

Sewall Wetland Consulting, Inc.

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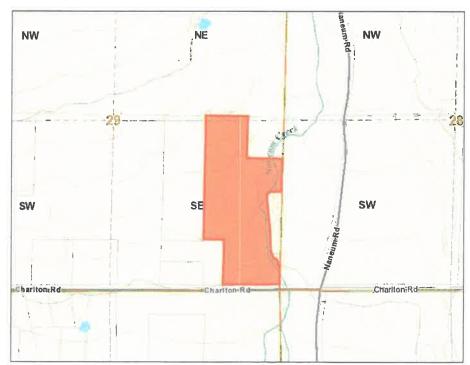
January 11, 2021

Leann Adams Sweetwater Ranch 1371 Charlton Rd Ellensburg, WA98926

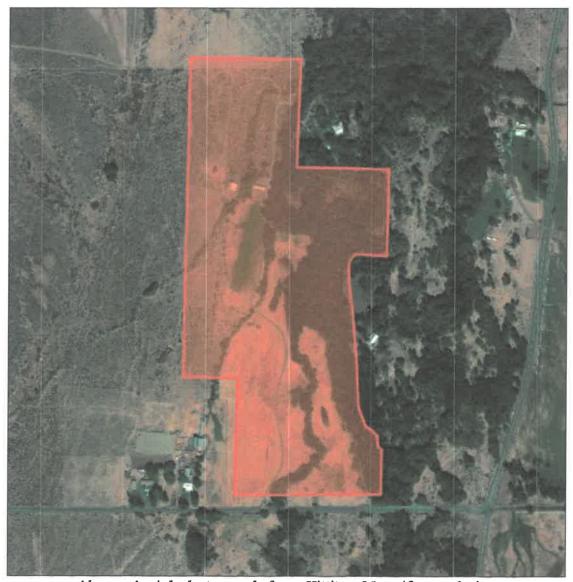
RE: Critical Area Report – Parcel #558434 Kittitas County, Washington SWC Job #19-191

Dear Leann,

This report describes our observations of any jurisdictional wetlands, streams and/or buffers on or within 200' of Parcel #558434, located at 13171 Charlton Road, in unincorporated Kittitas County, Washington (the "site"). The 58.83 acre site is within the SE ¼ of Section 29, Township 19 North, Range 19 East of the W.M.



Above: Vicinity Map of site



Above: Aerial photograph from Kittitas Mapsifter website.

METHODOLOGY

Ed Sewall of Sewall Wetland Consulting, Inc. inspected the site and within 200' of the site on November 20 and 22, 2019. The study area was limited to the area west of Naneum Creek and its un-named tributary, as a portion of the site is located east of Naneum Creek.

The site was reviewed using methodology described in the **Regional** Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACOE September 2008) as required by the US Army Corps of Engineers starting in June of 2009. This is the methodology currently recognized by the Kittitas County for wetland determinations and delineations. The site was also reviewed using methodology described in Soil colors were identified using the 1990 Edited and Revised Edition of the **Munsell Soil Color Charts** (Kollmorgen Instruments Corp. 1990.

Wetlands in the shoreline zone of Kittitas County are rated using the 2014 Washington State Department of Ecology Washington State Wetland Rating System for Eastern Washington, 2014 Update dated June 2014 Publication No. 14-06-018.

The ordinary high water mark (OHWM) of streams was located based upon the criteria described in the Washington Department of Ecology draft publication Determining The Ordinary High Water Mark on Streams In Washington State (WADOE Publication 08-06-001, March 2008).

OBSERVATIONS

Existing Site Documentation.

Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the National Wetland Inventory Map, WDNR Fpars Stream Typing Map, Kittitas County flood mapping, WDFW Priority Habitats and Species Maps, and the NRCS Soil Survey online mapping and Data.

National Wetlands Inventory (NWI)

The NWI map depicts a large forested and scrub shrub wetland along Naneum Creek on the eastern side of the site. There is also a pond type feature erroneously mapped where a large ponderosa pine is located in the southern pasture. All irrigation ditches on the site are erroneously shown as stream type features.

The USFWS data indicates this wetland was based on aerial photograph interpretation of a color infrared photograph from 2017 with no field

verification. Although some wetland is located within the forested areas along Naneum Creek, it is a much smaller area than incorrectly mapped in this inventory map which included all forested areas as wetland.



Above: NWI map of the area of the site

Soil Survey

According to the NRCS Soil Mapper website, the site is mapped as containing Weirman and Weirman-Kayak complex (moderately well drained) as well as Millhouse cobbly ashy loam which is a well-drained soil. Both of these soils are generally formed in alluvium and are not considered "hydric" soils according to the publication Hydric Soils of the United States (USDA NTCHS Pub No.1491, 1991).



Above: NRCS soil map of the site.

WADNR FPARS website

According to the WADNR FPARS website with stream types layers activated, Naneum Creek is depicted as a Type S water, and the small un-named tributary entering the Naneum from the northwest is depicted as a Type F water. In contrast to the inaccurate NWI map, this map correctly does not identify irrigation ditches on and near the site as streams.



Above: WDNR Fpars Stream Mapping of the area of the site.

Kittitas County Mapsifter - Flood Layer

The Kittitas County Mapsifter website depicts the 100 year floodplain as a narrow band along both Naneum Creek, and its un-named tributary.

WDFW Priority Habitats and Species Maps

The WDFW Priority Habitats and Species mapping for the site depicts the site located within a Township that contains breeding area for the Golden Eagle, as well as a "management buffer" for the Northern Spotted Owl, as

well as an area of regular concentrations of mule deer as well as shrub steppe (entire township has pink shading).



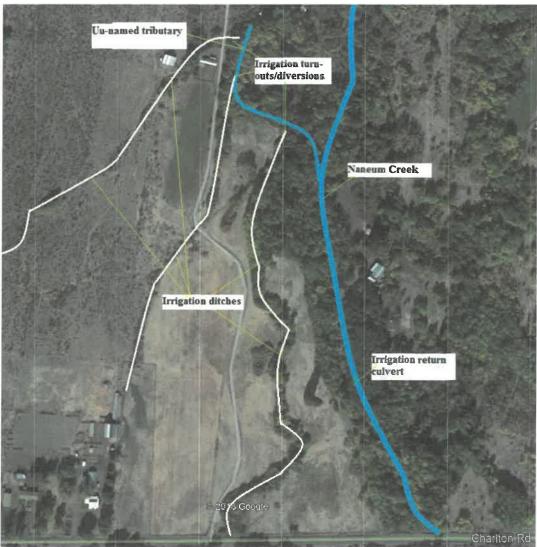
Above: Kittitas County Mapsifter Floodplain mapping.



Above: WDFW Priority Habitat Mapping of the site.

Field observations

The site consists of an agricultural property containing a gravel access road/driveway that provides access from Charlton Road, several agricultural buildings on the northwest side of the site, paddock areas and mowed hayfields. Several irrigation ditches diverted off the unnamed tributary pass through the pasture areas of the site. These are noted in the image below.



Above: Map of the approximate location of the main irrigation features on the site.

Two creeks are located on the site, one, an -un-named tributary, enters the northern side of the site and passes south and east before entering Naneum Creek. There are two irrigation turnouts form this creek to the east of the horse barn which direct irrigation water through pipes and a ditch to off-site properties to the southwest, and to the southern portion of the site where irrigation waters are used to water the pastures. There is also a turnout approximately 200' west of the junction of Naneum Creek and the tributary. This area contains a rock dam across the tributary with a plastic liner where water is diverted to a dug ditch running along the edge of the tree-line to the south.

Naneum Creek is located along the eastern side of the site and is a well-defined channel oriented in a roughly north-south orientation. As previously mentioned, the un-named tributary enters Naneum Creek near the northern end of the site. Naneum Creek then drains south in a channel with approximately 6' tall banks to the south where it passes under a driveway access bridge before it reaches Charlton Road.

Although the area surrounding both of these creeks is depicted as wetland on the NWI maps, only a small portion of this area is wetland as described later in this report. Most of this area is upland elevated 4'-7' above the creek elevations and vegetated with a mix of scattered cottonwoods, ponderosa pine, Oregon grape, snowberry, and some dogwood.

Soils in this forested upland area consists of a dry, cobbly loam with soil colors of 10YR3/3-3/4 with no hydric soil indicators or evidence of wetland hydrology.

The pastures on the site are a mix of pasture grasses and weedy species including orchard grass, cheatgrass, knapweed, tumble mustard, English plantain, and timothy.

Soils in the pasture upland area consists of a dry, sandy, cobbly loam with soil colors of 10YR3/3 with no hydric soil indicators or evidence of wetland hydrology.

Wetlands

There are two small wetland areas located south of the un-named tributary and west of Naneum Creek within the forested area. These

wetlands are located within low areas that are probably inundated during flood events, particularly Wetland A which has a direct connection to Naneum Creek. Below is a description of these wetlands;

Wetland A

Wetland A is a narrow forested and scrub-shrub wetland that connects to Naneum Creeks western bank between OHWM flags W36 & W37 (see attached survey map). This wetland appears to backflood from Naneum Creek when water levels are high. The southern irrigation ditch that comes off the un-named tributary is located just west of portions of this wetland and it appears some seepage from this ditch, elevated about 6' above the wetland, also provides some hydrology to this area.

This wetland was flagged with pink flagging labeled A1-A33. Vegetation noted within this wetland includes black cottonwood, scattered red-osier dogwood, pacific willow, and unidentified sedge.

Soil pits excavated within this wetland area revealed a cobbly loam with a color of 10YR 2/2 with common, medium, distinct redoximorphic concentrations. Soils saturated at the surface during our non-growing season observation of the wetland.

Using the 2014 Washington State Department of Ecology Washington State Wetland Rating System for Eastern Washington, 2014 Update dated June 2014 Publication No. 14-06-018, and rating this wetland as a "riverine" wetland, this wetland scored a total of 21 points with 8 for habitat. This indicates a Category II wetland. Based upon Kittitas County Code Chapter 17B.05.020G.1, Category II wetlands for a low-moderate intensity land use have a 150' buffer measured from the wetland edge.

Wetland B

Wetland B is a small scrub shrub wetland located northeast of Wetland A but separated by a small area of upland. This wetland also appears to flood when the creeks on site are in flooding conditions and therefore was also reviewed as a riverine wetland. Wetland B is vegetated with a mix of red-osier dogwood, sedge and hedge nettle. This wetland was flagged with pink flags labeled B1-B13.

Soil pits excavated within this wetland area revealed a cobbly loam with a color of 10YR 2/2 with common, medium, distinct redoximorphic concentrations. Souls saturated at the surface during our non-growing season observation of the wetland.

Using the 2014 Washington State Department of Ecology Washington State Wetland Rating System for Eastern Washington, 2014 Update dated June 2014 Publication No. 14-06-018, and rating this wetland as a "riverine" wetland, this wetland scored a total of 21 points with 7 for habitat. This indicates a Category II wetland. Based upon Kittitas County Code Chapter 17B.05.020G.1, Category II wetlands for a low-moderate intensity land use have a 150' buffer measured from the wetland edge.

Un-named Tributary

The western ordinary high water mark (OHWM) of the un-named tributary was delineated with blue flags W1-W26. The creek joins Naneum Creek at flag W26.

This creek is approximately 8'-10' in width with a cobble and gravel substrate, has a somewhat modified channel which appears to have been channelized with numerous irrigation turnouts and one dam previously described, which blocks any fish migration in the channel.

WADNR has mapped this stream as a Type F water (see page 6 of this report. According to KCC 17B.05.020K-1, Type F waters have a 100' buffer measured form the OHWM.

Naneum Creek

The western OHWM of Naneum Creek was flagged with blue flags W36-W46, which was the last flag placed by the wooden driveway bridge on the south end of the site. Naneum Creek is considered a Shoreline of the State or a Type 1/S water. Per KCC 17B.05.050.B.1, Shoreline streams have a 100' buffer in areas designated "Rural Conservancy" as is the site.

If you have any questions in regards to this report or need additional information, please feel free to contact me at (253) 859-0515 or at esewall@sewallwc.com.

Sincerely,

Sewall Wetland Consulting, Inc.

Ed Sewall

Senior Wetlands Ecologist PWS #212

Attached: Data sheets & Rating Form

REFERENCES

Cowardin, L., V. Carter, F. Golet, and E. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31, Washington, D. C.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. U. S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

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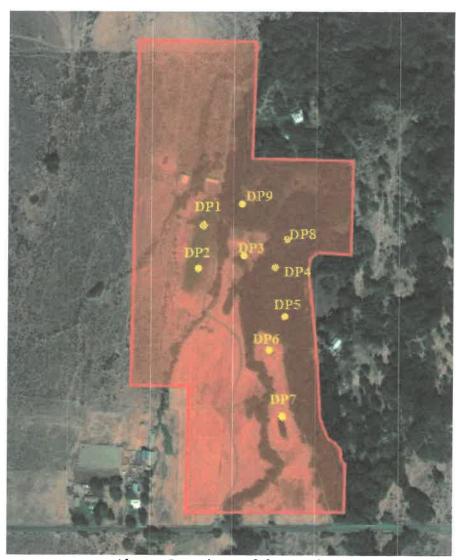
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Reed, P., Jr. 1988. National List of Plant Species that Occur in Wetlands: Northwest (Region 9). 1988. U. S. Fish and Wildlife Service, Inland Freshwater Ecology Section, St. Petersburg, Florida.

Reed, P.B. Jr. 1993. 1993 Supplement to the list of plant species that occur in wetlands: Northwest (Region 9). USFWS supplement to Biol. Rpt. 88(26.9) May 1988.

USDA NRCS & National Technical Committee for Hydric Soils, September 1995. Field Indicators of Hydric Soils in the United States - Version 2.1



Above: Locations of data points.







Above: Wetland A Below: Pasture area looking north just east of wooded area containing wetland A & B





Above: Looking north towards horse barn. Below: Looking south across horse pasture south of barn.

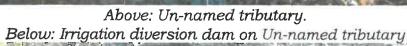




Above: looking north across horse pasture. Below: Un-named tributary







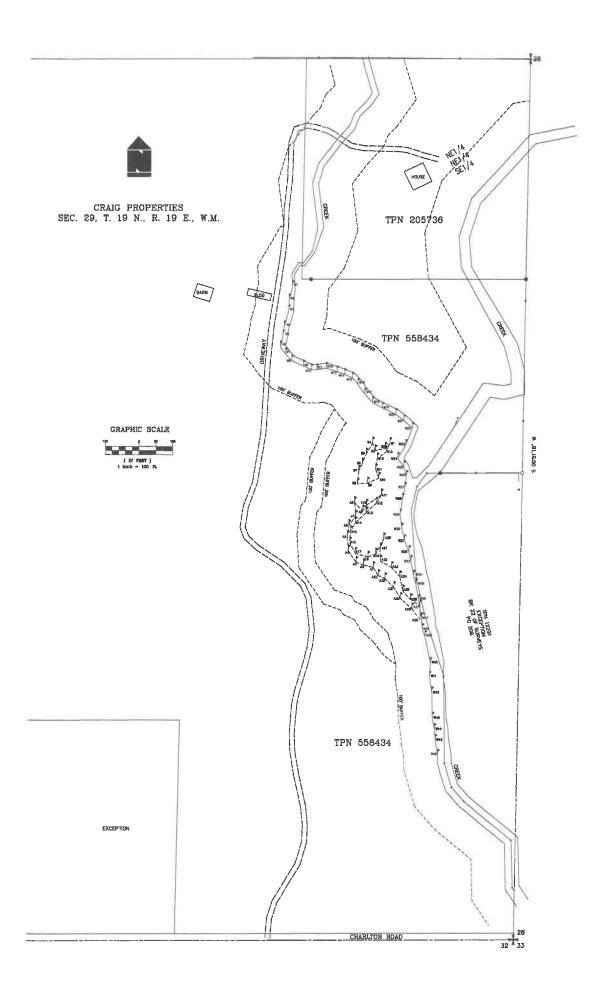




Above: Naneum Creek Below: Looking north at Naneum Creek where Un-named tributary (on left) joins the main stem of the creek.







Pasture on west by hore bon

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/site: Sweetwate March		City/County	. /	41thobas	Sempling Date:	11-22-1
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Investigator(s): Id Server //		Section, To		ange:		
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Subregion (LRR):				Lang:		
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Are Vegetation, Soil, or Hydrology signi				"Normal Circumstances"	-	<u> </u>
Are Vegetation, Soil, or Hydrology natu				needed, explain any answe		NO
SUMMARY OF FINDINGS - Attach site map sh						itures, etc.
Hydrophytic Vegetation Present? YesNo						/
Hydric Soil Present? Yes No_			e Sample In a Wells		No /	
Wetland Hydrology Present? Yes No	/			100	NO	
Remarks;						
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Hydrogen Sulfide (A4)	Loamy Gleyed Ma	trix (F2)		Red P	arent Material (TF2)
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Drift Deposits (83) (Nonriverine)	Presence of Red				rayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Redu			-	aturation Visible on Aerial Imagery (C9)
inundation Visible on Aerial Imagery (B.					
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(includes capillary fringe)			1		
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WETLAND DETERMINATION DATA FORM - Arid West Region

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Applicant/Owner: Investigator(s): ### Se will		Section, Township, Rang		
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Subregion (LRR):				
Soil Map Unit Name:			NWI classific	
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Are Vegetation, Soil, or Hydrology	2,03			present? YesNo
Are Vegetation Soil or Hydrology or			led, explain any enswa	•
BUMMARY OF FINDINGS - Attach site map	showin	sampling point loc	ations, transects	, important features, etc
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Hydric Soil Present? Yes N	0	within a Wetland		No
Wetland Hydrology Present? Yes N	0			
Remarks;				
/EGETATION				
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Histic Epipedon (A2)	Stripped Metrix (\$6)	2 cm Muck (A10) (LRR 8)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	— outer (colours at trattative)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	•
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	Indicators of hydrophytic vegetation and
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Primary Indicators (any one indicator is sufficient	not's	
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		Sediment Deposits (B2) (Riverine)
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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Sweethith	c	ity/County:	M	777 /24 5 State: WA	_ Sampling Date: _	11-22-14	
Applicant/Owner:				State: WA	Sampling Point:	DAKE	
Investigator(s): 54 Sequel		Section, Township, Range:					
Landform (hillslope, terrace, etc.):		Local relief (concave, convex, none):Stope (%):					
				Lang:			
Soli Map Unit Name:				NWA classi			
Are climatic / hydrologic conditions on the site typical for this tim		2 V-					
Are Vegetation Soil or Hydrology signif							
Are Vegetation Soil or Hydrology natur				Normal Circumstances		No	
SUMMARY OF FINDINGS - Attach site map sho				eded, explain any answ ocations, transect		etures, etc.	
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes No No			Sampled n a Wettan		No		
Remarks:					7,000		
VEGETATION							
	solute	Dominant	Indicator	Dominance Test wor	ksheet:		
		Species?		Number of Dominant I	Species		
1. Populus tremulaido 3	50		FAC	That Are OBL, FACW	or FAC:	(A)	
2.				Total Number of Domi			
3				Species Across Ali Str	ola:	(B)	
Total Cover:				Percent of Dominant 8	pecies	(BA)	
Sapilno/Shrub Stratum			~	That Are OBL, FACW,	or FAC:	(BA)	
1. Pasa pisocompa 6	60		FHL	Prevalence Index wo			
2				Total % Cover of:			
3		 -		OBL species			
4				FACW species			
5 Total Cover:				FACIL species			
Herb Stratum	-			FACU species			
1				Column Totals:			
2				0.000		(3)	
3				Prevalence Index			
4				Hydrophytic Vegetati			
5				Dominance Test is			
6				Prevalence Index			
7 8.	-			Morphological Ada data in Remark	a or ou a seberate submitted as	heet)	
Total Cover:				Problematic Hydro			
Woody Vine Stratum			1				
1				findicators of hydric sol be present.	ll and wetland hydrol	logy must	
Total Cover: % Bare Ground in Herb Stratum % Cover of 8		at .		Hydrophytic Vegetation Present? Ye	s No_ ^C		
Remarks:	9101						
Notice As.							
IS Army Corps of Engineers			4440, (444)		Arid West Versi	on 11-1-2008	

Sampling Point DP#3

rofile Description: (Describe to the Depth Matrix	Redox Fe	1112			
nches) Color (moist) %	Color (moist)	% Type	Loc	Texture	Remarks
11, 1044 3/3				marke	lun
		100		7	
	24				
					0.
			-		
ype: C=Concentration, D=Depletion,	RM=Reduced Matrix. 2Lo	cation: PL=Pon	Lining Ri	=Root Chan	nel MeMatrix
rdric Soll Indicators: (Applicable to					for Problematic Hydric Solls ³ :
Histosof (A1)	Sendy Redox (8				Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Maintx				Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky N	7			ced Vertic (F18)
Hydrogen Suffide (A4)	Loamy Glayed	304-3101			Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix			-	•
_ Strainled Layers (AS) (LRR C) _ 1 cm Mack (A9) (LRR D)	Redox Dark Sur	1		Unier	(Explain in Remarks)
_ Tem Muck (As) (Link D) _ Depleted Selow Dark Surface (A11)		30			
Thick Dark Surface (A11)		2 Brown 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
	Redox Depress			3	
_ Sandy Mucky Mineral (S1)	Vernal Pools (Fi	9)			of hydrophytic vegetation and
_ Sandy Gleyed Matrix (S4)				Wetten	1 hydrology must be present.
strictive Layer (if present):					
Туре:					/
Depth (inches):					December Man 84
		1		Hydric Soll	Present? Yes No
emarks:			No		liantes
		,	Nò		
emerks:			Nò		
DROLOGY			Nd	ina	
DROLOGY etiand Hydrology Indicators:	aufficient)		Nd	('NW	liartes
DROLOGY otiand Hydrology Indicators: imery indicators (any one indicator is			Nd	Secon V	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine)
DROLOGY Itiand Hydrology Indicators: mery indicators (any one indicator is: _ Surface Water (A1)	Selt Crust (B11		Nò	('/~/ Secondary V	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) Jediment Deposits (B2) (Riverine)
DROLOGY Itiand Hydrology Indicators: mery indicators (any one indicator is: Surface Water (A1) High Water Table (A2)	Selt Crust (B11 Biotic Crust (B1	12)	Nò	Sacon - V	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) kill Deposits (B3) (Riverine)
DROLOGY Identifications: Intervindent of the state of th	Selt Crust (B11 Biotic Crust (B-1) Aquetic inverte	1) 12) trates (B13)	Nò	Sacon — V — 8 — 0	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) int Deposits (B3) (Riverine) trainage Patterns (B10)
DROLOGY Indicators: Indinators: Indicators: Indicators: Indicators: Indicators: Indicator	Self Crust (B11 Biotic Crust (B' Aquatic inverte Hydrogen Suifi	trates (B13)		Sacon	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) iediment Deposits (B2) (Riverine) irit Deposits (B3) (Riverine) iranage Patterns (B10) iry-Season Water Table (C2)
DROLOGY Itiand Hydrology Indicators: Intervindestors (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Self Crust (B11 Blotic Crust (B** Aquetic inverte Hydrogen Suffi	trates (B13) de Odor (C1) spheres along t	Mng Root	Sacon — V — S — C — C — C — C — C — C	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) with Deposits (B3) (Riverine) Valuage Patterns (B10)
DROLOGY Interview of the second seco	Self Crust (B11 Blotic Crust (B11 Aquetic inverte Hydrogen Suffine) Cxidized Rhizo Presence of Re	trates (B13) de Odor (C1) spheres along to	Mng Root	Secondary V S C	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) indicators (B2) (Riverine) indicators (B3) (Riverine) indicator
DROLOGY Indicators: Indinators: Indicators: Indicators: Indicators: Indicators: Indicator	Self Crust (B11 Biotic Crust (B12 Aquetic inverte Hydrogen Suffine) Coddized Rhizo Presence of Re Recent iron Re	trates (B13) de Odor (C1) spheres along to duced iron (C4) duction in Plowe	Mng Root	Secondary V S C	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) indicators (B2) (Riverine) indicators (B3) (Riverine) indicator
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DROLOGY etiand Hydrology Indicators: imary indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery	Self Crust (B11 Biotic Crust (B: Aquetic inverte Hydrogen Suffi Coddized Rhizo Presence of Re Recent fron Re (B7) Other (Explain	trates (B13) de Odor (C1) spheres along to duction in Piowe in Remarks)	Mng Root	Sacon	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) into Deposits (B3) (Riveri
DROLOGY Interest indicators: Interest indicators: Interest indicators (any one indicator is interest indicators (any one indicator is interest indicator (any one indicator is interest indicator (any one indicator is interest indicator (any one indicator is indicator (any one indicator (a	Self Crust (B11 Biotic Crust (B: Aquetic inverte Hydrogen Suith Oxidized Rhizo Presence of Re Recent Iron Re (B7) Depth (inches)	trates (B13) de Odor (C1) spheres along to duced fron (C4) duction in Plowe in Remarks)	Mng Root	Sacon	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) into Deposits (B3) (Riveri
DROLOGY Intervindicators (any one indicator is imery indicators (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Ind Observations: rface Water Present? Yes	Self Crust (B11 Biotic Crust (B1 Aquetic inverte Hydrogen Suffi Oxidized Rhizo Presence of Re Recent Iron Re (B7) Depth (inches)	trates (B13) de Odor (C1) spheres along to duction in Plowe in Remarks)	Ming Roots	Second Se	Industry indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Wallinge Patterns (B10) Walnage Patterns (B10) Way-Season Water Table (C2) White Muck Surface (C7) Strayfish Burrows (C8) Saturation Visible on Aerial Imagery (C halfow Aquitard (D3) AC-Neutral Test (D5)
DROLOGY etiand Hydrology Indicators: imery indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Ind Observations: rface Water Present? Iter Table Present? Ves Intertable Present? Ves Intertable Present? Ves Intertable Present? Ves Intertable Present?	Self Crust (B11 Biotic Crust (B: Aquetic inverte Hydrogen Suith Oxidized Rhizo Presence of Re Recent Iron Re (B7) Depth (inches)	trates (B13) de Odor (C1) spheres along to duction in Plowe in Remarks)	Ming Roots	Second Se	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) into Deposits (B3) (Riveri
DROLOGY etiand Hydrology Indicators: imary indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nontiverine) Drift Deposits (B3) (Nontiverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) alto Observations: rface Water Present? Attrable Present? Ves Literation Present	Self Crust (B11 Biofic Crust (B** Aquetic inverte Hydrogen Suffi Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	iving Roots ad Solts (Ci	Sacon	Industry indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Wallinge Patterns (B10) Walnage Patterns (B10) Way-Season Water Table (C2) White Muck Surface (C7) Strayfish Burrows (C8) Saturation Visible on Aerial Imagery (C halfow Aquitard (D3) AC-Neutral Test (D5)
DROLOGY etiand Hydrology Indicators: imary indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nontiverine) Drift Deposits (B3) (Nontiverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) alto Observations: rface Water Present? Attrable Present? Ves Literation Present	Self Crust (B11 Biofic Crust (B** Aquetic inverte Hydrogen Suffi Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	iving Roots ad Solts (Ci	Sacon	Industry indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Wallinge Patterns (B10) Walnage Patterns (B10) Way-Season Water Table (C2) White Muck Surface (C7) Strayfish Burrows (C8) Saturation Visible on Aerial Imagery (C halfow Aquitard (D3) AC-Neutral Test (D5)
DROLOGY etiand Hydrology Indicators: imery indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) and Observations: rface Water Present? the Table Present? turation Present? turation Present? yes chicles capillary fringe) scribe Recorded Data (stream gauge,	Self Crust (B11 Biofic Crust (B** Aquetic inverte Hydrogen Suffi Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	iving Roots ad Solts (Ci	Sacon	Industry indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Wallinge Patterns (B10) Walnage Patterns (B10) Way-Season Water Table (C2) White Muck Surface (C7) Strayfish Burrows (C8) Saturation Visible on Aerial Imagery (C halfow Aquitard (D3) AC-Neutral Test (D5)
DROLOGY etiand Hydrology Indicators: imary indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nontiverine) Drift Deposits (B3) (Nontiverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) alto Observations: rface Water Present? Attrable Present? Ves Literation Present	Self Crust (B11 Biotic Crust (B** Aquetic inverte Hydrogen Suith Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	Wetlar	Secondary Second	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) with Deposits (B3) (Riverine) wanage Patterns (B10) kry-Season Water Table (C2) him Muck Surface (C7) trayfish Burrows (C8) aduration Visible on Aerial Imagery (C hallow Aquitard (D3) AC-Nautral Test (D5)
DROLOGY etiand Hydrology Indicators: imery indicators (any one indicator is: Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nontiverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) and Observations: rface Water Present? the Table Present? turation Present? turation Present? yes chicles capillary fringe) scribe Recorded Data (stream gauge,	Self Crust (B11 Biotic Crust (B** Aquetic inverte Hydrogen Suith Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	Wetlar	Secondary Second	Industry indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Wallinge Patterns (B10) Walnage Patterns (B10) Way-Season Water Table (C2) White Muck Surface (C7) Strayfish Burrows (C8) Saturation Visible on Aerial Imagery (C halfow Aquitard (D3) AC-Neutral Test (D5)
DROLOGY Interest States of Street Present? Water Table (A2) Settration (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Ind Observations: rface Water Present? Water Table Present?	Self Crust (B11 Biotic Crust (B** Aquetic inverte Hydrogen Suith Oxidized Rhizo Presence of Re Recent iron Re (B7) Other (Explain No Depth (inches) No Depth (inches)	trates (B13) de Odor (C1) spheres along I, duced iron (C4) duction in Piowe in Remarks)	Wetlar	Secondary Second	ndary indicators (2 or more required) Vater Marks (B1) (Riverine) sediment Deposits (B2) (Riverine) with Deposits (B3) (Riverine) wanage Patterns (B10) kry-Season Water Table (C2) him Muck Surface (C7) trayfish Burrows (C8) aduration Visible on Aerial Imagery (C hallow Aquitard (D3) AC-Nautral Test (D5)

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WEILAND DEIE	KIVIINA	DESCE!	DRM And West R	•	
Project/Site: Sweetnm / G	~~	City/County:		Sampling Date: //-27-	
pplicant/Owner:	,,_		State:	WA Sampling Point: DAWY	
nvestigator(s):	M	Section, Towns	hip, Range:		
andform (hillstope, terrace, etc.):		Local relief (concave, convex, none):Stope (%)			
Subregion (LRR): Lat:			Long:	Deltum:	
oil Map Unit Name:			NW c	desification:	
re climatic / hydrologic conditions on the site typical for this	s time of ye	er? Yes	No (If no, expli	ain in Remarks.)	
re Vegetation Soil, or Hydrologys	ignificantly	disturbed?	Are "Normal Circumste	nces' present? YesNo	
re Vegetation Soil, or Hydrology n	inturally pr	blematic?	(If needed, explain any	answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing	sampling p	oint locations, tran	sects, important features, etc.	
Hydrophytic Vegetation Present? YesN	٥	ic the Re	impled Area	/	
Hydric Sail Present? YesN	۰			No	
Wetland Hydrology Present? Yes N. Remerks:	°				
EGETATION					
Vanhour, many out	Absolute			t worksheet:	
Tree Stratum (Use scientific names.)		Species? St	TYPHICH OF DOCUM	nant Species Z	
			That Are OSL, F.	ACW, or FAC: (A)	
			I ORRI MURRISET OF		
		-	Species Across /	All Streta: (B)	
Total Cover		3	Percent of Domi: That Are OBL, F.		
Salix sitchward	30	FA	Prevalence Inde	ex worksheet:	
				er ofMultiply by:	
			OBL species	x1=	
				x2=	
Total Cover				x3=	
lerb Stratum			LIGH energies	x4=x5=	
· Cover spp	70	<i>F</i>	9 43	(A) (B)	
•				Index = B/A =	
			Dominance	petation indicators: Test is >50%	
•			Prevalence is		
			Morphologica	al Adaptations ¹ (Provide supporting	
			data in Re	emarks or on a separate sheet)	
Total Cover:			PTODIEMBEC	Hydrophytic Vegetation (Explain)	
Voody Vine Stratum			Indicators of hyd	ric soil and wetland hydrology must	
	-				
Total Cover:			Hydrophytic Vegetation		
	of Biotic C	rust	Present?	Yes No	
Remarks:					
				1	
S Army Come of Engineers	-		net to	Addition Vision and Assess	

US Army Corps of Engineers

Arid West - Version 11-1-2006

Sampling Point: DP#4

Profile Description: (Describe to the de	oth needed to document	t the indicator	or confirm	the absence	of indicators.)
Depth Matrix	Redox Fe		_,		,
(inches) Color (moist) %	Color (moist)	% Type	Loc	Texture	Remarks
4 1042 2/2					
	-	1			-
14 104×3/2	Come a	con in a	21161	Sarty	lon
				,	
	-	 			
			-		
	C1A				

True CoConceptation Delivation Date	-Continued Marketine 2		. 4 1 1 7 7		
Type: C=Concentration, D=Depletion, RM	Reduced Matrix, "Loc	cation: PL=Por	e Lining, Re	C=Root Chans	nol, M=Malrix.
Hydric Soil Indicators: (Applicable to ali				Indicators	for Problematic Hydric Solis ³ :
Histosol (A1)	Sandy Redox (S	(5)			luck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm N	luck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky M	ineral (F1)			ed Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed N	Matrix (F2)			rent Material (TF2)
Stratified Layers (A5) (LRR C)	Depteted Matrix	(F3)			Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Sur	1			
Depleted Below Dark Surface (A11)	Depleted Dark S				
Thick Dark Surface (A12)	Redox Depressi				
Sandy Mucky Mineral (S1)	Vernal Pools (F9			3mdicators	of hydrophytic vegetation and
Sandy Gleyed Metrix (S4)		P			hydrology must be present.
Restrictive Layer (if present):			-	Workert	Hydrorogy inust be present.
* * * *					_
Туре:					
Depth (inches):				Hydric Soli	Present? Yes No
Remarks:					
YDROLOGY					
Wetland Hydrology Indicators:					dery Indicators (2 or more required)
Primary Indicators (any one indicator is suffi	cient)				ptor Marks (B1) (Riverine)
Surface Water (A1)	Salt Crust (B11))			diment Deposits (B2) (Riverine)
High Water Table (A2)	Biotic Crust (B1	2)			# Deposits (B3) (Riverine)
Seturation (A3)	Aquatic invertet	rates (B13)			sinage Patterns (810)
Water Marks (B1) (Normiverine)	Hydrogen Sulfid				y-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizos		háng Barti		*
Drift Deposits (B3) (Nonriverine)		(A) 4.53			in Muck Surface (C7)
	Presence of Res		•		sylish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Rec		es Soils (Cé	5) Se	turation Visible on Aertat Imagery (C9)
inundation Visible on Aerial (magery (87) Other (Explain i	Remarks)		Sh	allow Aquitard (D3)
Water-Stained Leaves (B9)				FA	C-Neutral Test (D5)
field Observations:			7		
Surface Water Present? Yes A	lo Depth (inches):				
Vator Table Present? Yes	lo Depth (inches):				_
		-	1		
	io Depth (inches):	- 3	Wetten	d Hydrology	Present? Yes No
ncludes capillary fringe) bescribe Recorded Data (stream gauge, mor	Horing wall sadd shale	promine a lane	antional F		THE STATE OF THE S
		In the desirence with	overnis), il (g v 20121716 ;	
	moning a va, dona protot	1			
60-44p-(4)	moning wou, doing process		************		
iomarks:			9 17 S.L. Nalla Villandre für Laben Leer von Lebeng	ya di daniyahiya - 1 di y _a di dalaba i pilah sa massaaniya i	
60-44p-(4)	Trouble Was, doing process	and recommend of the specialist	to the first transfer to the second statement of the s	and the second s	
10-14-A	The state of the s		t ti A A Sala Silanda de la desa care an ademy	ign in manufacture of the second section of the sect	
60-44p-(4)	The state of the s		a walka ka wana a ka a wa ka a ka a ka a ka a	on demonstrative at \$1, is made a \$40 or names and	
10-14-A	The state of the s		T T B.A. Nada Atmosfer D and an acceptant administration of the second control of the se		
60-44p-(4)	treening was, decide process		* Takah Visula Wildin kerselalang	and and any of the second and any of the sec	

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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/site: 5 weething Pan	h	City/County	. 1	5-14/25 Sempling Date: 11-22-
Applicant/Owner:				State: WA Sampling Point: DP#5
Investigator(s): Fol Semal				ange:
Landform (hillslope, terrace, etc.):				convex, none): Slope (%):
				_ Long: Deturn:
Soil Map Unit Name:				NWI classification:
Are climatic / hydrologic conditions on the site typical for this	time of w	ear? Yes		
Are Vegetation Soil, or Hydrology s	0.20			"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology n				eeded, explain any answers in Remarks.)
			•	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks;	•	1	e Samplec In a Wella	
/EGETATION				
Tree Stratum (Use scientific names.)	Absolute	Dominant Species?		Dominance Test worksheet:
1. 5a/12 /23mole	40	Charles !	FAN	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2.				1
3.				Total Number of Dominant Species Across All Strata: (B)
4			-	
Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapina Stratum 1. Como 5to Inches	در و		FRIN	Prevalence index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species x 1 =
				FACW species x 2 =
5				FAC species x 3 =
Total Cover		+:		FACU species x 4 =
Herb Stratum	30		FAIN	UPL species x 5 =
2				Column Totals: (A) (B)
3				Prevalence index = B/A =
4.				Hydrophytic Vegetation indicators:
5.		8		Dominance Test is >50%
B				Prevalence Index is \$3.01
7				Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8.				Problematic Hydrophytic Vegetation (Explain)
Total Cover: Woody Vine Stratum				
1				¹ Indicators of hydric soil and wetland hydrology must
2.				be present.
Total Cover:				Hydrophytic Vegetation
	of Biotic C	rust		Present? Yes No
Remarks: JS Army Corps of Engineers	confidence from each fide		VAMING II.	Arid West - Version: 11-1-2006
चानाव च्यापा व्यक्तिक व्यक्तियाम्बर्गा				And west - Version: 11-1-2006

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	- 1	•	ы	ю	

Sampling Point: DP35

Profile Des	cription: (Describe to the	innth needed to documen	t the indicator	or confirm	the absence of inc	licators)
Depth	Matrix	Redox F		or commin	110 00 00 110 01 110	industrial)
(inches)	Color (moist) %	Color (moist)	% Type	Loc2	Texture	Remarks
14	104h 2/2	COMMU	ancelian			14-
29	TO THE EXT CO.			Dr. s. cher.	27	
					(12)	
						
