## WETLAND DETERMINATION DATA FORM - Alaska Region

Project	t/Site: Susitna-Watana Hydroelectric Project		Вс	rough/City:	Matanusk	a-Susitna Borough Sampling Date: 03-Jul-13
Applica	ant/Owner: Alaska Energy Authority					Sampling Point: SW13_T125_05
	gator(s): SLI, SCB		L	andform (hill	side, terrac	e, hummocks etc.): Hillside
	relief (concave, convex, none): hummocky			Slope:	% / 2.2	
	gion: Southcentral Alaska			2.937265395		Long.: -149.614514351 Datum: NAD83
		L	at <u>0</u>	2.937200390	07	
	ap Unit Name:				No ○	NWI classification: PSS1B
Are V	matic/hydrologic conditions on the site typical for this /egetation  , Soil  , or Hydrology  , egetation  , Soil  , or Hydrology  .	signifi natura wing	cantly ally pro	disturbed? blematic?	Are "N (If nee	(If no, explain in Remarks.)  Iormal Circumstances" present? Yes ● No ○  eded, explain any answers in Remarks.)  s, transects, important features, etc.
	Hydrophytic Vegetation Present? Yes   No			le	tha Sam	pled Area
	Hydric Soil Present? Yes ● No (					-
	Wetland Hydrology Present? Yes   No	<u> </u>		WI	thin a W	etiand? Tes © No ©
VEGI	ETATION -Use scientific names of plants. I		-			Dominance Test worksheet:
Tre	e Stratum		olute over	Dominant Species?	Indicator Status	Number of Dominant Species
1.	Picea mariana		7	<b>V</b>	FACW	That are OBL, FACW, or FAC: (A)
2.	Picea glauca	_	5	<u></u>	FACU	Total Number of Dominant Species Across All Strata: 3 (B)
3.		_	0			Percent of dominant Species
4.		_	0			That Are OBL, FACW, or FAC: 66.7% (A/B)
5.		_	0			Prevalence Index worksheet:
	Total Cove	r: _	12			Total % Cover of: Multiply by:
Sap	oling/Shrub Stratum 50% of Total Cover:	6	20% (	of Total Cover:	2.4	OBL Species 0.1 x 1 = 0.1
1.	Vaccinium uliginosum		40	<b>✓</b>	FAC	FACW Species 9 x 2 = 18
2.	Betula nana	_	10		FAC	FAC Species 53.1 x 3 = 159.3
3.	Picea glauca	_	5		FACU	FACU Species 12.2 x 4 = 48.80
4.	Spiraea stevenii	_	2		FACU	UPL Species 0 x 5 = 0
5.	Empetrum nigrum	_	1		FAC	Column Totals: 74.4 (A) 226.2 (B)
6.	Salix pulchra	_	1		FACW	
7.	·	_	0			Prevalence Index = B/A = 3.040
8.		_	0			Hydrophytic Vegetation Indicators:
9.			0			✓ Dominance Test is > 50%
10.			0			Prevalence Index is ≤3.0
_Her	Total Cove b Stratum 50% of Total Cover:		59 20%	of Total Cover	:11.8	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1.	Equisetum arvense	_	1		FAC	Problematic Hydrophytic Vegetation (Explain)
2.	Equisetum sylvaticum	_	1		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3.	Rubus chamaemorus	_	1		FACW	be present, unless disturbed or problematic.
