WETLAND DETERMINATION DATA FORM - Alaska Region

Applicatific Nomes Alaska Energy Authority Sampling Point Savis Tata 08	Project	/Site: Susitna-Watana Hydroelec	tric Project	В	orough/City:	Matanusk	a-Susitna Borough Sampling Date: 30-Aug-15		
Landform (hillside, terrace, hummocks etc.): Hillside	Applica	nt/Owner: Alaska Energy Authorit	tv				Sampling Point: SW15 T342 08		
Stope: S			,	I	Landform (hills	side, terrac			
Solid Map Unit Name	-		ımmocky		•				
New classification: Upland New Ceepstalion Soil									
re climatichydrologic conditions on the site typical for this time of year? Yes ◎ No ○ (If no, explain in Remarks.) Are 'Negelation │ Soli │ or 'Hydrology │ significantly disturbed? Are 'Negelation │ Soli │ or 'Hydrology │ naturally problematic? (If needed, explain in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Within a Wetland? Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Is the Sampled Area within a Wetland? Yes ○ No ◎ Yes ○ No ◎ Yes ○ No ◎ Is Total Cover: 12 ○ No ○ Yes ○ No ◎ Yes ○ N	_								
Are Vegetation						<u> </u>			
Are Vegetation Soil or Hydrology Insturally 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 Hydrophytic Vegetation Present Area No. Hydrophytic Vegetation Present. Yes No Hydrophytic Vegetation Presen			_	•					
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No			, ,, _	•			oma on ounced process.		
Hydrophytic Vegetation Present? Yes No	Are V	egetation	Hydrology	turally pro	oblematic?	(If nee	ded, explain any answers in Remarks.)		
Hydric Soil Present? Yes No	SUMN	IARY OF FINDINGS - Attach	n site map showi	ng sam	pling point	locations	, transects, important features, etc.		
Hydric Soil Present? Yes No		Hydrophytic Vegetation Present?	Yes O No 💿						
Wetland Hydrology Present? Yes ○ No ● within a Wetland? Yes ○ No ● Remarks: white spruce woodland with alder Factor Main Methand? Me					Is	the Sam	pled Area		
Remarks: white spruce woodland with alder Remarks: white spruce woodland Remarks: white spruce woodland with alder Remarks: white spruce woodland with alder Remarks: white spruce woodland with alder Remarks: white spruce woodland		·			wi	thin a W	etland? Yes O No 🖲		
Tree Stratum									
Tree Stratum	Rema	irks. White spruce woodland with aid	ier						
Tree Stratum									
Tree Stratum	VEGE	TATION . Use scientific nam	as of plants List	all spo	ciac in tha	olot			
Number of Dominant Species Number of Dom	VLGL	TATION - USE SCIENTIFIC Harri	es or plants. List	all spe	cies iii tile	piot.			
1. Picea glauca 2.									
Composition			_						
3. 0		Picea giauca				FACU			
A							Species Across All Strata: 6 (B)		
Total Cover: 12									
Total Cover 12							111at Ale OBL, FACW, OF FAC		
Sapling/Shrub Stratum 50% of Total Cover: 6 20% of Total Cover: 2.4 OBL Species 0 x 1 = 0 OBL Species 35 x 2 = 70 FACW Species	J.		Total Covers						
1. Alnus viridis ssp. crispa 2. Salix pulchra 3. Salix pseudomonticola 4. Ribes triste 7	C	50% d			of Total Cover:	2.4			
2. Salix pulchra	Sapi	ling/Snrub Stratum 30% C	or rotal cover	20%					
3. Salix pseudomonticola 4. Ribes triste 7	1.	Alnus viridis ssp. crispa		60	✓	FAC			
4. Ribes triste 7	2.	Salix pulchra		10		FACW			
5. Vaccinium uliginosum 6. Rosa acicularis 7. Empetrum nigrum 8. Picea glauca 9. Linnaea borealis 10. Spiraea stevenii 11. Boykinia richardsonii 22. Arctagrostis latifolia 3. Total Cover: 21. Arctagrostis latifolia 3. Equisetum arvense 4. Cornus canadensis 5. Petasites frigidus 6. Rosa acicularis 5. Vaccinium uliginosum 5. FAC 5. FAC 5. FACU Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index is ≤ 3.0 Indicators of na separate sheet) Problematic Hydrophytic Vegetation (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1. Poa pratensis ssp. alpigena 7. Poa pratensis ssp. alpigena 7. Poa pratensis ssp. alpigena 7. FACU Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index = B/A = 3.253 Hydrophytic Vegetation Indicators: Dominance Test is > 50% Prevalence Index is 4.5. FACU Prevalence Index i	3.	Salix pseudomonticola				FAC			
6. Rosa acicularis 7. Empetrum nigrum 8. Picea glauca 9. Linnaea borealis 10. Spiraea stevenii 10. Spiraea stevenii 11. Boykinia richardsonii 12. Arctagrostis latifolia 13. Equisetum arvense 14. Cornus canadensis 16. Polemonium acutiflorum 17. Poa pratensis ssp. alpigena 18. Picea glauca 19. Linnaea borealis 19. Linnaea borealis 19. Linnaea borealis 10. Spiraea stevenii 10. Morphological Adaptations (Provide supporting data in Remarks or on a se							UPL Species 20 x 5 = 100		
Prevalence Index = B/A = 3.253	5.						Column Totals: <u>217</u> (A) <u>706</u> (B)		
Price glauca 3							Prevalence Index = B/A = 3.253		
9. Linnaea borealis 10. Spiraea stevenii 2									
Total Cover: 105 Herb Stratum 50% of Total Cover: 52.5 20% of Total Cover: 21 1. Boykinia richardsonii 20					_				
Total Cover: 105 Herb Stratum 50% of Total Cover: 52.5 20% of Total Cover: 21 1. Boykinia richardsonii 20									
Herb Stratum 50% of Total Cover: 52.5 20% of Total Cover: 21 Remarks or on a separate sheet) 1. Boykinia richardsonii 2. Arctagrostis latifolia 3. Equisetum arvense 1. Cornus canadensis Petasites frigidus 6. Polemonium acutiflorum 7. Poa pratensis ssp. alpigena 50% of Total Cover: 21 Remarks or on a separate sheet) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1 Plot size (radius, or length x width) 10m FAC Where applicable) Remarks or on a separate sheet) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Plot size (radius, or length x width) What cover of Wetland Bryophytes (Where applicable) What cover of Wetland Bryophytes (Where applicable) Solvential Cover: 21 Remarks or on a separate sheet) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Plot size (radius, or length x width) What cover of Wetland Bryophytes (Where applicable) What cover of Wetland Bryophytes (Where applicable) What cover of Wetland Bryophytes (Where applicable)	10.	Spiraea stevenii				FACU			
1. Boykinia richardsonii 20	Harl	h Stratum 50%			of Total Cover	21			
2. Arctagrostis latifolia 3. Equisetum arvense 4. Cornus canadensis 5. Petasites frigidus 6. Polemonium acutiflorum 7. Poa pratensis ssp. alpigena 7. Poa pratensis ssp. alpigena 7. Acopitum delabiciifolium 7. Poa pratensis ssp. alpigena 7. Latifolia 15. ✓ FACW FACW FACW FACW FACW FACW FACW FACW		o oci acam					_ · · · · · · · · · · · · · · · · · · ·		
3. Equisetum arvense 4. Cornus canadensis 5. Petasites frigidus 6. Polemonium acutiflorum 7. Poa pratensis ssp. alpigena 7. FACU 8. Acopitum delephinifolium 9. FACU 9. Bare Ground 9.							, , , , , , , , , , , , , , , , , , , ,		
4. Cornus canadensis Petasites frigidus 6. Polemonium acutiflorum 7. Poa pratensis ssp. alpigena 7. FACU 8. Acceptium delektripitifelium 7. FACU 8. Acceptium delektripitifelium 7. FACU 8. Acceptium delektripitifelium 7. FACU 8. Bare Ground 9. Bare Ground									
