WETLAND DETERMINATION DATA FORM - Alaska Region

riojec	t/Site: Susitna-Watana Hydroelectric Project	Е	Borough/City:	Matanusk	a-Susitna Borough Sampling Date: 10-Jul-13
Applic	ant/Owner: Alaska Energy Authority				Sampling Point: SW13_T184_01
Invest	igator(s): JGK		Landform (hill	side, terrac	e, hummocks etc.): Shoulder slope
Local	relief (concave, convex, none): hummocky		Slope:		5 ° Elevation: 686
Subre	gion : Interior Alaska Mountains	Lat ·	62.851258159		Long.: -148.568057537 Datum: NAD83
			02.00120010	,	
	ap Unit Name:		0 Vaa	■ N= ○	NWI classification: PSS1/3B
	matic/hydrologic conditions on the site typical for this t	•		No ○	(If no, explain in Remarks.) Iormal Circumstances" present? Yes ● No ○
		•	y disturbed?		ionnai on cametanece procent.
Are	/egetation ☐ , Soil ☐ , or Hydrology ☐	naturally pi	roblematic?	(If nee	eded, explain any answers in Remarks.)
SUM	MARY OF FINDINGS - Attach site map sho	wing san	npling point	locations	s, transects, important features, etc.
	Hydrophytic Vegetation Present? Yes No				
	Hydric Soil Present? Yes ● No		Is	the Sam	pled Area
	Wetland Hydrology Present? Yes ● No		wi	thin a W	etland? Yes ◉ No ○
Rem	arks:				
VFG	ETATION -Use scientific names of plants. L	ict all cae	scies in the	nlot	
VLO	ETATION - OSE SCIENTING Harries Of plants. L			•	Dominance Test worksheet:
Tre	ee Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species
1.	Picea mariana	7	✓	FACW	That are OBL, FACW, or FAC:5(A)
2.		0			Total Number of Dominant Species Across All Strata: 5 (B)
3.					
4.					Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
5.					
	Total Cover	- <u>-</u> r: <u>7</u>			Prevalence Index worksheet: Total % Cover of: Multiply by:
Sa	pling/Shrub Stratum 50% of Total Cover:	3.5 20%	of Total Cover:	1.4	001.0
			_		OBL Species 0 x1 = 0 FACW Species 52.2 x2 = 104.4
1.	Vaccinium uliginosum			FAC	FAC Species 115.2 x 3 = 345.6
2.	Vaccinium vitis-idaea	- 5		FAC	FACU Species 0 x 4 = 0
3. 4.	Empetrum nigrum Retula page			FAC FAC	UPL Species 0 x 5 = 0
5.	Betula nana Rhododendron tomentosum			FACW	
6.	Arctous ruber	5		FAC	Column Totals: <u>167.4</u> (A) <u>450</u> (B)
	Salix pulchra	- <u>-3</u> 5		FACW	Prevalence Index = B/A =
8.	Picea mariana	5		FACW	Hydrophytic Vogetation Indicators
	Dhadadaa daa daa ahaa ahaa dia waa	- <u> </u>		FAC	Hydrophytic Vegetation Indicators: ✓ Dominance Test is > 50%
10.				1710	✓ Prevalence Index is ≤3.0
10.	Total Cover	r:100_			Morphological Adaptations ¹ (Provide supporting data in
Не	rb Stratum 50% of Total Cover:		6 of Total Cover	: 20	Remarks or on a separate sheet)
-	Equipotum aryonaa	35	\checkmark	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
1.	Equiscium arvense			FAC	Indicators of hydric soil and wetland hydrology must
1. 2.	Caray bigalayyii	10			
	Carex bigelowii	15	✓	FACW	be present, unless disturbed or problematic.
2.	Carex bigelowii Rubus chamaemorus	15		FACW	be present, unless disturbed or problematic.
2. 3.	Carex bigelowii Rubus chamaemorus	0.1			be present, unless disturbed or problematic. Plot size (radius, or length x width)
2. 3. 4.	Carex bigelowii Rubus chamaemorus Cornus suecica	0.1 0.1		FAC	be present, unless disturbed or problematic.
2. 3. 4. 5.	Carex bigelowii Rubus chamaemorus Cornus suecica Pedicularis labradorica	0.1 0.1 0.1		FACW	be present, unless disturbed or problematic. Plot size (radius, or length x width) 10m 20 20 20 20 20 20 20 20 20 20 20 20 20
2. 3. 4. 5. 6.	Carex bigelowii Rubus chamaemorus Cornus suecica Pedicularis labradorica Petasites frigidus	15 0.1 0.1 0.1 0.1		FACW FACW	be present, unless disturbed or problematic. Plot size (radius, or length x width) 10m 30 (Where applicable) % Bare Ground 0
2. 3. 4. 5. 6. 7. 8.	Carex bigelowii Rubus chamaemorus Cornus suecica Pedicularis labradorica Petasites frigidus Valeriana capitata	15 0.1 0.1 0.1 0.1 0.1		FACW FACW	be present, unless disturbed or problematic. Plot size (radius, or length x width) 10m 30 (Where applicable) % Bare Ground 0
2. 3. 4. 5. 6. 7. 8. 9.	Carex bigelowii Rubus chamaemorus Cornus suecica Pedicularis labradorica Petasites frigidus Valeriana capitata	15 0.1 0.1 0.1 0.1 0.1		FACW FACW	be present, unless disturbed or problematic. Plot size (radius, or length x width)
2. 3. 4. 5. 6. 7. 8. 9.	Carex bigelowii Rubus chamaemorus Cornus suecica Pedicularis labradorica Petasites frigidus Valeriana capitata	0.1 0.1 0.1 0.1 0.1 0 0 0		FACW FACW FAC	be present, unless disturbed or problematic. Plot size (radius, or length x width) 10m 30 30 (Where applicable) % Bare Ground 0 10 Total Cover of Bryophytes 60

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SOIL Sampling Point: SW13_T184_01

Depth ————	Matrix			dox Featu		2	. <u> </u>	
(inches) Color (i	ioist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	_Loc_2	Texture	Remarks
0-5		— —					Fibric Organics	-
5-10							Hemic Organics	
				-				
Type: C=Concentration.	D=Depletion. I	RM=Reduced	d Matrix ² Locatio	on: PL=Pore	Lining. RC	=Root Cha	nnel. M=Matrix	
Hydric Soil Indicators:			Indicators for P	roblematic	: Hydric So	oils:		
Histosol or Histel (A1)		-	Alaska Color C	Change (TA4	4		Alaska Gleyed Without H	ue 5Y or Redder
Histic Epipedon (A2)		1	Alaska Alpine	swales (TA5	5)		Underlying Layer	
Hydrogen Sulfide (A4)			Alaska Redox	With 2.5Y H	lue		Other (Explain in Remark	rs)
Thick Dark Surface (A:	2)		2.5					
Alaska Gleyed (A13)			One indicator o and an appropria				nary indicator of wetland h esent	ydrology,
Alaska Redox (A14)				·	•	•		
Alaska Gleyed Pores (A	15)		4 Give details of of	color change	e in Remark	S		
estrictive Layer (if present):							
Type: Rock							Hydric Soil Present	? Yes 💿 No 🔾
Depth (inches): 10								
YDROLOGY								
emarks: YDROLOGY Vetland Hydrology Indi								cators (two or more are required)
YDROLOGY Vetland Hydrology Indi							Water Stair	ned Leaves (B9)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any on Surface Water (A1)	e is sufficient)		Inundation		_		Water Stai	ned Leaves (B9) atterns (B10)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any on Surface Water (A1) V High Water Table (A2	e is sufficient)		Sparsely Ve	getated Con	_		☐ Water Stain☐ Drainage P☐ Oxidized R	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any on Surface Water (A1) High Water Table (A2) Saturation (A3)	e is sufficient)		Sparsely Ve	getated Cond ts (B15)	cave Surfac		Water Stain Drainage F Oxidized R Presence o	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4)
Primary Indicators (any on Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	e is sufficient)		Sparsely Ve	getated Con ts (B15) ulfide Odor (cave Surfac		Water Stail Drainage P Oxidized R Presence o Salt Depos	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) its (C5)
Primary Indicators (any on Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B.)	e is sufficient)		Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table	cave Surfac		Water Stail Drainage P Oxidized R Presence o Salt Depos Stunted or	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) its (C5) Stressed Plants (D1)