4.	Carex Ioliacea	_	0.1		OBL	Plot size (radius, or length x width)
5.	Chamaenerion angustifolium	_	0.1		FACU	% Cover of Wetland Bryophytes
6.	Calamagrostis canadensis	_	0.1		FAC	(Where applicable)
7.	Trientalis europaea		0.1		FACU	% Bare Ground
8.			0			Total Cover of Bryophytes
		-	0			
10.	Total Cove	_ ·	2.4			Hydrophytic Vegetation
	i otal Cove		3.4			
	50% of Total Cover:	1.7	20% c	of Total Cover:	0.68	Present? Yes   No

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SOIL Sampling Point: SW13\_T125\_05

(inches)	Calan (m.		0/	Calas (maiat)	0/	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-2	Color (mo	oist)	<u></u>	Color (moist)		Туре	LOC	Fibric Organics	Kemarks
2-8								Hemic Organics	_
8-11								Sapric Organics	sahblas
	10VD	2/2	100						w cobbles
11-12	10YR	2/2	100					loam	w heavy organics
12-17	10YR	2/2						Loam	w heavy organics
									_
Type: C=Co	ncentration. D	=Depletion	. RM=Reduce	ed Matrix <sup>2</sup> Locatio	n: PL=Pore	Lining. RC	=Root Cha	nnel. M=Matrix	
lydric Soil I	ndicators:			Indicators for P	roblematic	Hydric Sc	oils: <sup>3</sup>		
Histosol o	r Histel (A1)			Alaska Color C		4		Alaska Gleyed Without	Hue 5Y or Redder
Histic Epip	pedon (A2)			Alaska Alpine	swales (TA5)	)		Underlying Layer	
Hydrogen	Sulfide (A4)			Alaska Redox	With 2.5Y Hu	ue		Other (Explain in Rem	arks)
Thick Darl	k Surface (A12	)		30					
Alaska Gle	eyed (A13)			and an appropria				nary indicator of wetland esent	hydrology,
Alaska Re	dox (A14)					•	•		
☐ Alaska Gle	eyed Pores (A1	5)		<sup>4</sup> Give details of o	color change	ili Kemark	5		
strictive Lay	er (if present):								
Type:								Hydric Soil Prese	nt? Yes 💿 No 🔾
Depth (inclemarks:	hes):								
	hes):								
emarks:	,								
emarks:	,	ators:						_Secondary Ir	idicators (two or more are required
YDROLO Vetland Hyd	OGY		t)						idicators (two or more are required tained Leaves (B9)
YDROLO YEtland Hyd rimary Indica Surface V	OGY Irology Indicators (any one Water (A1)		t)	☐ Inundation \	Visible on Ae	erial Imager	y (B7)	Water S	
YDROLO YDROLO YDROLO YELLAND Hyd Timary Indica Surface V High Wat	OGY rology Indicators (any one Vater (A1) er Table (A2)		t)	Sparsely Ve	getated Cond			Water S Drainage Oxidized	tained Leaves (B9) e Patterns (B10) Rhizospheres along Living Roots ((
YDROLO Yetland Hyd rimary Indica Surface V High Wat	rology Indica ators (any one Vater (A1) er Table (A2) n (A3)		t)	Sparsely Ve	getated Cond ts (B15)	cave Surfac		Water S Drainage Oxidized Presence	tained Leaves (B9) e Patterns (B10) Rhizospheres along Living Roots ( e of Reduced Iron (C4)
YDROLO  YDROLO  Yetland Hyd  rimary Indica  Surface V  High Wat  Saturation  Water Ma	rology Indicators (any one Vater (A1) er Table (A2) n (A3) arks (B1)		t)	Sparsely Ve	getated Cond ts (B15) ulfide Odor (	cave Surfac		Water S Drainage Oxidized Presence Salt Dep	tained Leaves (B9) e Patterns (B10) Rhizospheres along Living Roots ( e of Reduced Iron (C4) osits (C5)
YDROLO  Yetland Hyd  rimary Indica  Surface V  High Wat  Y  Saturation  Water Ma  Sediment	rology Indicators (any one Vater (A1) er Table (A2) n (A3) arks (B1) : Deposits (B2)		t)	Sparsely Ved Marl Deposit Hydrogen St Dry-Season	getated Cond ts (B15) ulfide Odor ( Water Table	cave Surfac (C1) (C2)		Water S Drainage Oxidized Presence Salt Dep Stunted	tained Leaves (B9) e Patterns (B10) l Rhizospheres along Living Roots (Ge of Reduced Iron (C4) cosits (C5) or Stressed Plants (D1)
