

Sewall Wetland Consulting, Inc.

PO Box 880
Fall City, WA 98024

Phone: 253-859-0515

November 12, 2019

Kylie Clark
Steel Structures America
PO Box 895
Post Falls, ID 83877

RE: Critical Area Report – Parcel #20937
Kittitas County, Washington
SWC Job #19-189

Dear Kylie,

This report describes our observations of any jurisdictional wetlands, streams and/or buffers on or within 200' of Parcel #20937, located at 1657 Bar 14 Road, in unincorporated Kittitas County, Washington (the "site"). The 3.16 acre site is within Section 4, Township 18 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 on November 1, 2019. 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).

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 and the NRCS Soil Survey online mapping and Data.

National Wetlands Inventory (NWI)

The NWI map depicts a portion of an emergent wetland along the northwest side of the site. A narrow forested wetland is also mapped along Naneum Creek on the eastern side of the site. The USFWS data indicates this wetland was mapped in 1983 and not field checked during the inventory. This wetland depiction appears to be the historic pattern of flood irrigation flow paths that are no longer present on the site.



Above: NWI map of the area of the site

Soil Survey

According to the NRCS Soil Mapper website, the site is mapped as containing Brickmill-Naneum complex (somewhat poorly drained) and Weirman-Kayak complex (moderately well drained). 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.

Field observations

Field observations

The site contains a gravel driveway leading to a single family home. Several fenced livestock areas are present on the site. Naneum Creek, topographically a well-defined stream is located along the eastern side of the site.

The site is generally vegetate with a mix of xeric species such as cheatgrass, tumble mustard, thistle and prickly lettuce.

Soils were found to be a dry, cobbly loam with soil colors of 10YR3/2-2/2.

The inventory maps for the site are incorrect. There is no forested wetland located along the eastern side of the site, just Naneum Creek in a deeply incised channel.

A small area of wetland is located on the northwest corner of the site. This wetland extends a short distance north and west of the site and is not associated with Naneum Creek or the 200' shoreline area. Below is a description of this area.

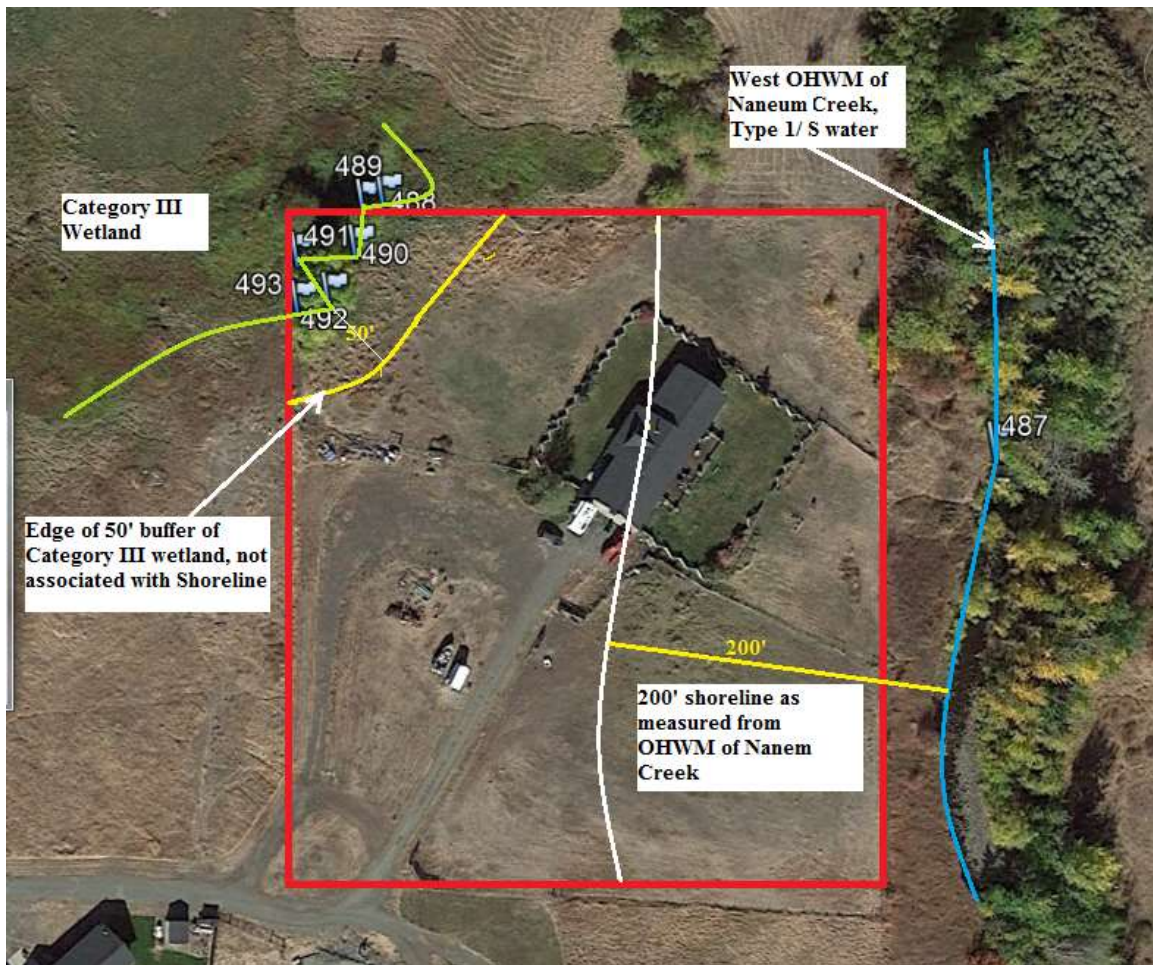
Wetland A

An emergent wetland located on the northwest corner of the site was flagged with flags A1-A6 (gps points 488-493). The wetland extends a short distance to the north and west of the site. The wetland may be maintained by irrigation water from the property to the north. It does not appear to be associated with Naneum Creek. Species observed in the wetland were sedge, creeping buttercup, and reed canary grass. A few small willows were planted along a small bermed pond area on the corner of the property within the wetland.

Using the 991 WADOE Wetland State Wetlands Rating System Form as utilized by Kittitas County, the wetland on-site would be classified as a Class III wetland. Per KCC 17A.04.020, Category III wetlands have a buffer range of 20-80' in width. Given the agricultural character of the wetland a 50' buffer would be adequate to protect its functions.

Naneum Creek

Naneum Creek is considered a Shoreline of the State or a Type 1/S water. Per KCC 17A.02.300 the buffers for a Type 1 water are 40'-200' from the OHWM 17A.07.010.



Above: Wetland and stream map of study area.

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.

Muller-Dombois, D. and H. Ellenberg. 1974. Aims and Methods of Vegetation Ecology. John Wiley & Sons, Inc. New York, New York.

Munsell Color. 1988. Munsell Soil Color Charts. Kollmorgen Instruments Corp., Baltimore, Maryland.

National Technical Committee for Hydric Soils. 1991. Hydric Soils of the United States. USDA Misc. Publ. No. 1491.

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 and below: Two views of Wetland A on the northwest corner.





*Above: Looking west along the north property line towards Wetland A
Below: Looking east along the eastern side of the driveway at the dry
pasture.*





Above: looking north from the driveway along the western side of the site.

WETLAND DETERMINATION DATA FORM – Arid West Region

Wet A

Project/Site: Daniels City/County: K. Hitas Sampling Date: 11-1-19
 Applicant/Owner: _____ State: WA Sampling Point: DP#1
 Investigator(s): Ed Sewall Section, Township, Range: S 4 T 18 N R 19 E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWM 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 No _____
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>grazed agricultural site</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Ranunculus repens</u>	<u>60</u>		<u>FACW</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Phalaris arundin</u>	<u>40</u>		<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Remarks:				

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
16	10W2/1		Cons. and Dis. Red				Clay	1m

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 Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 0

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

*Updated
6/20/05
Wet A*

Project/Site: Davids City/County: K, Hitas Sampling Date: 11-1-19
 Applicant/Owner: _____ State: WA Sampling Point: DP#2
 Investigator(s): Ed Sewall Section, Township, Range: S4 T18N R19E
 Landform (hilllope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 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 No _____
 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>grazed agricultural site</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (AB)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Total Cover: _____				
Herb Stratum				
1. <u>Poa spp</u>	<u>60</u>	<u>FAC</u>	<u>FAC</u>	
2. <u>Festuca spp</u>	<u>30</u>	<u>FAC</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody/Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: _____				

SOIL

Sampling Point: DP #2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
16	10Yk 3/2						clay tan	

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.)

