WETLAND DETERMINATION DATA FORM - Alaska Region

rojec	t/Site: Susitna-Watana Hydroelectric Project	В	orough/City:	Matanusk	a-Susitna Borough Sampling Date:30-Aug-15
Applica	ant/Owner: Alaska Energy Authority				Sampling Point: SW15_T342_10
	gator(s): AFW		Landform (hills	side, terrac	e, hummocks etc.): Flat
Local	relief (concave, convex, none): hummocky		Slope: 1.7	% / 1.0	° Elevation:
Subred	gion : Interior Alaska Mountains	Lat.:			Long.: Datum: WGS84
	ap Unit Name:				NWI classification: PSS1B
	matic/hydrologic conditions on the site typical for this	time of voor	o Vec	● No ○	(If no, explain in Remarks.)
	/egetation , Soil , or Hydrology	•	disturbed?		Iormal Circumstances" present? Yes No No
	/egetation, Soil, or Hydrology	•	oblematic?		eded, explain any answers in Remarks.)
SUMI	MARY OF FINDINGS - Attach site map sho	owing sam	pling point	locations	s, transects, important features, etc.
	Hydrophytic Vegetation Present? Yes No	\supset	_		
	Hydric Soil Present? Yes No	\supset			pled Area
	Wetland Hydrology Present? Yes No	\sim	wi	thin a W	/etland? Yes ● No ○
Rema	arks: several small closed stands of stunted black spro	uce in the ar	ea, permafros	t encounte	red at 24 inches
/EGF	ETATION -Use scientific names of plants. I	ist all spe	cies in the	plot.	
		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tre	e Stratum	% Cover	Species?	Status	Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)
1.					That are OBL, FACW, or FAC: 4 (A) Total Number of Dominant
2.					Species Across All Strata:4 (B)
3.					Percent of dominant Species
4.					That Are OBL, FACW, or FAC: 100.0% (A/B)
5.					Prevalence Index worksheet:
	Total Cove				Total % Cover of: Multiply by:
Sap	oling/Shrub Stratum 50% of Total Cover:	0 20%	of Total Cover:	0	OBL Species <u>3</u> x 1 = <u>3</u>
1.	Vaccinium uliginosum	35	✓	FAC	FACW Species 41 x 2 = 82
2.	Rhododendron tomentosum		✓	FACW	FAC Species x 3 =
3.	Betula nana	10		FAC	FACU Species0 x 4 =0
4.	Empetrum nigrum	10		FAC	UPL Species
5.	Vaccinium vitis-idaea	8		FAC	Column Totals: <u>122</u> (A) <u>319</u> (B)
6.	Vaccinium oxycoccos	3		OBL	Prevalence Index = B/A =2.615_
7.	Picea mariana	1		FACW	Trevalence mack - B/A
8.					Hydrophytic Vegetation Indicators:
					✓ Dominance Test is > 50%
10.					Prevalence Index is ≤3.0
Шал	Total Cover: _ 50% of Total Cover: _		of Total Cover	: 17.4	Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
		20	✓	FACW	Problematic Hydrophytic Vegetation (Explain)
	Rubus chamaemorus Carex bigelowii		✓	FAC	Indicators of hydric soil and wetland hydrology must
				TAC	be present, unless disturbed or problematic.
					Plot size (radius, or length x width) <u>10m</u>
		_			% Cover of Wetland Bryophytes (Where applicable)
		_			% Bare Ground35
					Total Cover of Bryophytes65
7.					
7. 8.					
7. 8. 9.					Hydrophytic
7. 8. 9.		0 0 r: 35		7	Hydrophytic Vegetation Present? Yes No

US Army Corps of Engineers Alaska Version 2.0

SOIL Sampling Point: SW15_T342_10

(inches)	Color (m	oict)	%	Color (m	oict)	%	Type ¹	Loc ²	Texture	Remarks
0-2	COIOI (III	ioist)	100	COIOI (III	oist)		Туре	LUC	Peat	
2-9			100						Mucky Peat	_
9-24		2/2	50	7.5YR	2.5/2				Silt Loam	cryoturbated. high organic content
+mottle	7.5YR	2.5/2	30	7.511	2.5/2				Silt Loam	
+motue	7.51K	2.5/2							Siit Loaiii	cryoturbated. high organic content
										_
Type: C=Co	ncentration D		. RM=Reduc	ed Matrix	² Location:	PI =Pore	Lining RC	=Root Cha	annel. M=Matrix	_
		Беріссіої	- Teauc				_		anner. Pi-Fidurx	
lydric Soil I					ors for Pro ca Color Cha		4	DIIS:	Alaska Clayed Without	Huo EV or Doddor
_	r Histel (A1) bedon (A2)				ka Color Cris ka Alpine sw		-		Alaska Gleyed Without Underlying Layer	nue of or Redder
Ξ '''	Sulfide (A4)				a Redox W	•	•		Other (Explain in Rema	rks)
¬ ' -	k Surface (A12	2)								
Alaska Gle	eyed (A13)	•			ndicator of happropriate				mary indicator of wetland	hydrology,
Alaska Re	dox (A14)						•		esent	
Alaska Gle	eyed Pores (A	15)		4 Give d	etails of col	or change	e in Remark	(S		
estrictive Laye	er (if present)	:								
Type: fros	it								Hydric Soil Presen	t? Yes 💿 No 🔾
	nes): 24 countered at 2	4 inches								
emarks:	<u>, </u>	4 inches								
emarks: ermafrost end	countered at 2	4 inches								
emarks: ermafrost enc YDROLO Vetland Hyd	ountered at 2 GY rology Indic	ators:							_Secondary Inc	dicators (two or more are required)
YDROLO Vetland Hyd	GY rology Indicators (any one	ators:	t)						Water St	ained Leaves (B9)
YDROLO /etland Hyd /rimary Indica	oGY rology Indicators (any one Vater (A1)	ators:	t)		undation Vis				Water St	ained Leaves (B9) Patterns (B10)
YDROLO //etland Hyd //rimary Indica Surface V // High Wat	GY rology Indicators (any one Vater (A1) er Table (A2)	ators:	t)	Spa	arsely Vege	tated Con			Water St. Drainage Oxidized	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (C
YDROLO /etland Hyd /rimary Indica Surface W High Wat Saturation	rountered at 2 OGY rology Indicators (any one Vater (A1) er Table (A2) n (A3)	ators:	t)	Spa	arsely Vege rl Deposits	tated Con (B15)	cave Surfac		Water St Drainage Oxidized Presence	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (C of Reduced Iron (C4)
YDROLO YDROLO YDROLO Yetland Hyd Trimary Indica Surface W High Wate Saturation Water Ma	rountered at 2 OGY rology Indicators (any one Water (A1) er Table (A2) in (A3) irks (B1)	ators: e is sufficien	t)	Spa	arsely Vege Irl Deposits drogen Sulf	tated Con (B15) îde Odor	cave Surfac		Water St. Drainage Oxidized Presence Salt Depo	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Ci of Reduced Iron (C4) soits (C5)
YDROLO YDROLO YDROLO YEtland Hyd Trimary Indica Surface W High Wate Saturation Water Ma Sediment	rountered at 2 rology Indicators (any one Water (A1) er Table (A2) in (A3) irks (B1) Deposits (B2)	ators: e is sufficien	t)	Spa	arsely Vege rl Deposits drogen Sulf y-Season W	tated Con (B15) ide Odor ater Table	cave Surfac (C1) e (C2)		Water St. Drainage Oxidized Presence Salt Depo	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Ci of Reduced Iron (C4) osits (C5) or Stressed Plants (D1)
YDROLO YELLAND IN THE PROPERTY OF THE PROPERTY	rology Indicators (any one Vater (A1) er Table (A2) in (A3) urks (B1) Deposits (B2) osits (B3)	ators: is sufficien	t)	Spa	arsely Vege Irl Deposits drogen Sulf	tated Con (B15) ide Odor ater Table	cave Surfac (C1) e (C2)		Water St. Drainage Oxidized Presence Salt Depo	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Coor Reduced Iron (C4) Soits (C5) Or Stressed Plants (D1) hic Position (D2)
YDROLO YETIAN Hyd rrimary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo	rology Indicators (any one Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) cosits (B3) or Crust (B4)	ators: is sufficien	t)	Spa	arsely Vege rl Deposits drogen Sulf y-Season W	tated Con (B15) ide Odor ater Table	cave Surfac (C1) e (C2)		□ Water St. □ Drainage □ Oxidized □ Presence □ Salt Depot □ Stunted ot □ Geomorp ☑ Shallow A	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Coording Reduced Iron (C4) Posits (C5) Por Stressed Plants (D1) Position (D2) Equitard (D3)
YDROLO Yetland Hyd rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	rology Indicators (any one Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) cosits (B3) or Crust (B4)	ators: e is sufficien	t)	Spa	arsely Vege rl Deposits drogen Sulf y-Season W	tated Con (B15) ide Odor ater Table	cave Surfac (C1) e (C2)		Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (City of Reduced Iron (C4) Desits (C5) Desits (C5) Desits (C5) Desits (D1) Desition (D2) Equitard (D3) Degraphic Relief (D4)
