stratum			
1. Vaov	10	✓	F
2. Mefe	3		FU
3. Tshe (sapling)	3		F
4. Opho - Oplopanax horridum	2		FU
5.			
6.			
Total Cover:	18		
50% of total cover: 9	20% of total cover: 3.6		
Herb Stratum			
1. Lyam - Lysichiton americanum	30	✓	O
2. Cave	20	✓	FU
3. Drdi	10		FU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	60		
50% of total cover: 30	20% of total cover: 12		

Plot size (radius, or length x width) 15' diameter % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1						OM	Sat.
8-12+	2.5Y 4/1						silt loam w/sand	Sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, 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: glacio marine sediment

Depth (inches): 8

Hydric Soil Present? Yes ✓ No ___

Remarks:

Isostatic rebound has lifted this site out of the influence of the tides, leaving a relatively impermeable silt layer that has some remenant redox features.

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)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ 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 along 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): 7

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: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: **3**

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

Local relief (concave, convex, none): _____ Slope (%): **10%**

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation ___ _, Soil __ __, or Hydrology __ __ significantly disturbed? Are "Normal Circumstances" present? Yes_____ No ✓

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.**

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	50	✓	F
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum			
1. Oplopanax horridus - Opho	40	✓	FU
2. Vaal	9		F
3.			
4.			
5.			
6.			
Total Cover: 49			
50% of total cover: 24.5 20% of total cover: 9.8			
Herb Stratum			
1. Ordi	35	✓	FU
2. Gydi	30	✓	FU
3. Titr - Tiarella trifoliata	4		F
4. Coas Coptis asplenifolia	2		F
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 71			
50% of total cover: 35.5 20% of total cover: 14.2			

Plot size (radius, or length x width) 15' diameter % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 65	x 3 = 195
FACU species 105	x 4 = 420
UPL species _____	x 5 = _____
Column Totals: 170 (A)	615 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	5YR 2.5/2						OM	unsat
4-12	7.5YR 2.5/3						loam w/ OM	unsat
12-14+	7.5YR 2.5/2						loam + rocks	unsat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, 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:

Isostatic rebound has lifted this site out of the influence of the tides, leaving a relatively impermeable silt layer that has some remenant redox features.

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)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ 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 along 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): 216

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): 216

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: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: 4

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

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

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: PF04

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

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

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.**

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	50	✓	F
2.			
3.			
4.			
Total Cover:			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum			
1. Opho	10	✓	FU
2.			
3.			
4.			
5.			
6.			
Total Cover:			
50% of total cover: _____ 20% of total cover: _____			
Herb Stratum			
1. Lyam	20	✓	O
2. Titr	5		F
3. Anco	3		F
4. Gyar	5		FU
5. Stro - Streptopus roseus	2		F
6.			
7.			
8.			
9.			
10.			
Total Cover:	35		
50% of total cover: 17.5 20% of total cover: 7			

Plot size (radius, or length x width) 15' diameter % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67.7 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16+	7.5YR 2.5/1						OM	sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, 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:

Isostatic rebound has lifted this site out of the influence of the tides, leaving a relatively impermeable silt layer that has some remenant redox features.

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)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ 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 along 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): 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:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: **5**

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

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

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: _____

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

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

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.**
This sample point is on a small ridge in a mapped wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	60	✓	F
2.			
3.			
4.			
Total Cover: 60			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum			
1. Opho	20	✓	FU
2. Vaov	20	✓	F
3.			
4.			
5.			
6.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Coca - Cornus canadensis	35	✓	FU
2. Coas - Coptis asplenifolia	10		F
3. Athfe - Athyrium felix-f	5		F
4. Gydr - Gymnocarpium dr.	5		F
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27.5 20% of total cover: 11			

Plot size (radius, or length x width) 15' diam. % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 100	x 3 = 300
FACU species 55	x 4 = 220
UPL species _____	x 5 = _____
Column Totals: 155 (A)	520 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No **✓**

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5YR 2.5/1						OM	sat.
3-9	7.5 YR 2.5/1						OM w/ rocks	unsat.
9+	2.5Y 5/3						Colluvium Rocks w/ OM	unsat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, 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:

Isostatic rebound has lifted this site out of the influence of the tides, leaving a relatively impermeable silt layer that has some remenant redox features.

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)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ 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 along 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): 0-2

Wetland Hydrology Present? Yes ____ No ✓

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

Remarks: the moss & top inch of OM was wet after a day of heavy rain.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: **Rich Harris - 4700 Glacier Hwy Site** Borough/City: **CBJ** Sampling Date: **7/21/2015**

Applicant/Owner **Rich Harris** Sampling Point: 6

Investigator(s): **Koren Bosworth - BBC** Landform: **Hillside/ toe of slope - glaciomarine deposits**

Local relief (concave, convex, none): _____ Slope (%): flat

Subregion: SE Alaska **Lat:** _____ **Long:** _____ **Datum: NAD83**

Soil Map Unit Name: _____ NWI classification: PFO4

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

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

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

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

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

Remarks: **Higher than average rainfall for the month. Heavy rains in the two days before the survey.**

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Tshe	50	✓	F
2.			
3.			
4.			
Total Cover:			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum			
1. Vavo	20	✓	F
2. Mefe	10	✓	FU
3. Opho	3		FU
4.			
5.			
6.			
Total Cover:	33		
50% of total cover: 16.5	20% of total cover: 6.6		
Herb Stratum			
1. Lyam	30	✓	O
2. Tifr	5		F
3. Gydr	5		FU
4. Cdca	3		FU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover:	43		
50% of total cover: 21.5	20% of total cover: 8.6		

Plot size (radius, or length x width) _____ % Bare Ground _____

% Cover of Wetland Bryophytes _____ Total Cover of Bryophytes _____ (Where applicable)

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1						OM	sat.
14+	10YR 2/1						OM + rocks	sat.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, 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:

Isostatic rebound has lifted this site out of the influence of the tides, leaving a relatively impermeable silt layer that has some remenant redox features.

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)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Marl Deposits (B15)
- ___ 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 along 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): 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: