WETLAND DETERMINATION DATA FORM - Alaska Region

Applicant/Owner Alaska Energy Authority Sampling Point Sw13 T106_01	Project	/Site: Susitna-Watana Hydroelectric Project		Borough/City:	Matanusk	ca-Susitna Borough Sampling Date: 03-Jul-13
Landform (hillsube, terrace, hummocks etc.): Swale	Applica	int/Owner: Alaska Energy Authority				Sampling Point: SW13 T106 01
Local relief (concave, convex, none):	Investi			Landform (hil	lside, terrac	
Subregion Interior Alaska Mountains	-	, ,		_		-
New Content Name: New			l at ·	- ' <u></u>		
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology algorithm disturbed? Are Normal Circumstances' present? Yes No Are Vegetation Soil or Hydrology in alturally 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 Within a Wetland? Yes No Within	_		Lat	02.00093310	01	
Are Vegetation		·		• V	(a) No (1)	
Are Vegetation			•			
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?			•	•		ionnal oli cametanoco procent.
Hydrophytic Vegetation Present? Yes	Are v	egetation . , Soil . , or Hydrology .	naturally	problematic?	(If nee	eded, explain any answers in Remarks.)
Wetland Hydrology Present?	SUMI	•		mpling point	locations	s, transects, important features, etc.
Weltand Hydrology Present? Yes		, , , ,		le	the Sam	uplad Araa
Wetland Hydrology Present? Yes		,				
Photo num 960 961. 9,58 photo time			<u> </u>	W	itmin a vv	retiand?
VEGETATION - Use scientific names of plants. List all species in the plot. Tree Stratum Absolute % Cover (% Cover) Dominant Species Status (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species (Number of Dominant Species Across All Stratas) Number of Dominant Species Species (Number of Dominant Species Across All Stratas) Number of Dominant Species Species (Number of Dominant Species Across All Stratas) Number of Dominant Species Species (Number of Dominant Species Across All Stratas) Number of Dominant Species Species (Number of Dominant Species Across All Stratas) Prevented of Morphological Across All Stratas Number of Dominant Species Across All Stratas Numb	Rema					
Absolute No		Photo num 960 961. 9,58 photo time				
Absolute No						
National Presentatum	VEGE	TATION - Use scientific names of plants. L	ist all sp	ecies in the	plot.	
Number of Dominant Species Status						Dominance Test worksheet:
1	Tree	e Stratum				
Species Across All Strata: 5 (B) Species Acros	1.		0			
4. 0	2.		0			
Total Cover	3.		0			Percent of dominant Species
Total Cover: O	4.					
Total Cover: 0 20% of Total Cover: 0 0 0 0 0 0 0 0 0	5.		0			Prevalence Index worksheet:
1. Dasiphora fruticosa 1. EACW Species 5.2 x 2 = 10.4 FACU Species 5.2 x 2 = 10.4 FACU Species 5.2 x 2 = 10.4 FACU UPL Species 6 x 4 = 24 UPL Species 5.2 x 2 = 10.4 FACU UPL Species 6 x 4 = 24 UPL Species 5.2 x 2 = 10.4 UPL Species 6 x 4 = 24 UPL Species 5.2 x 2 = 10.4 UPL Species 6 x 4 = 24 UPL Species 5.2 x 2 = 10.4 UPL Speci		Total Cove	er: <u> </u>	_		
2.	Sap	ling/Shrub Stratum 50% of Total Cover:	0 20	% of Total Cover	:0	OBL Species 50 x 1 = 50
2. 10	1.	Dasiphora fruticosa	10	✓	FAC	FACW Species 5.2 x 2 = 10.4
3. Empetrum nigrum 4. Vaccinium uliginosum 5				_		FAC Species <u>26.2</u> x 3 = <u>78.60</u>
4. Vaccinium uliginosum 5	3.	Empetrum piarum	10	✓	FAC	FACU Species6 x 4 =24
5. Salix barclayi 6. Salix pulchra 7.	4.	Varadalisma sillada a asses			FAC	UPL Species
6. Salix pulchra 7.	5.	Calix haralavi	1		FAC	Column Totals: 87.4 (A) 163.0 (B)
7. 8. 9. 0	6.	Salix pulchra	1		FACW	
9.	7.		0			Prevalence Index = B/A = 1.865
Total Cover: 37	8.		0	_		Hydrophytic Vegetation Indicators:
Total Cover: 37	9.		0			✓ Dominance Test is > 50%
Herb Stratum 50% of Total Cover: 18.5 20% of Total Cover: 7.4 Remarks or on a separate sheet) 1. Carex aquatilis 2. Trichophorum caespitosum 3. Cornus canadensis 5. Dodecatheon pulchellum 50% of Total Cover: 18.5 20% of Total Cover: 7.4 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. Plot size (radius, or length x width) 10m Cover of Wetland Bryophytes	10.		0	_		✓ Prevalence Index is ≤3.0
1. Carex aquatilis 2. Trichophorum caespitosum 35						☐ Morphological Adaptations ¹ (Provide supporting data in
2. Trichophorum caespitosum 15				_		' '
3. Cornus canadensis 5 FACU be present, unless disturbed or problematic. 4. Carex macrochaeta 5. Dodecatheon pulchellum 1 FACW FACW FACW FACW FACW FACW FACW Cover of Wetland Bryophytes						
4. Carex macrochaeta 5. Dodecatheon pulchellum 1 FACW FACW FACW Cover of Wetland Bryophytes						
5. Dodecatheon pulchellum 1 FACW FACW Cover of Wetland Bryophytes				-		be present, unless disturbed of problematic.
% Cover of Wetland Bryophytes				-		Plot size (radius, or length x width) <u>10m</u>
		<u> </u>		-		
O. Sicropicardo a consideración	6.	·		-		(Where applicable)
O di Santia		•		-		
8. Swertia perennis O.1 Total Cover of Bryophytes 5 9. Equisetum arvense 0.1 Total Cover of Bryophytes 5		·		-		Total Cover of bryophytes 5
O		<u> </u>		-		Hydrophytic
Total Cover: 60 4 Vegetation	10.			_		Vegetation
50% of Total Cover: 30.2 20% of Total Cover: 12.08 Present? Yes • No •					: 12.08	Present? Yes No
Remarks: sedge phenology not well developed.		_				· ·

