## WETLAND DETERMINATION DATA FORM - Alaska Region

TOJECT	t/Site: Susitna-Watana Hydr	oelectric Project	t	Borough/City:	Matanusk	a-Susitna Borough Sampling Date:	02-Aug-13
Applica	ant/Owner: Alaska Energy A	uthority				Sampling Point:	W13_T177_08
nvesti	gator(s): BAB	,		Landform (hil	lside, terrac	e, hummocks etc.): Lowland	
	relief (concave, convex, none):	concave		Slope: 5.2	% / 3.0		
Subrec	gion: Interior Alaska Mountair		l at ·	63.07365104			atum: WGS84
		15	Lutii	03.07 303 104	30		
	ap Unit Name:			2 V	● No ○	NWI classification: PEM1E	
Are V	matic/hydrologic conditions on to degree the conditions on the conditions of the conditions on the conditions of the conditions on the con	, or Hydrology	significantl naturally p	y disturbed? roblematic?	Are "N (If nee	(If no, explain in Remarks.)  Iormal Circumstances" present? Yes  eded, explain any answers in Remarks.)  s, transects, important features,	
	Hydrophytic Vegetation Preser	nt? Yes 💿 No	0				
	Hydric Soil Present?	Yes   No	0			pled Area	
	Wetland Hydrology Present?	Yes   No	0	W	ithin a W	'etland? Yes ● No ○	
Dom	narks:						
/EGE	ETATION - Use scientific	names of plants.	List all spe	ecies in the	plot.	Dominance Test worksheet:	
Tre	e Stratum		% Cover		Status	Number of Dominant Species That are OBL, FACW, or FAC:	4 (A)
1.			0			Total Number of Dominant	(A)
2.			0			Species Across All Strata:	4 (B)
3.			0			Percent of dominant Species	
4.			0			That Are OBL, FACW, or FAC:	L00.0% (A/B)
5.			0			Prevalence Index worksheet:	
		Total Cove	er: <u> </u>			Total % Cover of: Multiply	by:
Sap	ling/Shrub Stratum	50% of Total Cover:	0 20%	of Total Cover	:0	OBL Species <u>15.1</u> x 1 =	15.1
1.	Betula nana		8	<b>✓</b>	FAC	FACW Species <u>13.2</u> x 2 =	26.40
2.	Salix pulchra		2		FACW	FAC Species <u>12.2</u> x 3 =	36.60
3.	Vaccinium uliginosum			<b>✓</b>	FAC	FACU Species0 x 4 =	0
4.	Empetrum nigrum				FAC	UPL Species 0 x 5 =	0
5.	Ledum decumbens		0.1		FACW	Column Totals: 40.5 (A)	78.10 (B)
6.	Andromeda polifolia (IAM)		0.1		OBL		1.020
7.			0			Prevalence index = B/A =	1.928
8.			0			Hydrophytic Vegetation Indicators:	
9.			0			✓ Dominance Test is > 50%	
10.			0			✓ Prevalence Index is ≤3.0	
Her	b Stratum_	<b>Total Cove</b> 50% of Total Cover:		% of Total Cove	r: <u>2.84</u>	Morphological Adaptations <sup>1</sup> (Provide Remarks or on a separate sheet)	