			The same			
		-				
	to the second se					
	concentration, D=Depletion, R	M=Reduced Matrix. 2Lo	cation: PL=Pon	Lining, R	C=Root Channel, Ma	Matrix.
Hydric Soll	Indicators: (Applicable to	all LRRs, unless otherwis	e noted.)		Indicators for Pr	oblematic Hydric Solls":
Histoso	I (A1)	Sandy Redox (8	S5)		1 cm Muck (/	A9) (LRR C)
Histic E	pipedon (A2)	Stripped Matrix				410) (LRR B)
	istic (A3)	Loamy Mucky N			Reduced Ver	
	on Sulfide (A4)	Loamy Gleyed	OF THE STREET			Aatoriai (TF2)
	d Layers (AS) (LRR C)	Depleted Matrix				
_	uck (A9) (LRR D)	Redox Derk Su			Other (Expis	n in Remarks)
	*		ORG.			
	d Below Dark Surface (A11)	Depleted Dark	The second second			
	erk Surface (A12)	Redox Deprese	171227.			
	Aucky Mineral (81)	Vernal Pools (F	9)			rophytic vegetation and
-	Sleyed Matrix (S4)				wetland hydro	ogy must be present.
Restrictive	Layer (If present):					
Туре:						
Depth (in	ches);				Hydric Soll Prese	nt? Yes No
Remarks:						
IYDROLO	GY					
Wetland Hy	drology Indicators:				Secondary is	dicators (2 or more required)
Primary India	cators (any one indicator is su	efficient)				arks (B1) (Riverine)
	Weter (A1)	Sait Crust (B11	1			it Deposits (B2) (Riverine)
	iter Table (A2)	Biotic Crust (8:	126.1		Drift Dec	osits (B3) (Riverine)
Saturation	• •	Aquatic inverte	brates (B13)		Drainege	Patterns (B10)
Water M	larks (B1) (Nonriverine)	Hydrogen Sulfi	de Odor (C1)		Dry-Sea	son Water Table (C2)
Sedimer	it Deposits (B2) (Nonriverini) Oxidized Rhizo	spheres along L	Ming Roots	(C3) Thin Mu	ck Surface (C7)
Drift Deg	osits (83) (Nonriverine)	Presence of Re	duced iron (C4))		Burrows (C8)
	Soil Crecks (B6)		duction in Plowe			n Visible on Aerial Imagery (C9)
	on Visible on Aerial Imagery			a ann (a		
	lained Leaves (89)	mi) and (maping)	in incompanie			Aquitard (D3)
					FAC-Net	strai Test (D5)
Field Obser						
Surface Wate	er Present? Yes	No Depth (inches		-1		
Water Table	Present? Yes	No Depth (inches)	1	_1		/
Saturation Pr		No Depth (inches)		Mailer	d Hydrology Press	nt? Yes No
(includes cap			1		a cijul orugy Pi 650	77 TV 70
	corded Data (stream gauge, r	nonitoring well, aerial photo	s, previous insp	ections), if	available:	The state of the s
			1			
Ma	N EMPONENT		, , , , , , , , , , , , , , , , , , ,	and the story of the street, where	and the second second second second second	
Remarks:						

US Army Corps of Engineers

Arid West -- Version 11-1-2006

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Smeetheler Zml		City/County	15-	Atribos Sampling Date: 1/-27-1
Applicant/Owner:			*	State: WA Sampling Point: DR# C
Applicant/Owner: Investigator(s): Landform (hillistope, terrace, etc.):		Section To	wnshin R	ange:
Landform (hillstope, terrace, etc.):				. convex, none): Stope (%):
Subregion (LRR):				Long: Deturn:
Soil Map Unit Name:	Lat.			
Are climatic / hydrologic conditions on the site typical for this tin		2	/	NW classification:
Are Vegetation Soil or Hydrology signification Soil or Hydrology nature	ificantly o	disturbed?	Are	"Normal Circumstances" present? Yes No
SUMMARY OF FINDINGS - Attach site map sh	owing	samplin	g point	locations, transacts, important features, etc.
Hydrophytic Vegatetion Present? Hydric Soil Present? Wetland Hydrology Present? Remerks: Yes No	Les .	14 41	s Samplei in a Wetja	
VEGETATION				
	bsolute	Dominant		Dominance Test worksheet:
	-	Species?	Status	Number of Dominant Species
1,			************	That are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strais: (B)
Total Cover:				Percent of Dominant Species
Seoling/Shrub Stratum				That Are OBL, FACW, or FAC:
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species x1=
5.	-			FACW species x 2 =
Total Cover:				FAC species x 3 = FACU species x 4 =
Herb Stratum			game.	UPL species x 5 =
1. Agrepy our reps &	35		FAL	Column Totals: (A) (B)
2.		***************************************		
3				Prevalence index = 8/A =
4				Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6				Prevalence Index is \$3.01
7. <u> </u>			***************************************	Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)
Total Cover:				Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum 1				Indicators of hydric soil and wetland hydrology must
2				be present.
Total Cover:	-			Hydrophytic Vegetation Present? Yes No
Remarks:				THE PROPERTY OF THE PROPERTY O
US Army Corps of Engineers	That!			Arid West ~ Version: 11-1-2006
and the graph of magnitudes				Auto svest ~ Version: 11-1-2006

DP#6 SOIL Sampling Point: Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features (inches) Type Loc2 10423/3 ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Solls*: Histosol (A1) __ Sandy Redox (S5) ___ 1 cm Muck (A9) (LRR C) Histic Epipedon (A2) Stripped Matrix (88) ___ 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) ___ Hydrogen Sulfida (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) ___ Stratified Layers (A5) (LRR C) __ Depleted Matrix (F3) __ Other (Explain in Remarks) ___ 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Derk Surface (A12) Redox Depressions (F8) ___ Sandy Mucky Mineral (S1) _ Vernal Pools (F9) Indicators of hydrophytic vegetation and Sandy Gleyed Matrix (S4) wetland hydrology must be present. Restrictive Layer (if present): Type: Depth (inches): _ Hydric Soll Present? Remarks: No indicators **HYDROLOGY** Wetland Hydrology Indicators: Secondary indicators (2 or more required) Primary Indicators (any one indicator is sufficient) Water Marks (81) (Riverine) Surface Water (A1) Salt Crust (B11) ___ Sediment Deposits (B2) (Riverine) High Water Table (A2) Biotic Crust (B12) ___ Drift Deposits (B3) (Riverine) Saturation (A3) Aquatic Invertebrates (813) ___ Drainage Patterns (B10) _ Water Marks (B1) (Noral verine) Hydrogen Sulfide Odor (C1) ___ Dry-Season Water Table (C2) Oxidized Rhizospheres along Living Roots (C3) ____ Thin Muck Surface (C7) _ Sediment Deposits (B2) (Nonsiverine) Drift Deposits (B3) (Noturiverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) _ Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Solls (C6) Saturation Visible on Aerial Imagery (C9) __inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Shallow Aguitard (D3) Water-Stained Leaves (B9) FAC-Neutral Test (05) Field Observations: Surface Water Present? Depth (inches): Water Table Present? Depth (inches): Saturation Present? Depth (inches): Wetland Hydrology Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No indiche

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WETLAND DETERMINATION DATA FORM - Arid West Region City/County: 11-27-19 Sempling Dete: 11-27-19 Project/Site: State: WA Sampling Point: Applicant/Owner: Investigator(s): Section, Township, Range: ___ Landform (hillstope, terrace, etc.): Local relief (concave, convex, none): _____ Slope (%): ____ Subregion (LRR): Long: ___ Deturn: _____ Soil Map Unit Name: NWI classification: Are climetic / hydrologic conditions on the site typical for this time of year? Yes ______No____ (If no, explain in Remarks.) Are Vegetation _____ Soil _____ or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation _____, Soil _____, or Hydrology _____ naturally 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_ is the Sampled Area Hydric Soil Present? Yes No within a Wetland? Wetland Hydrology Present? No Yes ___ Remarks: VEGETATION Absolute Dominant Indicator % Cover Species? Status Dominance Test worksheet: Tree Stratum (Use scientific names.) Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Streta: Percent of Dominant Species Total Cover: That Are OBL, FACW, or FAC: Sapling/Shrub Stratum Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = ____ FACW species _ FAC species ____ Total Cover: FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ Column Totals: _ (A) _____(8) Prevalence Index = B/A = ___ Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% Prevalence Index is \$3.01 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation (Explain) Total Cover: Woody Vine Stratum findicators of hydric soil and wetland hydrology must be present. Total Cover: __ Hydrophytic Vegetation Present? ___ % Cover of Biotic ¢rust ___ % Bare Ground in Herb Stratum ____ Remarks:

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Lucina nascubitate (nascuna to tui	depth needed to document the indicator o	r confirm the absence of indicators.)
Depth Metrix	Redox Features	
(inches) Color (moist) 9	Color (moist) % Type	Loc ² Texture Remarks
16 JOHNELL		coppy len
¹Type: C=Concentration, D≈Depletion,	RM=Reduced Metrix. ² Location: PL=Pore	Lining, RC=Root Channel, M=Metrix.
Hydric Soil indicators: (Applicable to		indicators for Problematic Hydric Solls*:
Histosol (A1)	Sandy Rediox (S\$)	1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A6) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11		
Thick Derk Surface (A12)	Redox Depressions (F8)	.
Sandy Mucky Mineral (S1)	Vernel Pools (F9)	Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (84)		welland hydrology must be present.
Restrictive Layer (if present):		
Type:		
Depth (inches):		Hydric Soli Present? Yes No
Remarks:		
		io indials
IYDROLOGY		
·		
		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	sufficient)	
Wetland Hydrology Indicators: Primary indicators (any one indicator is		Water Marks (B1) (Riverine)
Wetland Hydrology Indicators: Primery Indicators (any one indicator is Surface Water (A1)	Self Crust (B11)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Wetland Hydrology Indicators: Primery Indicators (any one indicator is Surface Water (A1) High Water Table (A2)	Self Crust (B11) Blotic Crust (B12)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3)	Self Crust (B11) Blotic Crust (B12) Aquatic invertebrates (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nondverine)	Sett Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nondvertne) Sediment Deposits (B2) (Nondvert	Sett Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Suifice Odor (C1) Catidized Rhizospheres along Lin	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Petterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Sett Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Suifice Odor (C1) Catidized Rhizospheres along Lin Presence of Reduced Iron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Petterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Sett Crust (B11) Blotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Suifice Odor (C1) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plower	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainege Petterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
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Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9)	Sett Crust (B11) Blotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Suifice Odor (C1) Oxidized Rhizospheres along Lin Presence of Reduced Iron (C4) Recent Iron Reduction in Plower	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations:	Sett Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitand (D3)
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Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Includes capillary fringe)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower (B7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wettend Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes [includes capillary fringe)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Lh Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks) No Depth (inches) No Depth (inches) no Depth (inches) monitoring well, serial photos, previous inspe	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes [includes capillary fringe) Describe Recorded Data (stream gauge	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Lh Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks) No Depth (inches) No Depth (inches) no Depth (inches) monitoring well, serial photos, previous inspe	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes Includes capillary fringe) Describe Recorded Data (stream gauge	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Lh Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks) No Depth (inches) No Depth (inches) no Depth (inches) monitoring well, serial photos, previous inspe	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Includes capillary fringe)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Lh Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks) No Depth (inches) No Depth (inches) no Depth (inches) monitoring well, serial photos, previous inspe	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitand (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators: Primary Indicators (any one indicator is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Saturation Present? Yes Includes capillary fringe)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfice Oder (C1) Oxidized Rhizospheres along Lh Presence of Reduced Iron (C4) Recent Iron Reduction in Flower (B7) Other (Explain in Remarks) No Depth (inches) No Depth (inches) no Depth (inches) monitoring well, serial photos, previous inspe	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Petterns (B10) Dry-Season Water Table (C2) Ving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitand (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No

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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: 5 weetable Ruch	City/County: No Att to Sampling Date: 1/-22-1			
Applicant/Owner:	State: WO Sampling Point: DP # 8			
Investigator(s): For Secured	Section, Township, Range:			
Landform (hillstope, terrace, etc.):	Local relief (concave, convex, none): Stope (%):			
Subregion (LRR):Lat:				
Soil Map Unit Name:	NWI classification:			
Are climatic / hydrologic conditions on the site typical for this time of	war? Yes No. (Hino emplein in Removier)			
Are Vegetation, Soil, or Hydrology significan	il .			
Are Vegetation Soil or Hydrology naturally				
	as sampling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetiand Hydrology Present? Remerks: Yes No	ls the Sampled Area within a Wetland? YesNo			
VEGETATION	-			
1	Dominant Indicator Species? Status Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)			
3.	Total Number of Dominant Species Across All Strata: (8)			
4Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)			
Septing/Shrub Stratum 1. Corrys 5to In. Ren. 30	FAM Prevalence Index worksheet:			
2	Total % Cover of: Multiply by:			
3.	OBL species x1=			
4	FACW species x 2 =			
5	FAC species x 3 =			
Herb Stratum	FACU species x 4 =			
1. Streets Coolegne ZU	UPL species x 5 = (B)			
2	Drawience index w 9/A			
3	Prevalence index = 8/A = Hydrophytic Vegetation indicators;			
5	Double of Total Control			
6				
7	Morphological Adaptations 1 (Provide supporting			
8.	data in Remarks or on a separate sheet)			
Woody Vine Stratum	Problematic Hydrophytic Vegetation! (Explain)			
1	GC present.			
Total Cover:	Hydrophytic			
% Bare Ground in Herb Stratum % Cover of Biotic	Vegetation			
% Bare Ground in Herb Stratum % Cover of Biodic Remarks:	Crust Present? Yes No			
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3 U		