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: *no indicators*

HYDROLOGY

Wetland Hydrology Indicators:

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Flowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *no indicators*

WETLAND DETERMINATION DATA FORM – Arid West Region

east side of site

Project/Site: Daniels City/County: K, Hitas Sampling Date: 11-1-19
 Applicant/Owner: _____ State: WA Sampling Point: DP#3
 Investigator(s): Ed Sewall Section, Township, Range: S4 T18N R19E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 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 No _____
 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 _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks: <u>grazed agricultural site</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (AB)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Bromus tectorum</u>	<u>25</u>	<u>NI</u>	<u>NI</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>		
Remarks: _____				

SOIL

Sampling Point: DP#3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
16	10YR 3/3						cobby lam	

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.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: *no indicators*

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Flowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____ (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *no indicators*

WETLANDS RATING FIELD DATA FORM

BACKGROUND INFORMATION:

Name of Rater: Ed Sewall Affiliation: Sewall Wetland Care Date: 11-1-19

Name of wetland (if known): Wet A - Daniels

Government Jurisdiction of wetland: Ritritus Co.

Location: 1/4 S: _____ of 1/4 S: SW SEC: 4 TOWNSHIP: 18N RANGE: 19E

SOURCES OF INFORMATION: (Check all sources that apply)

Site visit: USGS Topo Map: NWI map: Aerial Photo: Soils survey:

Other: Describe: _____

WHEN THE FIELD DATA FORM IS COMPLETE ENTER CATEGORY HERE:

III

Q.1. High Quality Natural Heritage Wetland.

Circle answers

Answer this question if you have adequate information or experience to do so. If not find someone with the expertise to answer the questions. Then, if the answer to questions 1a, 1b and 1c are all NO, contact the Natural Heritage program of DNR.

1a. Is there significant evidence of human-caused changes to topography or hydrology of the wetland? Significant changes could include clearing, grading, filling, logging of the wetland or its immediate buffer, or culverts, ditches, dredging, diking or drainage of the wetland. Briefly describe the changes and your information source/s: Pasture wetland w/ old run made pond.

Yes: go to Q.3.
No: go to 1b.

1b. Are there populations of non-native plants which are currently present and appear to be invading native populations? Briefly describe any non-native plant populations and information source(s): _____

Yes: go to Q.3.
No: go to 1c.

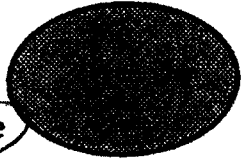
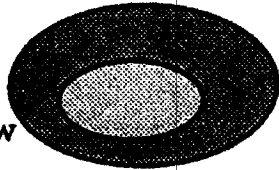
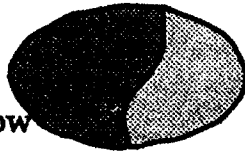
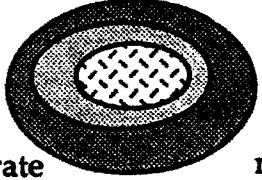
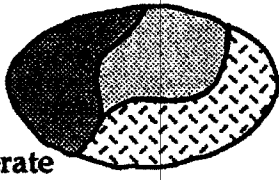
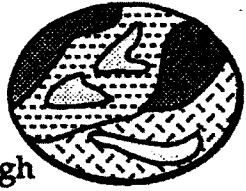
1c. Is there significant evidence of human-caused disturbance of the water quality of the system? Degradation of water quality could be evidenced by culverts entering the system, direct road/parking lot runoff, evidence of historic dumping of wastes, oily sheens, extreme eutrophic conditions, livestock use or dead fish etc. Briefly describe: _____

