## WETLAND DETERMINATION DATA FORM - Alaska Region

Investigator(s):       SLI, SCB       Landform (hillside, terrace, hummocks etc.):       Lowland         Local relief (concave, convex, none):       flat       Slope:       % / 3.7 ° Elevation:       476         Subregion :       Southcentral Alaska       Lat.:       62.9351195102       Long.:       -149.602361559       Datum:       NAD83         Soil Map Unit Name:       NWI classification:       PSS1E         Are climatic/hydrologic conditions on the site typical for this time of year?       Yes	Project/Site:	Susitna-Watana Hydroelectric Project	Borough/City:	Matanuska-Susitna Borough Sampling D	oate: 03-Jul-13
Local relief (concave, convex, none):       flat       Slope:       % / 3.7 °       Elevation:       476         Subregion :       Southcentral Alaska       Lat.:       62.9351195102       Long.:       -149.602361559       Datum:       NAD83         Soil Map Unit Name:	Applicant/Owne	r: Alaska Energy Authority		Sampling Point:	SW13_T125_06
Subregion :       Southcentral Alaska       Lat.:       62.9351195102       Long.:       -149.602361559       Datum:       NAD83         Soil Map Unit Name:       NWI classification:       PSS1E         Are climatic/hydrologic conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Yes Image: No Conditions on the site typical for this time of year?       Year Normal Circumstances'' present?       Year No Conditions on the site typical for this time of year?         Are Vegetation       , Soil       , or Hydrology        naturally problematic?	Investigator(s):	SLI, SCB	Landform (hill	side, terrace, hummocks etc.): Lowland	
Soil Map Unit Name:       NWI classification: PSS1E         Are climatic/hydrologic conditions on the site typical for this time of year?       Yes	Local relief (cor	ncave, convex, none): flat	Slope:	% / <u>3.7</u> ° Elevation: <u>476</u>	
Are climatic/hydrologic conditions on the site typical for this time of year? Yes No O (If no, explain in Remarks.) Are Vegetation O, Soil O, or Hydrology Significantly disturbed? Are "Normal Circumstances" present? Yes No O	Subregion : Se	buthcentral Alaska	Lat.: 62.935119510	Long.: -149.602361559	Datum: NAD83
Are Vegetation       □       , or Hydrology       □       significantly disturbed?       Are "Normal Circumstances" present?       Yes ●       No ○         Are Vegetation       □       , or Hydrology       □       naturally problematic?       (If needed, explain any answers in Remarks.)	Soil Map Unit N	ame:		NWI classification: P	SS1E
	Are Vegetation	n 📋 , Soil 🗌 , or Hydrology 🗌 signi	ficantly disturbed?	Are "Normal Circumstances" present?	
	- <b>J</b>	<b>DF FINDINGS</b> - Attach site map showing	51		,

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes ⊙ Yes ⊙	No () No ()	Is the Sampled Area	
Wetland Hydrology Present?	Yes 🖲	No 🔿	within a Wetland?	Yes 🖲 No 🔾
Remarks:				

## VEGETATION - Use scientific names of plants. List all species in the plot.

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tre	e Stratum	% Cover		Status	Number of Dominant Species
1.	Picea glauca	1		FACU	That are OBL, FACW, or FAC: (A)
2.		0			Total Number of Dominant Species Across All Strata: 4 (B)
3.		0			Percent of dominant Species
4.		0			That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)
5.		0			Prevalence Index worksheet:
	Total Cover:	1			Total % Cover of: Multiply by:
Sap	ling/Shrub Stratum 50% of Total Cover:	<u>0.5</u> 20%	6 of Total Cover:	0.2	OBL Species $13.1 \times 1 = 13.1$
1	Salix pulchra	25	$\checkmark$	FACW	FACW Species $25 \times 2 = 50$
	Soliv barolovi	25		FAC	FAC Species 37.1 x 3 = 111.3
	,,			FACU	FACU Species $2.1 \times 4 = 8.4$
	Picea glauca Betula neoalaskana	0.1		FACU	UPL Species $0 \times 5 = 0$
5.					Column Totals: <u>77.3</u> (A) <u>182.8</u> (B)
6.					
					Prevalence Index = B/A = 2.365
					Hydrophytic Vegetation Indicators:
					✓ Dominance Test is > 50%
		0			✓ Prevalence Index is $\leq$ 3.0
	Total Cover:				Morphological Adaptations <sup>1</sup> (Provide supporting data in
Her	b Stratum50% of Total Cover:	25.55 209	% of Total Cover:	10.22	Remarks or on a separate sheet)
1.	Carex utriculata	10		OBL	Problematic Hydrophytic Vegetation $^{\perp}$ (Explain)
2.	Calamagrostis canadensis	10		FAC	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
3.	Carex aquatilis	3		OBL	be present, unless disturbed or problematic.
4.	Polemonium acutiflorum	1		FAC	Plot size (radius, or length x width) 10m
5.	Rubus arcticus	1		FAC	
6.	Equisetum arvense	0.1		FAC	% Cover of Wetland Bryophytes (Where applicable)
7.	Comarum palustre	0.1		OBL	% Bare Ground
8.	Equisetum fluviatile	0.1		OBL	Total Cover of Bryophytes
9.	Chamaenerion angustifolium	0.1		FACU	
10.		0			Hydrophytic
	Total Cover:	25.4			Vegetation
	50% of Total Cover:			5.08	Present? Yes $\bullet$ No $\bigcirc$
		F0( 11			

Remarks: trace unid ferns and viola sp. total tree cover <5% thus no dominant tree species.