Sampling Point: DPE8

Profile Description: (Describe to the depti Depth Matrix			
E-VEVE I PROBLEM	Redox Feet	lres.	······································
(inches) Color (moist) %	Color (moist) %	Type Lo	c Texture Remarks
16 10×2/2	Comme no	lunder he	
-			
¹ Type: C=Concentration, D=Depletion, RM=F	Reduced Matrix 21 and	ion: Di sonna Lini	ng, RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all L		ntari i	Indicators for Problematic Hydric Soils*:
			The state of the s
Histosof (A1)	Sandy Redox (85)		1 cm Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (\$6		2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mine		Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Mar		Red Parent Material (TF2)
Stratified Layers (AS) (LRR C)	Depleted Matrix (F:		Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface		
Depleted Below Dark Surface (A11)	Depleted Dark Sur		
Thick Dark Surface (A12)	Redox Depression:	s (F8)	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (\$4)			wetland hydrology must be present.
Restrictive Layer (if present):			
Туре:	_		
Depth (inches):	_		Hydric Soli Present? Yes No
Remarks:			Trifute don Fragetitt 145
VARALAGY			
YDROLOGY			
Wetland Hydrology Indicators:	1111		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is suffici	ent)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Wetland Hydrology Indicators:	ent) Saft Crust (B11)		
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is suffici	No. of the last of		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficiently Surface Water (A1)	Seft Crust (B11)	tes (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficiently Surface Water (A1) High Water Table (A2) Saturation (A3)	Seit Crust (B11) Biotic Crust (B12) Aquatic invertebra		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Suifide	Odor (C1)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebra Hydrogen Sutfide	Odor (C1) neres along Living	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Sutfide of Oxidized Rhizosph Presence of Redu	Odor (C1) neres along Living ced fron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebra Hydrogen Suffice Oxidized Rhizosot Presence of Redu Recent Iron Reduc	Odor (C1) neres along Living ced Iron (C4) tion in Plowed So	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aeriei Imagery (C9)
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Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) inundation Visible on Aerial Imagery (B7) Water-Stained Leeves (B9)	Saft Crust (B11) Blotic Crust (B12) Aquatic Invertebra Hydrogen Suffice Oxidized Rhizosot Presence of Redu Recent Iron Reduc	Odor (C1) neres along Living ced Iron (C4) tion in Plowed So	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aeriei Imagery (C9)
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Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) inundation Visible on Aerial Imagery (B7) Water-Stained Leeves (B9) Field Observations: Surface Water Present? Ves	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Suiffde Oxidized Rhizosph Presence of Redu Recent iron Reduc Other (Explain in F	Odor (C1) heres along Living ced iron (C4) tition in Plowed So Romarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drill Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aeriel Imagery (C9) Shallow Aquitand (D3)
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Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient of the indicator of the i	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Suifide Oxidized Rhizosol Presence of Redu Recent iron Redu Other (Explain in F	Odor (C1) heres along Living hed Iron (C4) tion in Plowed So Romarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) its (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient of the indicator of the i	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Suifide Oxidized Rhizosol Presence of Redu Recent iron Redu Other (Explain in F	Odor (C1) heres along Living hed Iron (C4) tion in Plowed So Romarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) its (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient for indicator (A1) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leeves (B9) Field Observations: Surface Water Present? Yes No	Saft Crust (B11) Blotic Crust (B12) Aquatic invertebra Hydrogen Suifide Oxidized Rhizosol Presence of Redu Recent iron Redu Other (Explain in F	Odor (C1) heres along Living hed Iron (C4) tion in Plowed So Romarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) DriR Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) its (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Region City/County: 4.74/25 Sempling Date: 11-22-19 State: WA- Sampling Point: Applicant/Owner: investigator(s): Section, Township, Range: ___ Landform (hillstope, terrace, etc.): Local relief (concave, convex, none): ______ Stope (%): ____ Subregion (LRR): Lat: Long: ___ Detum: ____ Soil Map Unit Name: NWI classification; 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 _____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ Are Vegetation _____, Soil _____ or Hydrology _____ naturally 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? ts the Sampled Area Hydric Soll Present? Yes within a Wetland? Wetland Hydrology Present? Remarks: VEGETATION Absolute Dominant Indicator % Cover Species? Status Dominance Test worksheet: Tree Stratum (Use scientific names,) Number of Dominant Species 1. Populs bals-fu FAL That Are OBL, FACW, or FAC: Total Number of Dominant Species Across Ali Streta: Percent of Dominant Species Total Cover: ___ That Are OBL, FACW, or FAC: Sapling/Shrub Stratum

1. Comes stelm for a FAIN ZO Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species _____ x 1 = ____ FACW species _____ x 2 = ____ FAC species x 3 = Total Cover: FACU species _____ x 4 = ____ Herb Stratum UPL species _____ x 5 = ____ 1. Column Totals: __ (A) ____ Prevalence index = B/A = Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% Prevalence Index is \$3.01 ___ Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Total Cover: Woody Vine Stratum Indicators of hydric soil and wetland hydrology must be present. Total Cover: Hydrophytic Vegetation % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust ____ Present? Remarks:

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Profile Description:	Describe to the de	epth needed to document	the indicator o	r confirm !	the absence of Indicato	rs.)
Depth	Metrix	Redox Fe	atures			
	(moist) %	Color (moist)	% Type	Loc	Texture	Remarks
14 104	3/3				cubbly m	-
						~
					9155765	
			-			
Type: C=Concentration	on, D=Depletion, RI	A≃Reduced Matrix. ² Loc II LRRs, unless otherwise	ation: PL=Pore	Lining, RC		
	· Inhharana to a				indicators for Problem	•
Histosol (A1)		Sandy Redox (S			1 cm Muck (A9) (L	•
Histic Epipedon (A	2)	Stripped Matrix (The second second		2 cm Muck (A10) (LRR B)
Black Histic (A3)		Loamy Mucky M			Reduced Vertic (F1	18)
Hydrogen Sulfide (Loamy Gleyed N	atrix (F2)		Red Parent Materia	al (TF2)
Strattfled Layers (/		Depleted Matrix	(F3)		Other (Explain in R	emarks)
1 cm Muck (A9) (L	RR D)	Redox Dark Surf	ce (F6)			
Depleted Below Da	irk Surface (A11)	Depleted Dark S	arface (F7)			
Thick Dark Surface	(A12)	Redox Depression	ns (F8)			
Sandy Mucky Mine	ral (S1)	Vernal Pools (F9			Indicators of hydrophyl	ic vecetation and
Sandy Gleyed Mat	rix (94)	,			wetland hydrology n	
testrictive Layer (if p	resent):					
Type:	•					
				1		
Depth (inches):					Hydric Soli Present?	Yes No
temarks:						
WIROLOGY						
YDROLOGY	Madara					
Vetland Hydrology In		e				ers (2 or more required)
rimary Indicators (any	one indicator is suf	ficient)			Water Marks (B1) (Riverine)
Surface Water (A1)		Salt Crust (B11)			Sediment Dep	osits (32) (Riverine)
High Water Table (A2)	Blotic Crust (B1)	2)		Orift Deposits	(B3) (Riverine)
Seturation (A3)		Aquatic Invertet	rates (813)		Drainage Patte	
Water Marks (B1) (Noortverine)	Hydrogen Sulfid				ater Table (C2)
Sediment Deposits		0.000		sina Basis	(C3) Thin Muck Sur	
_ Drift Deposits (B3)	, , -					
	•	Presence of Re			Crayfish Burro	
_ Surface Soil Cracks		Recent iron Rec		d Soffs (C6)		ble on Aeriai imagery (CE
Inundation Visible o		(Explain in	Remarks)		Shallow Aquita	rd (D3)
_ Water-Stained Lear	res (B9)				FAC-Neutral T	est (D5)
ield Observations:				1		
urface Water Present?	Yes	No Depth (inches):		1		
later Table Present?	Yes	No Depth (inches):				
	103	The state of the s		1		/
aturation Present? actudes capillary frings	Yes	No Depth (inches):		wettand	Hydrology Present?	Yes No
		onitoring well, serial photos	, previous inspe	ctions) if a	vailable:	to a 4) A plant of the control of th
	- , 		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
emarks:	Sat Valde Special sphiliphopological		Applied decouples in the comment of		the rest time and any production and approximation of the second	The state of the s
			No	inch	and the same	
			100	Salah Salah Salah	1 1: 0 T	

Wetland name or nur			المرابع المرا	/ashington
Rated by Sed for	or ID #): Se or Rating Rive	Traine	Date of by Ecology? Yes N	e of site visit:
1. Category	of wetland ba Category I - To Category IV - To Category IV - To	VERALL WE used on FUNC tal score = 22- tal score = 19- tal score = 16	- 27 - 21 - 18	Score for each function based on three ratings (order of ratings is not important)
FUNCTION	Improving Water Quality	Hydrologic	Habitat	9 = H,H,H 8 = H,H,M 7 = H,H,L
Site Potential Landscape Potential Value Score Based on Ratings	H M L H M L	H M L H M L	ratings H M L H M L H M L Z = Z	7 = H,M,M 6 = H,M,L 6 = M,M,M 5 = H,L,L 5 = M,M,L 4 = M,L,L 3 = L,L,L
	based on SPE		TERISTICS of wetla CATEG Circle the approp	IORY

CATEGORY Circle the appropriate category
II III
I
I
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I
I
II
11



Maps and figures required to answer questions correctly (Eastern Washington)

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2, H1.3	
Location of outlet (can be added to map of hydroperiods)	D 1.1, D1.4	
Boundary of 150 ft buffer (can be added to another figure)	D 2.2, D 5.2	
Polygon of area 1km from wetland edge - Including polygons for accessible habitat and undisturbed habitat	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	D 3.1, D 3.2	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	D 3.3	
Area of open water (can be added to map of hydroperiods)	H1.3.1	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.2, H1.3	
Ponded depressions	R 1.1	
Boundary of 150 ft buffer (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Polygon of area 1km from wetland edge -Including polygons for accessible habitat and undisturbed habitat	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	R 3.1	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake-fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L1.1, L4.1, H1.1, H1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of 150 ft buffer (can be added to another figure)	L 2.2	
Polygon of area 1km from wetland edge (Including polygons for accessible habitat and undisturbed habitat)	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	L3.1	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	L3.3	

Slope Wetlands

Map off	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	S 2.1, S 5.1	
Polygon of area 1km from wetland edge (Including polygons for accessible habitat and undisturbed habitat)	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	S 3.1, S 3.2	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	S 3.3	

HGM Classification of Wetland Units in Eastern Washington

For questions 1-4 the criteria described must apply to the entire unit being rated for it to be classified correctly.

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

of a body of permanent open water (with 20 acres (8 ha) in size At least 30% of the open water area is dee	water side of the Ordinary High Water Mark out any plants on the surface) that is at least
2. Does the entire wetland unit meet all of the folloon	ery gradual), one direction (unidirectional) and usually entition (unidirectional) and usually entition, or in a swale without distinct banks. In a swale with a swale without distinct banks. In a swale with
3. Does the entire wetland unit meet all of the follow. The unit is in a valley, or stream channel flooding from that stream or river. The overbank flooding occurs at least on NOTE: The riverine unit can contain depriver is not flooding. NO - go to 4 YES - The wetland class is	where it gets inundated by overbank ce every ten years. ressions that are filled with water when the
4. Is the entire wetland unit in a topographic depresent the surface, at some time during the year the interior of the wetland. NO - go to 5 YES - The wetland class in the interior of the wetland	leans that any outlet, if present, is higher than

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM

classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

IJGM Classes within the wetland unit being rated	HGM Class to
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake-fringe	Depressional
Riverine + Lake-fringe	Riverine

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

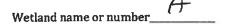
RIVERINE WETLANDS Water Quality Functions - Indicators that site fun	ctions to improve water quality	Points (only 1 score per box)
R 1.0 Does the wetland unit have the potential to impr	ove water quality?	
R 1.1 Area of surface depressions within the riverine we event	etland that can trap sediments during a flooding	
Depressions cover >1/3 area of wetland	points = 6	
Depressions cover > 1/10 area of wetland	points = 3	
Depressions present but cover < 1/10 area of wetland	points = 1	
No depressions present	points = 0	6
R 1.2 Structure of plants in the unit (areas with >90% cover a	person height; not Cowardin classes):	
Forest or shrub > 2/3 the area of the wetland	points = 10	
Forest or shrub 1/3 – 2/3 area of the wetland	points = 5	
Ungrazed, herbaceous plants > 2/3 area of wetland	points = 5	
Ungrazed herbaceous plants 1/3 – 2/3 area of wetland		5
Forest, shrub, and ungrazed herbaceous < 1/3 area of	wetland points = 0	
Total for R1	Add the points in the boxes above	11
Rating of Site Potential If score is: 12 – 16 =	H 6 - 11 = M 0 - 5 = L Record the rating on the first page	
R 2.0 Does the landscape have the potential to support	the water quality function at the site?	
R 2.1 Is the unit within an incorporated city or within its UGA	Yes = 2 No = 0) 6
R. 2.2 Does the contributing basin include a UGA or incorpora	ted area? Yes = 1 No = 0	0
R 2.3 Does at least 10% of the contributing basin contain tille clearcut within the last 5 years?	d fields, pastures, or forests that have been Yes = 1 No = D	6
R 2.4 Is > 10% of the buffer within 150 ft of wetland unit in la		
R 2.5 Are there other sources of pollutants coming into the v R 2.1 – R 2.4? Source	vetiand that are not listed in questions Yes = 1 No = 0	0
Total for R 2 Add the points in the		1
Rating of Landscape Potential If score is: 3-6=	1 or 2 = M 0 = L	1
Mading of Earlingcape Potential II score is.	Record the rating on the first page	
R 3.0 Is the water quality improvement provided by	the site valuable to society?	
R 3.1 Is the unit along a stream or river that is on the 303 d lis	or on a tributary that drains to one? Yes = 1 No = 0	1
R 3.2 Does the river on stream have TMDL limits for nutrients,	toxics, or pathogens? Yes = 1 No = 0	1
R 3. Has the site been identified in a watershed or local plan a (answer YES if there is a TMDL for the drainage in which u		0
Total for R 3 Add the points in th		2
Rating of Value: If score is: 2-4 = H	1 = M 0 = L Record the rating on the first page	