Yes: go to Q.3.
No: Possible
Category I

<p>Q.2. Regionally Rare Native Wetland Communities</p> <p>The Department of Ecology is developing a methodology for regionally rare native wetland communities. It is not yet available for use.</p>	
<p>Q.3. Irreplaceable Ecological Functions:</p> <p>Does the wetland:</p> <ul style="list-style-type: none"> - have at least 1/2 acre of contiguous peat wetland;..... - <u>or</u>, have a forested class greater than 1 acre ; - <u>or</u>, have characteristics of an estuarine system; - <u>or</u>, have eel grass, floating <u>or</u> non-floating kelp beds?..... 	<p>No to all: go to Q.4.</p> <p>Yes: go to 3a.</p> <p>Yes: go to 3b.</p> <p>Yes: go to 3c.</p> <p>Yes: go to 3d.</p>
<p>3a. Peat Wetlands.</p> <p>3a1. Does at least 1/2 acre of the contiguous peat wetland have < 25% areal cover of any combination of species from the list of invasive/exotic species on p.19, <u>and</u> have < 80% areal cover of <i>Spirea douglasii</i>?.....</p>	<p>Yes: Category I</p> <p>No: go to Q.4.</p>
<p>Q.3b. Mature forested wetland.</p> <p>3b1. Is the average age of dominant trees in the forested wetland > 80 years?</p> <p>3b2. Is the average age of dominant trees in the forested wetland 50-80 years, <u>and</u> is the structural diversity high as characterized by a multi-layer community of trees > 50' tall <u>and</u> trees 20'-49' tall <u>and</u> shrubs <u>and</u> herbaceous groundcover? ..</p> <p>3b3. Is > 50% (areal cover) of the dominant plants in one or more layers (canopy, young trees, shrubs, herbs) invasive/exotic plant species from the p.19 list? ..</p>	<p>Yes: Category I</p> <p>No: go to 3b2.</p> <p>Yes: go to 3b3.</p> <p>No: go to Q.5.</p> <p>Yes: go to Q.5.</p> <p>No: Category I</p>

Q3c. Estuarine wetlands.	
3c1. Is the wetland listed as National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park, or Educational, Environmental or Scientific Reserves designated under WAC 332-30-151?	Yes: Category I No: go to 3c2.
3c2. Is the wetland > 5 acres;	Yes: Category I
or is the wetland 1-5 acres;	Yes: go to 3c3.
<u>or</u> is the wetland < 1 acre?	Yes: go to 3c4.
3c3. Does the wetland meet at least 3 of the following 4 criteria:	Yes: Category I No: Category II
- minimum existing evidence of human related disturbance such as diking, ditching, filling, cultivation, grazing or the presence of non-native plant species (see guidance for definition);	
- surface water connection with tidal saltwater or tidal freshwater;	
- at least 75% of the wetland has a 100' buffer of ungrazed pasture, open water, shrub or forest;	
- has at least 3 of the following features: low marsh; high marsh; tidal channels; lagoon(s); woody debris; or contiguous freshwater wetland.	
3c4. Does the wetland meet <u>all</u> of the four criteria under 3c3. (above)?	Yes: Category II No: Category III
Q3d. Eel Grass and Kelp Beds.	
3d1. Are eel grass beds present?	Yes: Category I No: go to 3d2.
3d2. Are there floating or non-floating kelp bed(s) present with greater than 50% macro algal cover in the month of August or September?	Yes: Category I No: Category II
Q4. Category IV wetlands	
4.1. Is the wetland: less than 1 acre <u>and</u> , hydrologically isolated <u>and</u> , comprised of <u>one</u> vegetated class that is dominated (> 80% areal cover) by <u>one</u> species from the list in guidance p.18.	Yes: Category IV No: go to 4.2.
4.2. Is the wetland: less than two acres <u>and</u> , hydrologically isolated, with <u>one</u> vegetated class, and > 90% of areal cover is <u>any</u> combination of species from the list in guidance p.19.	Yes: Category IV No: go to Q.5.