5. Petasites frigidus 6. Polemonium acutiflorum 7. Poa pratensis ssp. alpigena 8. Acopitum delephiniifolium		- ·							
6. Polemonium acutiflorum 10 FAC (Where applicable) 7. Poa pratensis ssp. alpigena 7 FACU 8. Acopitum delabinijifalium 5 FACU 7 FACU 8 Bare Ground 55							Plot size (radius, or length x width)		
7. Poa pratensis ssp. alpigena 7 FACU % Bare Ground 55									
2. Appriture delektricifolium									
U. Modificati adipinimipinani	8.	Aconitum delphiniifolium		5		FAC			
9. Mertensia paniculata 3		·					40 <u>40</u>		
Company description		·		3		FACU	Hydrophytic		
Total Cover: 100 Vegetation							Vegetation		
50% of Total Cover: 50 20% of Total Cover: 20 Present? Yes No •		50% (of Total Cover:	20	Present? Yes O No 🗨		
Remarks: juncus castaneus 0.1%, epilobium angustifolium 1%, carex media 1% (collected, tufted), festuca altaica 1%, dryopteris expansa 1%	Dan	orker in our control of the	alationa and according to	10/			unfied) feeting altrice 10/ described		

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SOIL Sampling Point: SW15 T342 08

JUIL									g Point: 3W15_1342_06
Profile Descript	•	•	eded to docu	ment the indicator or co			ators)		
Depth		1atrix			dox Featu				
(inches)	Color (moi	st)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	<u>Loc</u> 2	Texture	Remarks
0-3			100					Hemic Organics	-
3-7			100					Sapric Organics	-
7-14	10YR	3/3	100					Sandy Loam	w rounded gravels
14-19	2.5Y	3/2	100					Loamy Sand	w rounded gravels
¹Type: C=Co	ncentration. D=	Depletion.	RM=Reduc	ced Matrix ² Location	n: PL=Pore	E Lining. RC	=Root Cha	nnel. M=Matrix	
Hydric Soil I	ndicators:			Indicators for Pr	oblematio	: Hydric So	oils:		
	r Histel (A1)			Alaska Color C		4		Alaska Gleyed Without H	lue 5Y or Redder
l —	pedon (A2)			Alaska Alpine s		-	_	Underlying Layer	
	Sulfide (A4)			Alaska Redox \	Nith 2.5Y H	lue		Other (Explain in Remar	ks)
☐ Thick Darl	k Surface (A12)			2.5					
Alaska Gle	eyed (A13)			and an appropria				nary indicator of wetland l esent	hydrology,
Alaska Re	. ,			4 Cive details of c	olor change	in Domark			
☐ Alaska Gle	eyed Pores (A15)		⁴ Give details of o	olor change	e III Kelliai k	.5		
Restrictive Lay	er (if present):								
Type:								Hydric Soil Present	t? Yes O No 💿
Depth (incl	hes):								
Remarks:									
no hydric soil ii	ndicators								
HYDROLO	GY								
_	rology Indica								icators (two or more are required)
	ators (any one is	sufficient)						ined Leaves (B9)
	Vater (A1)			☐ Inundation V		_			Patterns (B10)
	er Table (A2)			Sparsely Veg		icave Surfac	ce (B8)		Rhizospheres along Living Roots (C3)
Saturation Water Ma	. ,			Marl Deposit	. ,	(C1)		Salt Depo	of Reduced Iron (C4)
	Deposits (B2)			☐ Hydrogen Su☐ Dry-Season V					r Stressed Plants (D1)
Drift Dep				Other (Expla		. ,			nic Position (D2)
	or Crust (B4)				iii iii Keilia	113)			quitard (D3)
☐ Iron Deposits (B5)									graphic Relief (D4)
	ioil Cracks (B6)								al Test (D5)
Field Observa	ations:								
Surface Wate	r Present?	Yes C	No 💿	Depth (inche	es):				
Water Table F	Present?	Yes C	No 💿	Depth (inche	es):		Wetlar	nd Hydrology Preser	nt? Yes O No 💿
Saturation Pre		Yes O	No •	Depth (inche	•				
(includes capi	illary fringe)	165 0	140 😊	Берит (писпе	:5).				
Describe Recor	rded Data (strea	am gauge,	monitor we	ell, aerial photos, pre	vious inspe	ction) if ava	ilable:		
Daw 1									
Remarks:									
Remarks:									
Remarks:									

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