RIVERINE WETLANDS (only 1 score		
Hydrologic Functions Indicators that site functions to reduce flooding and stream erosion per box)		
R 4.0 Does the wetland unit have the potential to r		
R 4.1 Characteristics of the overbank storage the unit provide Estimate the average width of the wetland unit perpendicular stream or river channel (distance between banks). Calculate of stream between banks).	to the direction of the flow and the width of the	
If the ratio is more than 2 If the ratio is between 1 – 2 If the ratio is ½ - <1 If the ratio is ¼ - < ½ If the ratio is < ¾	points = 10 points = 8 points = 4 points = 2 points = 1	4
R 4.2 Characteristics of plants that slow down water velocities during floods: Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description. (polygons need to have >90% cover at person height NOT Cowardin classes): Forest or shrub for more than 2/3 the area of the wetland.		
Forest or shrub for > 1/3 area OR herbaceous plants > 2/3 Forest or shrub for > 1/10 area OR herbaceous plants > 1/4 Plants do not meet above criteria	·	6
Total for R 5	Add the points in the boxes above	10
Rating of Site Potential If score is: 12 – 16 = H 6 - 11 = M 0 - 5 = L Record the lating on the first page		
R 5.0 Does the landscape have the potential to support		
R5.1 Is the stream/river adjacent to the unit downcut?	es = 0 No = 1	0
R 5.2 Does the upgradient watershed include a UGA or incorp	orated area? Yes = No = 0	0
R 5.3 Is The upgradient stream or river controlled by dams?	Yes = No = 1	1
Total for R 5	Add the points in the boxes above	1
Rating of Landscape Potential If score is: 3 = H	or 2 = M 0 = L Record the rating on the first page	
R 6.0 Are the hydrologic functions provided by the site	aluable to society?	
R 6.1 Distance to the nearest areas downstream that have flo fits the site. The sub-basin immediately down-gradient of site has su		
human or natural resources Surface flooding problems are in a basin further down-g No flooding problems anywhere downstream	radient points = 2 points = 1 points = 0	1
R 6.2 Has the site has been identified as important for flood scontrol plan?	torage or flood conveyance in a regional flood Yes = 2 No = 0	0
Total for R 6	Add the points in the boxes above)
Rating of Value If score is 2-4 = H	0 = L Record the rating on the first page	· · · · · · · · · · · · · · · · · · ·

These questions apply to wetlar	HMW 전 : 사람들적 : "현무관리 다른 사람들이 하는 경기 때문 관심 등 등 경기를 받는다. 한 시간 문법	(only 1 score per box)
HABITAT FUNCTIONS - Indicators that site function H 1. Does the wetland unit have the potential to provide		
H 1. Does the wetland unit have the potential to provide	Habitat for many species?	
H 1.1 Categories of vegetation structure Check the Cowardin vegetation classes present and categories category is >= 1/2 acre or >= 10% of the unit if unit is < 2.5 acre		
Emergent plants 0-12 in. (0 – 30 cm) high are the high Emergent plants >12 – 40 in.(>30 – 100cm) high are Emergent plants > 40 in.(> 100cm) high are the high Scrub/shrub (areas where shrubs have >30% cover) Forested (areas where trees have >30% cover)	the highest layer with >30% cover est layer with >30% cover) 4-6 checks points = 3 3 checks points = 2 2 checks points = 1 1 check points = 0	1
H 1.2. Is one of the vegetation types "aquatic bed?"	YES = 1 point NO = 0 point	0
H 1.3. Surface Water H 1.3.1 Does the unit have areas of "open" water (with acre OR 10% of its area during the March to early June Note: answer YES for Lak YES = 3 points & go to H H 1.3.2 Does the unit have an intermittent or permanel boundaries, or along one side, over at least 1/4 acre or 1/4	OR in August to the end of September? e-fringe wetlands 1.4 NO = go to H 1.3.2 ht, and unvegetate,d stream within its	3
H 1.4. Richness of Plant Species Count the number of plant species in the wetland that cove species can be combined to meet the size threshold) Do not include Eurasean Milfoil, reed canarygrass, paradian Thistle, Yellow-flag Iris, and Salt Cea # of species Scoring: > 9 species = 2 points 4	You do not have to name the species. urple loosestrife, Russian Olive, Phragmites,	J
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion between and unvegetated areas (open water or mudflats) is high, med Use map of Cowardin plant classes prepared for question None = 0 points Low = 1 point High = 3 points High = 3 points	um, low, or none.	Figure
NOTE: If you have four or more classes or three plants classes		

Wetland name or number		۵
H 1.6. <u>Special Habitat Features:</u> Check the habitat features that are present in the wetland Loose rocks larger than 4" or large, downed, woody debt		
ponding or in stream.		
Cattails or bulrushes are present within the unit.		
Standing snags (diameter at the bottom > 4 inches) in the	· · · · · · · · · · · · · · · · · · ·	
Emergent or shrub vegetation in areas that are permane Stable steep banks of fine material that might be used b		
slope) OR signs of recent beaver activity	y beaver of filuskiat for defining (>45 degree	
Invasive species cover less than 20% in each stratum of	vegetation (canopy, sub-canopy, shrubs,	,
herbaceous, moss/ground cover)	Maximum score possible = 6	
H 1. TOTAL Score -	Add the check marks in the box above	7
Rating of Site Potential If score is: 12 – 16 =	H 6 -11 = M 0 - 5 = L Record the rating on the first page	
H 2.0 . Does the landscape have the potential to support	habitat at the site?	
H 2.1 Accessible habitat (only area of habitat abutting wetlan		
% undisturbed habitat 15 + [(% moderate and low inte		
If total accessible habitat is:		
> 1/3 (33.3%) of 1km circle (~100 hectares	points = 3	
20 - 33% of 1km circle	points = 2	
10- 19% of 1km circle	points = 1	ک
<10% of 1km circle	points = 0	
H2.2 Undisturbed habitat in 1km circle around unit. If:		
Undisturbed habitat > 50% of circle	points = 3	
Undisturbed habitat 10 - 50% and in 1-3 pate	hes points = 2	
Undisturbed habitat 10 - 50% and > 3 patche	points = 1	2
Undisturbed habitat < 10% of circle	points = 0	
H2.3 Land use intensity in 1 km circle. If:		
> 50% of circle is high intensity land use	points = (- 2)	_
Does not meet criterion above	points = 0	0
H 2.4 @ The wetland unit is in an area where annual rainfall		
influenced by irrigation practices, dams, or water conti boundaries of reclamation areas, irrigation district, or i		0
	s in the boxes above	4
	H 1-3 = M <1 = L	
	Record the rating on the first page	
H 3.0 Is the Habitat provided by the site valuable to soci		
H3.1Does the site provides habitat for species valued in laws,		
Site meets ANY of the following criteria:	points = 2)	
It provides habitat for Threatened or Endangered spe		
It is a "priority area" for an individual WDFW species		
It is a Wetland With a High Conservation Value as det	ermined by the Department of Natural Resources	
It has 3 or more priority habitats within 100m (see Ap	pendix B)	
lt has been categorized as an important habitat site in Shoreline Master Plan, or in a watershed plan	a local or regional comprehensive plan, in a	
Site has 1 or 2 priority habitats within 100m (see Appendix	B) points = 1	_
Site does not meet any of the criteria above	points = 0	Z
Rating of Value If score is: 2 = H	1=M 0 = L	
	Record the rating on the first page	
Wetland Rating System for Eastern WA: 2014 Update	necord the rating on the just page	1.4
Rating Form		14



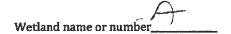
CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland unit meets the attributes described below and circle the appropriate Category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All units should also be characterized based on their functions.

Wetland Type Check off any criteria that apply to the wetland. Circle to appropriate criteria are met.	Category ne Category when the
SC 1.0 Vernal pools Is the wetland unit less than 4000 ft ² , and does it meet a criteria?	it least two of the following
 Its only source of water is rainfall or snowm basin and has no groundwater input 	
 Wetland plants are typically present only in vegetation is typically upland annuals. NOT 	E: If you find perennial,
"obligate", wetland plants the wetland is pro — The soil in the wetland are shallow (<1ft dee	ep (30 cm)) and is underlain by
an impermeable layer such as basalt or clay — Surface water is present for less than 120 day YES = Go to SC 1.1 SC 1.1 Is the vernal pool relatively undisturbed in Fel	ernal pool oruary and March?
SC 1.2 Is the vernal pool in an area where there are a resources within 0.5 miles (other wetlands, river	· · · · · · · · · · · · · · · · · · ·
SC 2.0 Alkali wetlands Does the wetland unit meets one of the following two of	riteria?
— The wetland has a conductivity > 3.0 mS/cr	1
— The wetland has a conductivity between 2.	
of the plant cover in the wetland can be clas	ssified as "alkali" species (see
Table 4 for list of plants found in alkali syste	•
— If the wetland is dry at the time of your field area is covered with a layer of salt.	l visit, the central part of the
OR does the wetland unit meets two of the following thr	ee sub-criteria?
 Salt encrustations around more than 80% or 	9
— More than ¾ of the plant cover consists of s	-
- A pH above 9.0. All alkali wetlands have a h	
some freshwater wetlands may also have a	high pH. Thus, pH alone is not
a good indicator of alkali wetlands. YES = Category I NO – not	an alkali wetland Cat. I



SC 3.0 Wetlands with High Conservation Value (W	HCV)	
SC 2.1 Has the Department of Natural Resources up	dated their web site to include the list of	
Wetlands with High Conservation Value?		
YES - Go to SC 2.2 NO - Go	to SC 2.3	Cat. I
SC 2.2 Is the wetland unit you are rating listed on the	and the same of th	
Conservation Value? YES = Category	NO = not a WHCV	
SC 2.3 is the wetland unit being rated in a Section/T	ownship/Range that contains a Natural	
Heritage wetland?		
http://www1.dnr.wa.gov/nhp/refdes	k/dataseareh/wnhpwetlands.pdf	
YES contact WNHP/DNR and go to SC 2.4		
SC 2.4 Has DNR identified the wetland within the S/		
value and is listed on their web site?		
YES = Category I NO	not an WHCV	
SC 4.0 Bogs and Calcareous Fens		
Does the wetland unit (or any part of the wetland un		
vegetation in bogs or calcareous fens. Use the key be	****	
calcareous fen. If you answer yes you will still need to	•	
SC 4.1. Does an area within the wetland unit have		
soil), either peats or mucks, that compose 16 inc		
soil profile? (See Appendix C for a field key to ide		
1	No - go to SC 4.2	
SC 4.2. Does an area within the unit have organic s		
than 16 inches deep over bedrock or an imperm		
ash, or that are floating on top of a lake or pond	The state of the s	
1	No - Is not a bog for rating)	
SC 4.3. Does an area within the unit have more than	The state of the s	
AND at least 30% of the total plant cover consist	to.	
	No - go to SC 4.4	
NOTE: If you are uncertain about the extent of m		
substitute that criterion by measuring the pH of		
least 16" deep. If the pH is less than 5.0 and the	plant species in Table 5 are present, the	
wetland is a bog.		
SC 4.4 Is an area with peats or mucks forested (> 30	, , ,	
cedar, western hemlock, lodgepole pine, quakin		
white pine, AND any of the species (or combinat	tion of species) listed in Table 5 provide	
more than 30% of the cover under the canopy		
	– go to question SC 4.5	Cat. I
5. Do the species listed in Table 6 comprise at least peats and mucks?	20% of the total plant cover within an area of	
Yes Is a Calcareous Fen for purpose of rat	ng No - go to Question 6	
6. Do the species listed in Table 6 comprise at least 1		
and mucks, AND one of the two following of	onditions is met:	
Marl deposits (calcium carbonate (CaCO3) stems	precipitate) occur on the soil surface or plant	
The pH of free water ≥ 6.8 AND electrical co	nductivity ≥ 200 uS/cm at multiple locations	
within the wetland	, , , , , , , , , , , , , , , , , , , ,	
Yes – is a Category I calcareous fen	No - Is not a calcareous fen	Cat. I



SC 5.0 Forested Wetlands	
Does the wetland unit have an area of forest rooted within its boundary that meets at least	
one of the following three criteria? (Continue only if you have identified a forested class is present in question H 1.1)	
The wetland is within the "100 year" flood plain of a river or stream	
aspen (<i>Populus tremuloides</i>) represents at east 20% of the total cover of woody species	
— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are	
"mature" or "old-growth" according to the definitions for these priority habitats	
developed by WDFW (see definitions in question H3.1)	
YES = go to SC 5.1 NO -not a forested wetland with special characteristics	
SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by	
cover) are slow growing native trees (see Table 7)	Cat. I
YES = Category I NO = go to SC 5.2	
SC 5.2 Does the unit have areas where aspen (<i>Populus tremuloides</i>) represents at least 20% of the total cover of woody species.	Cat. I
YES = Category I NO = go to SC 5.3	
7.00 0.00 0.00	
SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree	
species (by cover) are fast growing species. (see Table 7)	Cat. II
apolica (a) corety are read growing species. (see Faste 7)	out. II
YES = Category II NO = go to SC 5.5	
SC 5.4 Is the forested component of the wetland within the "100 year floodplain" of a river or	
stream?	
YES = Category II	Cat. II
Category of wetland based on Special Characteristics	
	222
Choose the "highest" rating if wetland falls into several categories. If you answered NO for all types enter "Not Applicable" on p.1	M

			A
Wetland	name or	number	()

Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf)