O.5. Significant habitat value. Answer all questions and enter data requested.		Circle scores that qualify																																							
<p>5a. Total wetland area</p> <p>Estimate area, select from choices in the near-right column, and score in the far column:</p> <p>Enter acreage of wetland here: <u>5</u> acres, and source: <u>air photo</u> <u>meas</u></p>	<p>acres</p> <p>> 20.00 10 - 19.99 5 - 9.99 1 - 4.99 0.1 - 0.99 <0.1</p>	<p>Yes=6 Yes=5 Yes=4 Yes=3 Yes=2 Yes=1</p>																																							
<p>5b. Wetland classes: Circle the wetland classes below that qualify:</p> <p>Open Water: if the area of open water is > 1/2 acre or > 10% of the total wetland area. Source: _____</p> <p>Aquatic Beds: if the area of aquatic beds > 10% of the open water area or > 1/2 acre.</p> <p>Emergent: if the area of emergent class is > 1/2 acre or > 10% of the total wetland area</p> <p>Scrub-Shrub: if the area of scrub-shrub class is > 1/2 acre or > 10% of the total wetland area.</p> <p>Forested: if area of forested class is > 1/2 acre or > 10% of the total wetland area.</p> <p>Add the number of wetland classes, above, that qualify, and then score according to the columns at right.</p> <p>e.g. If there are 4 classes (aquatic beds, open water, emergent & scrub-shrub), you would circle 7 points in the far right column.</p>																																									
	<p># of classes</p> <p>1 2 3 4 5</p>	<p>Yes=1 Yes=3 Yes=5 Yes=7 Yes=10</p>																																							
<p>5c. Plant species diversity.</p> <p>For all wetland classes (at right) that qualify in 5b. above, count the number of different plant species you can find. You do not have to name them.</p> <p>Score in column at far right:</p> <p>e.g. If a wetland has an aquatic bed class with 3 species, an emergent class with 4 species and a scrub-shrub class with 2 species you would circle 2, 2, and 1 in the far column.</p>																																									
	<table border="1"> <thead> <tr> <th>Class</th> <th># of species</th> <th></th> </tr> </thead> <tbody> <tr> <td><u>Aquatic Bed</u></td> <td>1-2...</td> <td>Yes=1</td> </tr> <tr> <td>"</td> <td>3...</td> <td>Yes=2</td> </tr> <tr> <td>"</td> <td>>3...</td> <td>Yes=3</td> </tr> <tr> <td><u>Emergent</u></td> <td>1-2...</td> <td>Yes=1</td> </tr> <tr> <td>"</td> <td>3-4...</td> <td>Yes=2</td> </tr> <tr> <td>"</td> <td>>4...</td> <td>Yes=3</td> </tr> <tr> <td><u>Scrub-Shrub</u></td> <td>1-2...</td> <td>Yes=1</td> </tr> <tr> <td>"</td> <td>3-4...</td> <td>Yes=2</td> </tr> <tr> <td>"</td> <td>>4...</td> <td>Yes=3</td> </tr> <tr> <td><u>Forested</u></td> <td>1-2...</td> <td>Yes=1</td> </tr> <tr> <td>"</td> <td>3-4...</td> <td>Yes=2</td> </tr> <tr> <td>"</td> <td>>4...</td> <td>Yes=3</td> </tr> </tbody> </table>	Class	# of species		<u>Aquatic Bed</u>	1-2...	Yes=1	"	3...	Yes=2	"	>3...	Yes=3	<u>Emergent</u>	1-2...	Yes=1	"	3-4...	Yes=2	"	>4...	Yes=3	<u>Scrub-Shrub</u>	1-2...	Yes=1	"	3-4...	Yes=2	"	>4...	Yes=3	<u>Forested</u>	1-2...	Yes=1	"	3-4...	Yes=2	"	>4...	Yes=3	
Class	# of species																																								
<u>Aquatic Bed</u>	1-2...	Yes=1																																							
"	3...	Yes=2																																							
"	>3...	Yes=3																																							
<u>Emergent</u>	1-2...	Yes=1																																							
"	3-4...	Yes=2																																							
"	>4...	Yes=3																																							
<u>Scrub-Shrub</u>	1-2...	Yes=1																																							
"	3-4...	Yes=2																																							
"	>4...	Yes=3																																							
<u>Forested</u>	1-2...	Yes=1																																							
"	3-4...	Yes=2																																							
"	>4...	Yes=3																																							