SOIL
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Matrix	or or confirm the absenc Redox Features			
Depth (inches) Color (moist) % Color (moist)	t) % T	ype <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
	<u> </u>	ype Loc		
			P	
				-
			-	
1				
<sup>1</sup> Type: C=Concentration. D=Depletion. RM=Reduced Matrix <sup>2</sup> I		-	nnel. M=Matrix	
Hydric Soil Indicators: Indicators	for Problematic Hy	dric Soils: <sup>3</sup>		
Histosol or Histel (A1)	Color Change (TA4)		Alaska Gleyed Without H	ue 5Y or Redder
Histic Epipedon (A2)	Alpine swales (TA5)	_	Underlying Layer	
Hydrogen Sulfide (A4)	Redox With 2.5Y Hue	$\checkmark$	Other (Explain in Remarl	ks)
Thick Dark Surface (A12)				
	ator of hydrophytic v propriate landscape p		nary indicator of wetland h	hydrology,
Alaska Redox (A14)				
Alaska Gleyed Pores (A15) <sup>4</sup> Give deta	ils of color change in	Remarks		
Restrictive Layer (if present):				
Туре:			Hydric Soil Present	? Yes 🖲 No 🔾
Depth (inches):				
Pemarks:				
Remarks:	iter	I		
Remarks: assume hydric soil due to hydrophytic vegetation and standing wa	iter			
	ater			
	ater			
	iter			
assume hydric soil due to hydrophytic vegetation and standing wa	iter			
assume hydric soil due to hydrophytic vegetation and standing wather the standard standing wather the standard	iter			cators (two or more are required)
assume hydric soil due to hydrophytic vegetation and standing wa HYDROLOGY Wetland Hydrology Indicators: _Primary Indicators (any one is sufficient)			Water Stai	ined Leaves (B9)
Assume hydric soil due to hydrophytic vegetation and standing watched by the hydrophytic vegetation and stan	ation Visible on Aeria	5,(,,	Water Stai	ned Leaves (B9) Patterns (B10)
Assume hydric soil due to hydrophytic vegetation and standing watched by the hydrophytic vegetation and stan	ation Visible on Aeria ely Vegetated Concav	5,(,,	Water Stai	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3)
Assume hydric soil due to hydrophytic vegetation and standing watched by the hydrophytic vegetation and stan	ation Visible on Aeria ely Vegetated Concav Deposits (B15)	e Surface (B8)	Water Stai	ned Leaves (B9) Patterns (B10) hizospheres along Living Roots (C3) of Reduced Iron (C4)
Assume hydric soil due to hydrophytic vegetation and standing watched by the hydrophytic vegetation and standing watched by the hydrology Indicators:          Primary Indicators (any one is sufficient)         Image: Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)	ation Visible on Aeria ely Vegetated Concav Deposits (B15) gen Sulfide Odor (C1	e Surface (B8)	Water Stai Urainage F Oxidized R Presence c Salt Depos	ned Leaves (B9) Patterns (B10) thizospheres along Living Roots (C3) of Reduced Iron (C4) sits (C5)
Assume hydric soil due to hydrophytic vegetation and standing water MyDROLOGY          Wetland Hydrology Indicators:         Primary Indicators (anv one is sufficient)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Sediment Deposits (B2)	ation Visible on Aeria ely Vegetated Concav Deposits (B15) gen Sulfide Odor (C1 eason Water Table (C	e Surface (B8) ) 2)	Water Stai Drainage F Oxidized R Presence c Salt Depos	ned Leaves (B9) Patterns (B10) thizospheres along Living Roots (C3) of Reduced Iron (C4) sits (C5) • Stressed Plants (D1)
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Assume hydric soil due to hydrophytic vegetation and standing water HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one is sufficient)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1)         Hydro         Drift Deposits (B2)         Drift Deposits (B3)         Algal Mat or Crust (B4)         I ron Deposits (B5)	ation Visible on Aeria ely Vegetated Concav Deposits (B15) gen Sulfide Odor (C1 eason Water Table (C	e Surface (B8) ) 2)	Water Stail Water Stail Drainage F Oxidized R Presence c Salt Depos Stunted or Geomorph Shallow Ac Microtopos	ned Leaves (B9) Patterns (B10) thizospheres along Living Roots (C3) of Reduced Iron (C4) sits (C5) • Stressed Plants (D1) ic Position (D2) quitard (D3) graphic Relief (D4)
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