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf)	nny nabitat and species List. Olympia, washington. 177 pp.
Count how many of the following priority habitats are within 330 ft independent of the land use between the wetland unit and the priori	
Aspen Stands: Pure or mixed stands of aspen greater than 0.4 h	a (1 acre).
Biodiversity Areas and Corridors: Areas of habitat that are re wildlife (full descriptions in WDFW PHS report p. 152).	latively important to various species of native fish and
Old-growth/Mature forests: Old-growth east of Cascade crests structural characteristics due to the influence of fire, climate, and strees/ha (10 trees/acre) that are > 53 cm (21 in) dbh, and 2.5-7.5 structural characteristics due to the influence of fire, climate, and strees/ha (10 trees/acre) that are > 53 cm (21 in) dbh, and 2.5-7.5 strees diameter. Downed logs may vary from abundant to absent. Canopic alterations to the stand will be absent or so slight as to not affect the forests: Stands with average diameters exceeding 53 cm (21 in) db numbers of snags, and quantity of large downed material is general west and 80 - 160 years old east of the Cascade crest.	oils. In general, stands will be >150 years of age, with 25 mags/ha (1 – 3 snags/acre) that are > 30-35 cm (12-14 in) as may be single or multi-layered. Evidence of human-caused the ecosystem's essential structures and functions. Mature th; crown cover may be less than 100%; decay, decadence,
Oregon white Oak: Woodlands Stands of pure oak or oak/conii component is important (full descriptions in WDFW PHS report p. 1.	
Riparian: The area adjacent to aquatic systems with flowing wa ecosystems which mutually influence each other.	ter that contains elements of both aquatic and terrestrial
Instream: The combination of physical, biological, and chemical life history requirements for instream fish and wildlife resources.	processes and conditions that interact to provide functional
Caves: A naturally occurring cavity, recess, void, or system of in other geological formations and is large enough to contain a human	
Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000	ft.
Talus: Homogenous areas of rock rubble ranging in average size and/or sedimentary rock, including riprap slides and mine tailings	0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, May be associated with cliffs.
Snags and Logs: Trees are considered snags if they are dead or cavity excavation/use by wildlife. Priority snags have a diameter at are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at are > 2 m (6.5 ft) in height.	breast height of > 51 cm (20 in) in western Washington and
Shrub-steppe: A nonforested vegetation type consisting of one obut discontinuous layer of shrubs (see Eastside Steppe for sites wi	
Eastside Steppe: Nonforested vegetation type dominated by broor a combination of both. Bluebunch Wheatgrass (Pseudoroegneria Idaho Fescue (Festuca idahoensis), Sandberg Bluegrass (Poa secun (Achnatherum spp.).	spicata) is often the prevailing cover component along with
Juniper Savannah: All juniper woodlands.	
Note: All vegetated wetlands are by definition a priority habitat but elsewhere.	are not included in this list because they are addressed

Wetland name or number	Swatn

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): Watter 15	Date of site visit: 11-22-17
Rated by Summ Trainer	by Ecology? Yes_No Date of training
HGM Class Used for Rating Rivery	Unit has multiple HGM classes?YN
NOTE: Form is not complete without Source of base aerial photo/map	the figures requested (figures can be combined).

OVERALL WETLAND CATEGORY _____

1. Category of wetland based on FUNCTIONS

Category I - Total score = 22 - 2	.7
Category II - Total score = 19 - 2	1
Category III - Total score = 16 - 1	8
Category IV - Total score = 9 - 15	

FUNCTION	Improving Water Quality				1	Habitat			
		Circ	cle the	ар	propr	iate	ratin	gs	
Site Potential	Н	M	L	(A)	М	L.	Н	М	1
Landscape Potential	Н	M	L	Н	M	L	F	М	L
Value	Œ	М	L	Н	M	L	B	М	L
Score Based on Ratings		7			7			7	

Score for each function based on three ratings (order of ratings is not important)

9 = H,H,H 8 = H,H,M 7 = H,H,L 7 = H,M,M

6 = H,M,L 6 = M,M,M

5 = H,L,L 5 = M,M,L

4 = M,L,L 3 = L,L,L

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2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	CATEGORY Circle the appropriate category
Vernal Pools	II III
Alakali	I
Wetland with high conservation value	1
Bog	I
Old Growth or Mature Forest – slow growing	I
Aspen Forest	
Old Growth or Mature Forest – fast growing	II
Floodplain forest	II
None of the above	

				D
Wetland	name	or	number.	

Maps and figures required to answer questions correctly (Eastern Washington)

Depressional Wetlands

16.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000 18.000	To answer questions;	Figure #
owardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.4	
ydroperiods	D 1.4, H 1.2, H1.3	
ocation of outlet (can be added to map of hydroperiods)	D 1.1, D1.4	
oundary of 150 ft buffer (can be added to another figure)	D 2.2, D 5.2	
olygon of area 1km from wetland edge - Including polygons fo abitat and undisturbed habitat	or accessible H 2.1, H2.2	
creen capture of map of 303d listed waters in basin (from Eco	logy web site) D 3.1, D 3.2	
reen capture of list of TMDL's for WRIA in which unit is found	d (from web) D 3.3	
rea of open water (can be added to map of hydroperiods)	H1.3.1	
olygon of area 1km from wetland edge - Including polygons for abitat and undisturbed habitat creen capture of map of 303d listed waters in basin (from Ecol creen capture of list of TMDL's for WRIA in which unit is found	or accessible H 2.1, H2.2 logy web site) D 3.1, D 3.2 d (from web) D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.2, H1.3	
Ponded depressions	R 1.1	
Boundary of 150 ft buffer (can be added to another figure)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (can be added to another figure)	R 4.1	
Polygon of area 1km from wetland edge -including polygons for accessible habitat and undisturbed habitat	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	R 3.1	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake-fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L1.1, L4.1, H1.1, H1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of 150 ft buffer (can be added to another figure)	L 2.2	
Polygon of area 1km from wetland edge (including polygons for accessible habitat and undisturbed habitat)	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	L3.1	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	L3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	\$1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (can be added to figure above)	S 4.1	
Boundary of 150 ft buffer (can be added to another figure)	\$ 2.1, \$ 5.1	
Polygon of area 1km from wetland edge (Including polygons for accessible habitat and undisturbed habitat)	H 2.1, H2.2	
Screen capture of map of 303d listed waters in basin (from Ecology web site)	S 3.1, S 3.2	
Screen capture of list of TMDL's for WRIA in which unit is found (from web)	\$ 3.3	



HGM Classification of Wetland Units in Eastern Washington

For questions 1-4 the criteria described must apply to the entire unit being rated for it to be classified correctly.

if the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-4 apply, and go to Question 5.

1. Does the entire wetland unit meet both of the following criteria?
The vegetated part of the wetland is on the water side of the Ordinary High Water Mark
of a body of permanent open water (without any plants on the surface) that is at least
20 acres (8 ha) in size
At least 30% of the open water area is deeper than 10 ft (3 m)
NO - go to 2 YES - The wetland class is Lake-fringe (Lacustrine Fringe)
2. Does the entire wetland unit meet all of the following criteria?
The wetland is on a slope (slope can be very gradual),
The water flows through the wetland in one direction (unidirectional) and usually
comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
Does the water leaves the wetland without being impounded?
NOTE: Surface water does not pond in these type of wetlands except occasionally in
very small and shallow depressions or behind hummocks (depressions are
usually <3ft diameter and less than 1 foot deep).
NO - go to 3 YES - The wetland class is Slope
3. Does the entire wetland unit meet all of the following criteria?
The unit is in a valley, or stream channel, where it gets inundated by overbank
flooding from that stream or river
The overbank flooding occurs at least once every ten years.
NOTE: The riverine unit can contain depressions that are filled with water when the
river is not flooding.
NO - go to 4 YES - The wetland class is Riverine
4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to
the surface, at some time during the year. This means that any outlet, if present, is higher than
the interior of the wetland.
NO – go to 5 YES – The wetland class is Depressional

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM

Wetland name or number_________

classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the HGM class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	HGM Class to Use in Rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake-fringe	Depressional
Riverine + Lake-fringe	Riverine

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

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RIVERINE WETLANDS Water Quality Functions - Indicators that site fun	ctions to improve water quality	Points (only 1 score per box)
R 1.0 Does the wetland unit have the potential to impr	ove water quality?	
R 1.1 Area of surface depressions within the riverine w event	etland that can trap sediments during a flooding	
Depressions cover >1/3 area of wetland	points = 6	
Depressions cover > 1/10 area of wetland	points = 3	
Depressions present but cover < 1/10 area of wetland		
No depressions present	points = 0	6
R 1.2 Structure of plants in the unit (areas with >90% cover a Forest or shrub > 2/3 the area of the wetland Forest or shrub 1/3 – 2/3 area of the wetland Ungrazed, herbaceous plants 2/3 area of wetland	points = 10 points = 5 points = 5	
Ungrazed herbaceous plants 1/3 – 2/3 area of wetland	,	5
Forest, shrub, and ungrazed herbaceous < 1/3 area of Total for R1	wetland points = 0 Add the points in the boxes above	11
Rating of Site Potential If score is: 12 – 16 =	H 6 - 11 = M 0 - 5 = L Record the rating on the first page	
R 2.0 Does the landscape have the potential to support	the water quality function at the site?	
R 2.1 Is the unit within an incorporated city or within its UGA	Yes = 2 No = 0	<u> </u>
R. 2.2 Does the contributing basin include a UGA or incorpora	ted area? Yes = 1 No = 0	ø
R 2.3 Does at least 10% of the contributing basin contain tille clearcut within the last 5 years?	d fields, pastures, or forests that have been Yes = 1 No = 0	0
R 2.4 Is > 10% of the buffer within 150 ft of wetland unit in la	nd uses that generate pollutants Yes = 1 No = 0	
R 2.5 Are there other sources of pollutants coming into the v R 2.1 – R 2.4? Source	vetland that are not listed in questions Yes = 1 No = 0	U
Total for R 2 Add the points in the	e boxes above	1
Rating of Landscape Potential If score is: 3 – 6 =	1 or 2 = M 0 = L Record the rating on the first page	
R 3.0 Is the water quality improvement provided by	the site valuable to society?	
R 3.1 Is the unit along a stream or river that is on the 303 d list	or on a tributary that drains to one? Yes = 1 No = 0	
R 3.2 Does the river on stream have TMDL limits for nutrients,	toxics, or pathogens?	1
R 3. Has the site been identified in a watershed or local plan a (answer YES if there is a TMDL for the drainage in which u		0
Total for R 3 Add the points in the	e boxes above	2
Rating of Value: If score is: $2-4 = H$	1 = M 0 = L Record the rating on the first page	- T

RIVERINE WETLANDS (only 1 score)			
Hydrologic Functions - Indicators that site function	s to reduce flooding and stream erosion	per box)	
R 4.0 Does the wetland unit have the potential to re	duce flooding and erosion?		
R 4.1 Characteristics of the overbank storage the unit provide Estimate the average width of the wetland unit perpendicular stream or river channel (distance between banks). Calculate to of stream between banks).	to the direction of the flow and the width of the		
If the ratio is more than 2 If the ratio is between 1 – 2 If the ratio is ½ - <1 If the ratio is ¾ - <½ If the ratio is < ¼	points = 10 points = 8 points = 4 points = 2 points = 1	প্ত	
R 4.2 Characteristics of plants that slow down water velocities "forest or shrub". Choose the points appropriate for the best at person height NOT Cowardin classes):	lescription. (polygons need to have >90% cover		
Forest or shrub for more than 2/3 the area of the wetland. Forest or shrub for >1/3 area OR herbaceous plants > 2/3 a Forest or shrub for > 1/10 area OR herbaceous plants > 1/3 Plants do not meet above criteria	rea points = 4	4	
Total for R 5	Add the points in the boxes above	12	
Rating of Site Potential If score is: 12-16 =	Record the rating on the first page		
R 5.0 Does the landscape have the potential to support			
R5.1 Is the stream/river adjacent to the unit downcut?	Yes = 0 No = 1	0	
R 5.2 Does the upgradient watershed include a UGA or incorp	orated area? Yes = No = 0	0	
R 5.3 Is The upgradient stream or river controlled by dams?	Yes = 0 No = 1	(
Total for R 5	Add the points in the boxes above	1	
Rating of Landscape Potential If score is: 3 = H	Or 2 = M O = L Record the rating on the first page		
R 6.0 Are the hydrologic functions provided by the site v	aluable to society?		
R 6.1 Distance to the nearest areas downstream that have flor fits the site.			
The sub-basin immediately down-gradient of site has su human or natural resources Surface flooding problems are in a basin further down-gradient flooding problems anywhere downstream	points = 2	1	
R 6.2 Has the site has been identified as important for flood s control plan?	torage or flood conveyance in a regional flood Yes = 2 No = 0	a a	
Total for R 6	Add the points in the boxes above	J	
Rating of Value If score is $2-4 = H$	1 = M Record the rating on the first page		