<p>5d. Structural diversity. If the wetland has a forested class, add 1 point for each of the following:</p> <ul style="list-style-type: none"> -trees > 50' tall -trees 20'- 49' tall -shrubs -herbaceous ground cover 	<p>Yes=1 Yes=1 Yes=1 Yes=1</p> <p style="text-align: right;">NA</p>
<p>5e. Decide from the diagrams below whether interspersions between wetland classes is high, moderate, low or none?</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>none</p> </div> <div style="text-align: center;">  <p>low</p> </div> <div style="text-align: center;">  <p>low</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;">  <p>moderate</p> </div> <div style="text-align: center;">  <p>moderate</p> </div> <div style="text-align: center;">  <p>high</p> </div> </div>	<p>High=3 Moderate=2 Low=1 None=0</p>
<p>5f. Habitat features. Answer questions below, circle features that apply, and score to right:</p> <p>Is there evidence of current use by beavers? NO Yes=3</p> <p>Is a heron rookery located within 300'? NO Yes=2</p> <p>Are raptor nest/s located within 300'? NO Yes=1</p> <p>Are there at least 3 standing dead trees (snags) per acre? NO Yes=1</p> <p>Are any of these standing dead trees (snags) > 10" in diameter? NO Yes=1</p> <p>Are there any other perches (wires, poles or posts)? Yes=1</p> <p>Are there at least 3 downed logs per acre? NO Yes=1</p>	<p>Yes=3 Yes=2 Yes=1 Yes=1 Yes=1 Yes=1</p>
<p>5g. Connection to streams. (Score one answer only.)</p> <p>Is the wetland connected at any time of the year via surface water:</p> <ul style="list-style-type: none"> to a perennial stream or a seasonal stream <u>with</u> fish; <u>or</u>, to a seasonal stream <u>without</u> fish; <u>or</u>, is not connected to any stream? 	<p>Yes=5 Yes=3 Yes=0</p>

5h. Buffers.											
<p>STEP 1 Estimate (to the nearest 5%) the % of each buffer or land-use type (below) that adjoins the wetland boundary.</p> <p>Then multiply the %/s by the factor(s) below and enter result in column to right:</p>	<p>STEP 2 Multiply result(s) of step 1: by 1, if buffer width is 25-50'; by 2, if buffer width is 50-100'; by 3, if buffer width is >100'.</p> <p>Enter results below and add subscore:</p>										
roads, buildings or parking lots: % <u>50</u> x 0 =	0										
lawn, grazed pasture, vineyards or annual crops: % <u>50</u> x 1 =	<u>50</u> x <u>3</u> = <u>150</u>										
ungrazed grassland or orchards: % <u> </u> x 2 =	_____ x _____ = _____										
open water or native grasslands: % <u> </u> x 3 =	_____ x _____ = _____										
forest or shrub: % <u> </u> x 4 =	_____ x _____ = _____										
Add Buffer total = <u>150</u>											
STEP 3. Score points according to table at right :	<table style="width: 100%; border: none;"> <tr> <td style="border: none;">Buffer total</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">900-1200...</td> <td style="border: none;">Yes=4</td> </tr> <tr> <td style="border: none;">600-899....</td> <td style="border: none;">Yes=3</td> </tr> <tr> <td style="border: none;">300-599....</td> <td style="border: none;">Yes=2</td> </tr> <tr> <td style="border: none;">100-299...</td> <td style="border: none;"><u>Yes=1</u></td> </tr> </table>	Buffer total		900-1200...	Yes=4	600-899....	Yes=3	300-599....	Yes=2	100-299...	<u>Yes=1</u>
Buffer total											
900-1200...	Yes=4										
600-899....	Yes=3										
300-599....	Yes=2										
100-299...	<u>Yes=1</u>										
5i. Connection to other habitat areas:											
- Is there a riparian corridor to other wetlands within 0.25 of a mile, <u>or</u> a corridor > 100' wide with good forest or shrub cover to any other habitat area?.....	<u>Yes =5</u>										
- Is there a narrow corridor < 100' wide with good cover <u>or</u> a wide corridor > 100' wide with low cover to any other habitat area?.....	Yes=3										
- Is there a narrow corridor < 100' wide with low cover <u>or</u> a significant habitat area within 0.25 mile but no corridor?.....	Yes=1										
- Is the wetland and buffer completely isolated by development and or cultivated agricultural land?.....	Yes=0										
<p>NOW: Add the scores circled (for Q.5a - Q.5i above) to get a Total.</p> <p>Is the <u>Total</u> greater than or equal to 22 points.</p>											
<p>Total = <u>13</u> Yes: Category II <u>No: Category III</u></p>											