Primary Indicators (any on Surface Water (A1) ✓ High Water Table (A2 ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Drift Deposits (B3)	e is sufficient)		Sparsely Ve	getated Con ts (B15) ulfide Odor (cave Surfac		Water Stail Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi	ned Leaves (B9) Patterns (B10) Patterns (B10) Patterns (B10) Patterns (C3) Patterns (C4) Patterns (C5) Patterns (D1) Patterns (D1) Patterns (D2)
Primary Indicators (any on Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Drift Deposits (B3) Algal Mat or Crust (B4)	e is sufficient)		Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table	cave Surfac		Water Stain Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi Shallow Ag	ned Leaves (B9) Patterns (B10) Phizospheres along Living Roots (C3) If Reduced Iron (C4) Patterns (C5) Stressed Plants (D1) Proposition (D2) Streid (D3)
WDROLOGY Wetland Hydrology Indi Primary Indicators (any on Surface Water (A1) W High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5)	e is sufficient) 2)		Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table	cave Surfac		Water Stain Drainage P Oxidized R Presence of Salt Depos Stunted or Geomorphi Shallow Ad 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
Primary Indicators (any on Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (B	e is sufficient) 2)		Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table	cave Surfac		Water Stain Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi Shallow Ag	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
Primary Indicators (any on Surface Water (A1) ✓ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Surface Soil Cracks (Bield Observations:	e is sufficient) 2)	No ●	Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table ain in Remar	cave Surfac		Water Stain Drainage P Oxidized R Presence of Salt Depos Stunted or Geomorphi Shallow Ad 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
Print Deposits (B1) Surface Water (A1) ✓ High Water Table (A2 ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B5) Surface Water Present?	e is sufficient) 2) (2) (3) Yes		Sparsely Ve	getated Con ts (B15) ulfide Odor (Water Table ain in Remar	cave Surfac	e (B8)	Water Stain Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi Shallow Aq Microtopog	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) hits (C5) Stressed Plants (D1) hit Position (D2) hitard (D3) hitard (D3) hitard (D4) hitard (D5)
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Proposits (B1) Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B5) Surface Water Present? Water Table Present?	e is sufficient) 2) (2) (3) Yes	No O	Sparsely Ve	getated Contest (B15) ulfide Odor (Water Table ain in Reman es):	cave Surfac	e (B8)	Water Stain Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi Shallow Aq Microtopog	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) hits (C5) Stressed Plants (D1) hit Position (D2) hitard (D3) hitard (D3) hitard (D4) hitard (D5)
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IYDROLOGY Wetland Hydrology Indi Primary Indicators (any on Surface Water (A1) High Water Table (A2 V Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4 Iron Deposits (B5) Surface Soil Cracks (B Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st	e is sufficient) Yes Yes Yes Yes	No O	Sparsely Veg Marl Deposi Hydrogen Si Dry-Season Other (Explain) Depth (inch Depth (inch	getated Conts (B15) ulfide Odor (Water Table ain in Reman es): es): 0	cave Surfac (C1) e (C2) ks)	Wetlan	Water Stain Drainage P Oxidized R Presence o Salt Depos Stunted or Geomorphi Shallow Aq Microtopog	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4) hits (C5) Stressed Plants (D1) hit Position (D2) hitard (D3) hitard (D3) hitard (D4) hitard (D5)
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