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YDROLO  Yetland Hyd  Irimary Indica  Surface V  High Wat  Saturation  Water Ma  Sediment  Drift Dep  Algal Mat	or Crust (B4)		t)	Sparsely Ved Marl Deposit Hydrogen St Dry-Season	getated Cond ts (B15) ulfide Odor ( Water Table	cave Surfac (C1) (C2)		Water S Drainage Oxidized Presence Salt Dep Stunted Geomor	tained Leaves (B9) e Patterns (B10) Rhizospheres along Living Roots (Ge of Reduced Iron (C4) cosits (C5) or Stressed Plants (D1) chic Position (D2) Aquitard (D3)
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YDROLO  /etland Hyd  rimary Indica  Surface V  High Wate  ✓ Saturation  Drift Depo  Algal Mat  Iron Depo  Surface S  ield Observation  Surface Wate  Water Table Foots  Saturation Pre  includes capi	Present?  Prology Indicators (any one Vater (A1)  Per Table (A2)  Proposits (B1)  Proposits (B3)  Proposits (B4)  Proposits (B5)  Proposits (B6)  Proposition (B6)  Prop	Yes Yes Yes	<ul><li>No ●</li><li>No ○</li><li>No ○</li><li>No ○</li></ul>	Sparsely Veg Marl Deposit Hydrogen St Dry-Season Other (Expla	getated Condition (B15) ulfide Odor (Water Table ain in Remark es): es): 5	Cave Surfac (C1) (C2) ks)	Wetlar	Water S Drainage Oxidized Presence Salt Dep Stunted Geomor Shallow Microtop	tained Leaves (B9) e Patterns (B10) l Rhizospheres along Living Roots (Ce) e of Reduced Iron (C4) sosits (C5) or Stressed Plants (D1) phic Position (D2) Aquitard (D3) sographic Relief (D4) tral Test (D5)
YDROLO  /etland Hyd  rimary Indica  Surface V  High Wate  ✓ Saturation  Drift Depo  Algal Mat  Iron Depo  Surface S  ield Observation  Surface Wate  Water Table Foots  Saturation Pre  includes capi	Present?  Prology Indicators (any one Vater (A1)  Per Table (A2)  Proposits (B1)  Proposits (B3)  Proposits (B4)  Proposits (B5)  Proposits (B6)  Proposition (B6)  Prop	Yes Yes Yes	<ul><li>No ●</li><li>No ○</li><li>No ○</li><li>No ○</li></ul>	Sparsely Veg Marl Deposi Hydrogen Si Dry-Season Other (Expla	getated Condition (B15) ulfide Odor (Water Table ain in Remark es): es): 5	Cave Surfac (C1) (C2) ks)	Wetlar	Water S Drainage Oxidized Presence Salt Dep Stunted Geomor Shallow Microtop	tained Leaves (B9) e Patterns (B10) l Rhizospheres along Living Roots (Ce) e of Reduced Iron (C4) sosits (C5) or Stressed Plants (D1) phic Position (D2) Aquitard (D3) sographic Relief (D4) tral Test (D5)
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YDROLO  /etland Hyd  rimary Indica  Surface V  High Wate  ✓ Saturation  Drift Depo  Algal Mat  Iron Depo  Surface S  ield Observation  Surface Wate  Water Table Foots  Saturation Pre  includes capi	Present?  Prology Indicators (any one Vater (A1)  Per Table (A2)  Proposits (B1)  Proposits (B3)  Proposits (B4)  Proposits (B5)  Proposits (B6)  Proposition (B6)  Prop	Yes Yes Yes	<ul><li>No ●</li><li>No ○</li><li>No ○</li><li>No ○</li></ul>	Sparsely Veg Marl Deposit Hydrogen St Dry-Season Other (Expla	getated Condition (B15) ulfide Odor (Water Table ain in Remark es): es): 5	Cave Surfac (C1) (C2) ks)	Wetlar	Water S Drainage Oxidized Presence Salt Dep Stunted Geomor Shallow Microtop	tained Leaves (B9) e Patterns (B10) l Rhizospheres along Living Roots (Ce) e of Reduced Iron (C4) sosits (C5) or Stressed Plants (D1) phic Position (D2) Aquitard (D3) sographic Relief (D4) tral Test (D5)

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