1.	Carex aquatilis		_ 3		OBL	Problematic Hydrophytic Vegetation <sup>1</sup>	
2.					OBL	<sup>1</sup> Indicators of hydric soil and wetland hydro	ology must
3.	Carex membranacea				FACW	be present, unless disturbed or problemati	С.
4.	Eriophorum scheuchzeri				OBL	Plot size (radius, or length x width)	_10m
5.	Lumila namiflara		0.1		FACW	% Cover of Wetland Bryophytes	
6.			$-\frac{0.1}{5}$		FAC OBL	(Where applicable)	
7.	Carex rotundata				FAC	% Bare Ground	_30
8.					OBL	Total Cover of Bryophytes	3
9.	Trichophorum caespitosum  Juncus castaneus		$ \frac{1}{0.1}$		FACW		
10.	סטווטטט טמטנמווכטט	Total Cov			- AC11	Hydrophytic Vegetation	
		<b>Total Cove</b> 50% of Total Cover:		of Total Cover	: 5.26	Present? Yes • No	
1					5.20	I and the second	

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SOIL Sampling Point: SW13\_T177\_08

Depth —	Matrix		Re	dox Featur				
(inches)	Color (moist)		Color (moist)	_%_	Type <sup>1</sup>	_Loc_2	Texture	Remarks
0-12							Fibric Organics	
12-19						-	Hemic Organics	
								-
								P
Type: C=Concer	ntration D=Denleti	on RM=Reduc	ed Matrix <sup>2</sup> Locatio	on: PI =Pore	Lining RC	=Root Cha	unnel M=Matrix	
		Jii. Kii—Keude	Indicators for P				milet Pi-Piduix	
Hydric Soil Indi			Alaska Color C		4	,iis. 	Alaska Clayed Without H	us EV or Doddor
✓ Histosol or His	` ,		Alaska Alpine				Alaska Gleyed Without H Underlying Layer	ue 51 or Redder
Histic Epipedo			Alaska Redox	` ,			Other (Explain in Remark	(5)
✓ Hydrogen Sulf	. ,		☐ Alaska Redux	WILL Z.51 FIL	ie.		Outer (Explain in Remain	۵)
Thick Dark Su	` ,		<sup>3</sup> One indicator o	f hydrophytic	vegetatio	n, one prin	nary indicator of wetland h	ydrology,
Alaska Gleyed	` '		and an appropria					,
<ul><li>Alaska Redox</li><li>Alaska Gleyed</li></ul>	` ,		4 Give details of o	color change	in Remark	S		
estrictive Layer (i	f present):						Undia Call Dans and	? Yes ● No ○
							Hydric Soil Present	? Yes S No C
Type: Depth (inches) emarks:	:							
* *	:							
Depth (inches)	:							
Depth (inches)	:							
Depth (inches)	:							
Depth (inches) emarks:								
Depth (inches) emarks:  YDROLOGY	(						Secondary Indi	cators (two or more are required)
Depth (inches) emarks:  YDROLOGY Vetland Hydrology	(	ent)						cators (two or more are required) ned Leaves (B9)
Depth (inches) emarks:  YDROLOGY Vetland Hydrolo Primary Indicators	<b>/</b> <b>ogy Indicators:</b> s (any one is suffici	ent)	☐ Inundation \	Visible on Aer	rial Imagei	ry (B7)	Water Stai	
Depth (inches) emarks:  YDROLOGY Vetland Hydrolo Primary Indicators Surface Wate	ogy Indicators: s (any one is sufficier (A1)	ent)		Visible on Aer			Water Stai Drainage F	ned Leaves (B9)
Pimary Indicators  YDROLOGY  Yetland Hydrolo  Primary Indicators  Surface Wate  High Water T	ogy Indicators: s (any one is sufficier (A1) able (A2)	ent)		getated Conc			Water Stai Drainage F Oxidized R	ned Leaves (B9) Patterns (B10)
Pimary Indicators  VI Surface Wate  High Water T  Saturation (A	ogy Indicators: s (any one is sufficient (A1) able (A2) 3)	ent)	Sparsely Veg Marl Deposit	getated Conc ts (B15)	cave Surfac		Water Stai Drainage F Oxidized R Presence of	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4)
Primary Indicators  ✓ Surface Wate  High Water T  ✓ Saturation (A  Water Marks	ogy Indicators: s (any one is sufficient (A1) sable (A2) 3) (B1)	ent)	Sparsely Veg Marl Deposit  Hydrogen St	getated Conc ts (B15) ulfide Odor (0	cave Surfac		Water Stai Drainage F Oxidized R Presence c Salt Depos	ned Leaves (B9) latterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) its (C5)
Primary Indicators  Valuation (A Water Marks  Sediment Dep	ogy Indicators: a (any one is sufficient (A1) able (A2) a) (B1) posits (B2)	ent)	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Conc ts (B15) ulfide Odor (G Water Table	cave Surfac C1) (C2)		Water Stai Drainage F Oxidized R Presence o Salt Depos Stunted or	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) its (C5) Stressed Plants (D1)