YDROLO Yetland Hyd rimary Indica Surface V High Wate Saturation Water Ma Sediment Drift Depo	rology Indicators (any one Vater (A1) er Table (A2) on (A3) urks (B1) Deposits (B2) or Crust (B4) osits (B5) oil Cracks (B6)	ators: e is sufficien	ıt)	Spa	arsely Vege rl Deposits drogen Sulf y-Season W	tated Con (B15) ide Odor ater Table	cave Surfac (C1) e (C2)		□ Water St. □ Drainage □ Oxidized □ Presence □ Salt Depot □ Stunted ot □ Geomorp ☑ Shallow A	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (City of Reduced Iron (C4) Desits (C5) Desits (C5) Desits (C5) Desits (D1) Desition (D2) Equitard (D3) Degraphic Relief (D4)
YDROLO YDROLO YDROLO YELIAND Hyd Frimary Indica Surface W ✓ High Wate ✓ Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S ield Observa	rology Indicators (any one Vater (A1) er Table (A2) on (A3) or	eators: e is sufficien)	nt)	Spi Ma Hyi Dry Ott	arsely Vege rl Deposits drogen Sulf y-Season W	tated Con (B15) ide Odor later Table in Remai	cave Surfac (C1) e (C2)		Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (City of Reduced Iron (C4) Desits (C5) Desits (C5) Desits (C5) Desits (D1) Desition (D2) Equitard (D3) Degraphic Relief (D4)
YDROLO YDROLO	rountered at 2 rology Indicators (any one Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) oil Cracks (B6 ations: r Present?	eators: e is sufficien Yes		Spi Ma Hyi Dry Ott	arsely Vege ri Deposits drogen Sulf y-Season W ner (Explain	tated Con (B15) ide Odor later Table in Remai	cave Surfac (C1) e (C2)	ce (B8)	Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Citor of Reduced Iron (C4) posits (C5) por Stressed Plants (D1) hic Position (D2) Aquitard (D3) pographic Relief (D4) ral Test (D5)
YDROLO /etland Hyd /rimary Indica Surface W / High Wate / Saturation Water Ma Sediment Drift Depu Algal Mat Iron Depo Surface S	rountered at 2 rology Indicators (any one Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) oil Cracks (B6 ations: r Present? Present?	Yes) No	Spi Ma Hyi Dry Ott	arsely Vege rrl Deposits drogen Sulf y-Season W ner (Explain	tated Con (B15) ide Odor (ater Table in Remai i):	cave Surfac (C1) e (C2)	ce (B8)	Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A Microtopo FAC-neut	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Citor of Reduced Iron (C4) posits (C5) por Stressed Plants (D1) hic Position (D2) Aquitard (D3) pographic Relief (D4) ral Test (D5)
YDROLO Yetland Hyd rimary Indica Surface W High Wate Sediment Drift Depo Algal Mat Iron Depo Surface S Gulface Water Water Table F Saturation Pre includes capi	rountered at 2 rology Indicators (any one Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) oil Cracks (B6 ations: r Present? Present?	Yes Yes	No O No O No O	Spi Maa Hyo Dry Ott	arsely Vege ri Deposits drogen Sulf y-Season W her (Explain pth (inches pth (inches	tated Con (B15) fide Odor (ater Table in Reman	(C1) (C2) e (C2) rks)	Wetla	Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A Microtopo FAC-neut	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Citor of Reduced Iron (C4) posits (C5) por Stressed Plants (D1) hic Position (D2) Aquitard (D3) pographic Relief (D4) ral Test (D5)
YDROLO YDROLO YDROLO YELIAND HYD YMATERIA Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S ield Observi Surface Water Water Table F Saturation Pre includes capi escribe Recor	rountered at 2 rology Indicators (any one Vater (A1) er Table (A2) n (A3) or Ks (B1) Deposits (B3) or Crust (B4) osits (B5) oil Cracks (B6 ations: r Present? Present? esent?	Yes Yes	No O No O No O	Spi Maa Hyo Dry Ott	arsely Vege rl Deposits drogen Sulf y-Season W her (Explain pth (inches pth (inches	tated Con (B15) fide Odor (ater Table in Reman	(C1) (C2) e (C2) rks)	Wetla	Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A Microtopo FAC-neut	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Citor of Reduced Iron (C4) posits (C5) por Stressed Plants (D1) hic Position (D2) Aquitard (D3) pographic Relief (D4) ral Test (D5)
YDROLO Yetland Hyd rimary Indica Surface W High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Geld Observa Surface Water Table F Saturation Pre includes capi	rountered at 2 rology Indicators (any one Vater (A1) er Table (A2) n (A3) or Ks (B1) Deposits (B3) or Crust (B4) osits (B5) oil Cracks (B6 ations: r Present? Present? esent?	Yes Yes	No O No O No O	Spi Maa Hyo Dry Ott	arsely Vege rl Deposits drogen Sulf y-Season W her (Explain pth (inches pth (inches	tated Con (B15) fide Odor (ater Table in Reman	(C1) (C2) e (C2) rks)	Wetla	Water St. Drainage Oxidized Presence Salt Depo Stunted of Geomorp Shallow A Microtopo FAC-neut	ained Leaves (B9) Patterns (B10) Rhizospheres along Living Roots (Coof Reduced Iron (C4) soits (C5) or Stressed Plants (D1) hic Position (D2) Aquitard (D3) ographic Relief (D4) ral Test (D5)

U.S. Army Corps of Engineers Alaska Version 2.0