These questions apply to wetlan HABITAT FUNCTIONS - Indicators that site function	[19일 등 1일 일도 : 19일 문화 기계 1일	(only 1 score per box)
H 1. Does the wetland unit have the potential to provide	habitat for many species?	
H 1.1 Categories of vegetation structure Check the Cowardin vegetation classes present and categories category is >= ½ acre or >= 10% of the unit if unit is < 2.5 acre		
Emergent plants 0-12 in. (0 – 30 cm) high are the high Emergent plants >12 – 40 in.(>30 – 100cm) high are	the highest layer with >30% cover	
Emergent plants > 40 in.(> 100cm) high are the high Scrub/shrub (areas where shrubs have >30% cover) Forested (areas where trees have >30% cover)		
	2 checks points = 1 1 check points = 0	9
H 1.2. Is one of the vegetation types "aquatic bed?"	YES = 1 point 0 = 0 points	6
H 1.3. Surface Water H 1.3.1 Does the unit have areas of "open" water (without acre OR 10% of its area during the March to early June of Note: answer YES for Lake YES = 3 points & go to H 1 H 1.3.2 Does the unit have an intermittent or permanen boundaries, or along one side, over at least 1/4 acre or 10 YES = 3 points	or in August to the end of September? e-fringe wetlands .4 NO = go to H 1.3.2 t, and unvegetate,d stream within its	0
H 1.4. Richness of Plant Species Count the number of plant species in the wetland that cove species can be combined to meet the size threshold) Do not include Eurasean Milfoil, reed canarygrass, p Canadian Thistle, Yellow-flag Iris, and Salt Cede # of species 3 Scoring: > 9 species = 2 points 4-	You do not have to name the species. urple loosestrife, Russian Olive, Phragmites,	0
H 1.5. Interspersion of habitats Decide from the diagrams below whether interspersion between and unvegetated areas (open water or mudflats) is high, mediture of map of Cowardin plant classes prepared for question	um, low, or none.	Figure
		*
None = 0 points Low = 1 point	Moderate = 2 points	
High = 3 points High = 3 points NOTE: If you have four or more classes or three plants classes	riparian braided channels with 2 classes = High and open water the rating is always "high".	0

wetland name or number		٥
H 1.6. Special Habitat Features:		
Standing snags (diameter at the bottom > 4 inches) in th	wetland unit or within 30 m (100ft) of the edge.	
Emergent or shrub vegetation in areas that are permane		
Stable steep banks of fine material that might be used b	beaver or muskrat for denning (>45 degree	
slope) OR signs of recent beaver activity		
Invasive species cover less than 20% in each stratum of	egetation (canopy, sub-canopy, shrubs,	~
herbaceous, moss/ground cover)	Maximum score possible = 6	
H 1. TOTAL Score -	Add the check marks in the box above	2
Rating of Site Potential If score is: 12 – 16 =	H 6 - 11 = M 0 - 5 = L Record the rating on the first page	
H 2.0. Does the landscape have the potential to suppor	habitat at the site?	
H 2.1 Accessible habitat (only area of habitat abutting wetlan	d unit). Calculate:	
% undisturbed habitat /5 + ((% moderate and low inter	sity land uses)/2] <u>/5</u> = <u>30</u> %	
If total accessible habitat is:		
> 1/3 (33.3%) of 1km circle (~100 hectares)	points = 3	
20 - 33% of 1km circle	points = 2	
10- 19% of 1km circle	points = 1	2
<10% of 1km circle	points = 0	
H2.2 Undisturbed habitat in 1km circle around unit. If:		
Undisturbed habitat > 50% of circle	points = 3	
Undisturbed habitat 10 - 50% and in 1-3 pate		
Undisturbed habitat 10 - 50% and > 3 patche	·	ک
Undisturbed habitat < 10% of circle	points = 0	
H2.3 Land use intensity in 1 km circle. If: > 50% of circle is high intensity land use	nointe (2)	
Does not meet criterion above	points = (-2)	0
H 2.4 The wetland unit is in an area where annual rainfall is less than 12 inches, and its water regime is not influenced by irrigation practices, dams, or water control structures. (Generally, this means outside		
boundaries of reclamation areas, irrigation district, or n		0
	s in the boxes above	4
Rating of Landscape Potential If score is: 4-6=	1-3=M <1=L	
	Record the rating on the first page	
H 3.0 Is the Habitat provided by the site valuable to soci	ety?	
H3.1Does the site provides habitat for species valued in laws,	regulations or policies? (choose the highest score)	
Site meets ANY of the following criteria:	points = 2	
lt_provides habitat for Threatened or Endangered spec	ies (any plant or animal on state or federal lists)	
It is a "priority area" for an individual WDFW species		
lt is a Wetland With a High Conservation Value as dete		
_lt has 3 or more priority habitats within 100m (see Ap		
It has been categorized as an important habitat site in Shoreline Master Plan, or in a watershed plan	a local or regional comprehensive plan, in a	
Site has 1 or 2 priority habitats within 100m (see Appendix	points = 1	2
Site does not meet any of the criteria above	points = 0	
Rating of Value If score is: 2 = H	1 = M 0 = L	
	Record the rating on the first page	
Wetland Rating System for Eastern WA: 2014 Update		14

Rating Form

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland unit meets the attributes described below and circle the appropriate Category. NOTE: A wetland may meet the criteria for more than one set of special characteristics. Record all those that apply. NOTE: All units should also be characterized based on their functions.

Wetland Type Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.	Category
SC 1.0 Vernal pools Is the wetland unit less than 4000 ft², and does it meet at least two of the follocriteria? — Its only source of water is rainfall or basin and has no groundwater input. — Wetland plants are typically present vegetation is typically upland annuals. NOTE: If you find perennial "obligate", wetland plants the wetland is probably NOT a vernal pool — The soil in the wetland are shallow (<1ft deep (30 cm)) and is under an impermeable layer such as basalt or clay. — Surface water is present for less than 120 days during the "wet" set YES = Go to SC 1.1	outing er l, pol erlain by
SC 1.1 Is the vernal pool relatively undisturbed in February and March? YES = Go to SC 1.2 NO - not a vernal pool with special charact SC 1.2 Is the vernal pool in an area where there are at least 3 separate aqua resources within 0.5 miles (other wetlands, rivers, lakes etc.)? YES = Category II NO = Category III	
SC 2.0 Alkali wetlands Does the wetland unit meets one of the following two criteria? — The wetland has a conductivity > 3.0 mS/cm. — The wetland has a conductivity between 2.0 - 3.0 mS, and more the of the plant cover in the wetland can be classified as "alkali" species. Table 4 for list of plants found in alkali systems). — If the wetland is dry at the time of your field visit, the central part area is covered with a layer of salt. OR does the wetland unit meets two of the following three sub-criteria? — Salt encrustations around more than 80% of the edge of the wetland. More than ¾ of the plant cover consists of species listed on Table 4. — A pH above 9.0. All alkali wetlands have a high pH, but please notes some freshwater wetlands may also have a high pH. Thus, pH along.	es (see of the nd the that
a good indicator of alkali wetlands. YES = Category I NO – not an alkali wetland	Cat. I



Carrier and the second		
SC 3.0 Wetlands with High Conservation Value (WH	ICV)	
SC 2.1 Has the Department of Natural Resources upo	dated their web site to include the list of	
Wetlands with High Conservation Value?		
YES - Go to SC 2.2 NO - Go t	to SC 2.3	Cat. I
SC 2.2 Is the wetland unit you are rating listed on the	DNR database as having a High	
Conservation Value? YES = Category I	NO = not a WHCV	
SC 2.3 Is the wetland unit being rated in a Section/To	ownship/Range that contains a Natural	
Heritage wetland?		
http://www1.dnr.wa.gov/nhp/refdesk		
YES – contact WNHP/DNR and go to SC 2.4	NO = not a WHCV	
SC 2.4 Has DNR identified the wetland within the S	「/R as a wetland with High Conservation	
value and is listed on their web site?		
YES = Category I NO	ot an WHCV	
SC 4.0 Bogs and Calcareous Fens		
Does the wetland unit (or any part of the wetland unit) meet both the criteria for soils and	
vegetation in bogs or calcareous fens. Use the key belo	w to identify if the wetland is a bog or	
calcareous fen. If you answer yes you will still need to	rate the wetland based on its functions.	
SC 4.1. Does an area within the wetland unit have or		
soil), either peats or mucks, that compose 16 inch		
soil profile? (See Appendix C for a field key to ider	the state of the s	
	o - go to SC 4.2	
SC 4.2. Does an area within the unit have organic spi		
than 16 inches deep over bedrock or an impermen		
ash, or that are floating on top of a lake or pond?		
	o - Is not a bog for rating	
SC 4.3. Does an area within the unit have more than		
AND at least 30% of the total plant cover consists	•	
	o - go to SC 4.4	
NOTE: If you are uncertain about the extent of mo		
substitute that criterion by measuring the pH of th	· · · · · · · · · · · · · · · · · · ·	
least 16" deep. If the pH is less than 5.0 and the p wetland is a bog.	nant species in Table 5 are present, the	
SC 4.4 Is an area with peats or mucks forested (> 309	Cover) with cubalains fir western red	
cedar, western hemlock, lodgepole pine, quaking		
white pine, AND any of the species (or combination		
more than 30% of the cover under the canopy	on or species, fisted in Table 5 provide	
	go to question SC 4.5	Cat. I
5. Do the species listed in Table 6 comprise at least 20	- ·	Cat. I
peats and mucks?	on the total plant cover within an area of	
Yes – is a Calcareous Fen for purpose of rating	g No - go to Question 6	
6. Do the species listed in Table 6 comprise at least 10	· · · · · · · · · · · · · · · · · · ·	
and mucks, AND one of the two following cor		
Marl deposits (calcium carbonate (CaCO3) pr		
stems		
The pH of free water ≥ 6.8 AND electrical con	nductivity ≥ 200 uS/cm at multiple locations	
within the wetland	,	
Yes – Is a Category I calcareous fen	No - Is not a calcareous fen	Cat. I

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SC 5.0 Forested Wetlands	
Does the wetland unit have an area of forest rooted within its boundary that meets at least	
one of the following three criteria? (Continue only if you have identified a forested class is	
present in question H 1.1)	
 The wetland is within the "100 year" floodplain of a river or stream 	经过少时间 值
 aspen (Populus tremuloides) represents at least 20% of the total cover of woody 	a harris to
species	
— There is at least ¼ acre of trees (even in wetlands smaller than 2.5 acres) that are	
"mature" or "old-growth" according to the definitions for these priority habitats	
developed by WDFW (see definitions in question H3.1)	
YES = go to SC 5.1 NO -not a forested wetland with special characteristics	
SC 5.1 Does the wetland unit have a forest canopy where more than 50% of the tree species (by	
cover) are slow growing native trees (see Table 7)	Cat. I
YES = Category I NO = go to SC 5.2	-
, and the state of	
SC 5.2 Does the unit have areas where aspen (Populus tremuloides) represents at least 20% of	Cat. I
the total cover of woody species.	
YES = Category I NO = go to SC 5.3	
113 30 10 30 10	
SC 5.3 Does the wetland unit have areas with a forest canopy where more than 50% of the tree	
species (by cover) are fast growing species. (see Table 7)	Cat. II
· · · · · · · · · · · · · · · · · · ·	
YES = Category II NO = go to SC 5.5	
SC 5.4 Is the forested component of the wetland within the "100 year floodplain" of a river or	
stream?	
YES = Category II	Cat. II
Category of wetland based on Special Characteristics	
Choose the "highest" rating if wetland falls into several categories	NA
	/ / / .
If you answered NO for all types enter "Not Applicable" on p.1	

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Wetland	name	or	number	للمسك	

Appendix B: WDFW Priority Habitats in Eastern Washington

Priority habitats listed by WDFW (see complete descriptions of WDFW priority habitats, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008. Priority Habitat and Species List. Olympia, Washington. 177 pp. http://wdfw.wa.gov/publications/00165/wdfw00165.pdf)

http://wdfw.wa.gov/publications/00165/wdfw00165.pdf)	7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1
Count how many of the following priority habitats are within 3: independent of the land use between the wetland unit and the p	
Aspen Stands: Pure or mixed stands of aspen greater than	0.4 ha (1 acre).
Biodiversity Areas and Corridors: Areas of habitat that a wildlife (full descriptions in WDFW PHS report p. 152).	re relatively important to various species of native fish and
structural characteristics due to the influence of fire, climate, a trees/ha (10 trees/acre) that are > 53 cm (21 in) dbh, and 2.5-diameter. Downed logs may vary from abundant to absent Car alterations to the stand will be absent or so slight as to not affect.	-7.5 snags/ha (1 – 3 snags/acre) that are > 30-35 cm (12-14 in) noples may be single or multi-layered. Evidence of human-caused ect the ecosystem's essential structures and functions. Mature n) dbh; crown cover may be less than 100%; decay, decadence,
Oregon white Oak: Woodlands Stands of pure oak or oak/component is important (full descriptions in WDFW PHS report	
Riparian: The area adjacent to aquatic systems with flowin ecosystems which mutually influence each other.	ng water that contains elements of both aquatic and terrestrial
Instream: The combination of physical, biological, and cher life history requirements for instream fish and wildlife resource	mical processes and conditions that interact to provide functional ces.
Caves: A naturally occurring cavity, recess, void, or system other geological formations and is large enough to contain a hu	of interconnected passages under the earth in soils, rock, ice, or uman.
Cliffs: Greater than 7.6 m (25 ft) high and occurring below	5000 ft.
Talus: Homogenous areas of rock rubble ranging in average and/or sedimentary rock, including riprap slides and mine tail	e size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, lings. May be associated with cliffs.
	nd or dying and exhibit sufficient decay characteristics to enable ter at breast height of > 51 cm (20 in) in western Washington and a diameter at the largest end, and > 6 m (20 ft) long.
Shrub-steppe: A nonforested vegetation type consisting of but discontinuous layer of shrubs (see Eastside Steppe for site	one or more layers of perennial bunchgrasses and a conspicuous es with little or no shrub cover).
Eastside Steppe: Nonforested vegetation type dominated by or a combination of both. Bluebunch Wheatgrass (Pseudoroegi Idaho Fescue (Festuca idahoensis), Sandberg Bluegrass (Poa se (Achnatherum spp.).	by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, meria spicata) is often the prevailing cover component along with ecunda), Rough Fescue (F. campestris), or needlegrass
Juniper Savannah: All juniper woodlands.	
Note: All vegetated wetlands are by definition a priority habitat elsewhere.	but are not included in this list because they are addressed