Popth (inches)  emarks:  YDROLOGY  Vetland Hydrolo  Primary Indicators  Surface Wate  High Water T  Saturation (A  Water Marks  Sediment Dep  Drift Deposits	ogy Indicators: 6 (any one is sufficient (A1) 6 (able (A2) 3) (B1) 6 (B2) 6 (B3)	ent)	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Conc ts (B15) ulfide Odor (0	cave Surfac C1) (C2)		Water Stai □ Drainage F □ Oxidized R □ Presence c □ Salt Depos □ Stunted or ☑ Geomorph	ned Leaves (B9) Patterns (B10) Phizospheres along Living Roots (C3) If Reduced Iron (C4) Patterns (C5) Stressed Plants (D1) Patterns (D2)
Pepth (inches)  emarks:  YDROLOGN  Vetland Hydrolo  Primary Indicators  ✓ Surface Wate  ✓ High Water T  ✓ Saturation (A  Water Marks  Sediment Deposits  Algal Mat or (A	ogy Indicators: 6 (any one is sufficient (A1) 7 (able (A2) 3) (B1) 9 (B2) 6 (B3) Crust (B4)	ent)	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Conc ts (B15) ulfide Odor (G Water Table	cave Surfac C1) (C2)		Water Stai □ Drainage F □ Oxidized R □ Presence c □ Salt Depos □ Stunted or ☑ Geomorph □ Shallow Ac	ned Leaves (B9) Patterns (B10) Phizospheres along Living Roots (C3) If Reduced Iron (C4) Patterns (C5) Stressed Plants (D1) Proposition (D2) Streid (D3)
Pepth (inches)  emarks:  YDROLOGY  Vetland Hydrolo  Primary Indicators  V Surface Wate  High Water T  Saturation (A  Water Marks  Sediment Dep  Drift Deposits  Algal Mat or (  V Iron Deposits	regy Indicators: s (any one is sufficient (A1) able (A2) 3) (B1) posits (B2) s (B3) Crust (B4) s (B5)	ent)	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Conc ts (B15) ulfide Odor (G Water Table	cave Surfac C1) (C2)		Water Stai □ Drainage F □ Oxidized R □ Presence c □ Salt Depos □ Stunted or ✔ Geomorph □ Shallow Ac □ Microtopog	ned Leaves (B9) Patterns (B10) Phizospheres along Living Roots (C3) If Reduced Iron (C4) Patterns (C5) Stressed Plants (D1) Patterns (D2) Patterns (D3) Patterns (D4) Patterns (D4) Patterns (B10) Patter
Popth (inches) emarks:  YDROLOG) Vetland Hydrolo Primary Indicators  Surface Wate High Water T Saturation (A Water Marks Sediment Deposits Algal Mat or ( Iron Deposits Surface Soil (1)	y pgy Indicators: s (any one is sufficient (A1) sable (A2) 3) (B1) posits (B2) s (B3) Crust (B4) s (B5) Cracks (B6)	ent)	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Conc ts (B15) ulfide Odor (G Water Table	cave Surfac C1) (C2)		Water Stai □ Drainage F □ Oxidized R □ Presence c □ Salt Depos □ Stunted or ☑ Geomorph □ Shallow Ac	ned Leaves (B9) Patterns (B10) Phizospheres along Living Roots (C3) If Reduced Iron (C4) Patterns (C5) Stressed Plants (D1) Patterns (D2) Patterns (D3) Patterns (D4) Patterns (D4) Patterns (B10) Patter
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Pepth (inches)  Popth (inches	respondence of the property of	<ul><li>No ○</li><li>No ○</li><li>No ○</li><li>No ○</li></ul>	☐ Sparsely Veg ☐ Marl Deposit ☑ Hydrogen St ☐ Dry-Season ☐ Other (Explain ☐ Depth (inched)	getated Conc ts (B15) ulfide Odor (C Water Table ain in Remark es): 2 es): 6 es): 0	cave Surface C1) (C2) (cs)	Wetla	Water Stai □ Drainage F □ Oxidized R □ Presence o □ Salt Depos □ Stunted or ☑ Geomorph □ Shallow Ac □ Microtopog ☑ FAC-neutra	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) hits (C5) Stressed Plants (D1) hit Position (D2) hitard (D3) higher Relief (D4) higher Test (D5)
Pepth (inches)  Popth (inches	respondence of the property of	<ul><li>No ○</li><li>No ○</li><li>No ○</li><li>No ○</li></ul>	☐ Sparsely Veg☐ Marl Deposit☐ Hydrogen St☐ Dry-Season☐ Other (Explain Depth (inched D	getated Conc ts (B15) ulfide Odor (C Water Table ain in Remark es): 2 es): 6 es): 0	cave Surface C1) (C2) (cs)	Wetla	Water Stai □ Drainage F □ Oxidized R □ Presence o □ Salt Depos □ Stunted or ☑ Geomorph □ Shallow Ac □ Microtopog ☑ FAC-neutra	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) hits (C5) Stressed Plants (D1) hit Position (D2) hitard (D3) higher Relief (D4) higher Test (D5)
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