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SOIL Sampling Point: SW13_T106_01

Depth	Matrix		ent the indicator or co	dox Featur			-	
(inches) Color (noist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1		100					Fibric Organics	
1-9		100					Hemic Organics	
								-
							-	
¹ Type: C=Concentration.		RM=Reduce	d Matrix ² Locatic	n: PI =Pore	Lining RC	=Root Cha	nnel M=Matrix	
Hydric Soil Indicators:	<u> — Берісцоп.</u>		Indicators for P		_		inner. Pi-Piduix	
Histosol or Histel (A1)			Alaska Color C		4	, . .	Alaska Gleyed Without H	ie 5V or Pedder
✓ Histic Epipedon (A2)			Alaska Alpine				Underlying Layer	de 31 of Redder
Hydrogen Sulfide (A4)			Alaska Redox	, ,			Other (Explain in Remark	rs)
Thick Dark Surface (A								
Alaska Gleyed (A13)	,						nary indicator of wetland h	ydrology,
Alaska Redox (A14)			and an appropria	ite ianascape	e position n	nust be pre	esent	
Alaska Gleyed Pores (A	15)		4 Give details of o	color change	in Remark	S		
Restrictive Layer (if presen	:):							
Type: seasonal frost							Hydric Soil Present	? Yes ● No O
Depth (inches): 9								
Remarks: rimarily sedge peat								
IYDROLOGY								
rimarily sedge peat YDROLOGY Wetland Hydrology Indi								cators (two or more are required)
IYDROLOGY Wetland Hydrology Indi Primary Indicators (any or)					Water Stai	ned Leaves (B9)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any or V Surface Water (A1)	e is sufficient)	☐ Inundation \				☐ Water Stai ✓ Drainage F	ned Leaves (B9) latterns (B10)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any or ✓ Surface Water (A1) ✓ High Water Table (A2	e is sufficient)	Sparsely Veg	getated Conc			☐ Water Stai ☑ Drainage F ☐ Oxidized R	ned Leaves (B9) latterns (B10) hizospheres along Living Roots (C3)
IYDROLOGY Wetland Hydrology Indi Primary Indicators (any or Surface Water (A1) High Water Table (A2) Saturation (A3)	e is sufficient)	Sparsely Veg	getated Conc ts (B15)	cave Surfac		Water Stai ✓ Drainage F ○ Oxidized R ○ Presence of	ned Leaves (B9) latterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4)
YDROLOGY Vetland Hydrology Indi Primary Indicators (any or Y Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1)	<u>e is sufficient</u>))	Sparsely Veg Marl Deposit Hydrogen Si	getated Cond ts (B15) ulfide Odor (cave Surfac		Water Stai ✓ Drainage F ○ Oxidized R ○ Presence c ○ Salt Depos	ned Leaves (B9) atterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) its (C5)
IYDROLOGY Wetland Hydrology Indi Primary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B	<u>e is sufficient</u>))	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Cond ts (B15) ulfide Odor (Water Table	cave Surfac C1) (C2)		Water Stai ✓ Drainage F ○ Oxidized R ○ Presence o ○ Salt Depos ○ Stunted or	ned Leaves (B9) atterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) its (C5) Stressed Plants (D1)
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IYDROLOGY Wetland Hydrology Indi Primary Indicators (any or Surface Water (A1) High Water Table (A2 Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B4)	<u>e is sufficient</u>) 2))	Sparsely Veg Marl Deposit Hydrogen St Dry-Season	getated Cond ts (B15) ulfide Odor (Water Table	cave Surfac C1) (C2)		Water Stai ✓ Drainage F ○ Oxidized R ○ Presence of Salt Depos Stunted or ✓ Geomorph ✓ Shallow Ac	ned Leaves (B9) htterns (B10) hizospheres along Living Roots (C3) f Reduced Iron (C4) htts (C5) Stressed Plants (D1) c Position (D2) uitard (D3)
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