Sewall Wetland Consulting, Inc.

TAYLOR CLUSTER
KITTITAS COUNTY
CRITICAL AREAS REPORT

Prepared For:

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September 5, 2007
Job#A7-152

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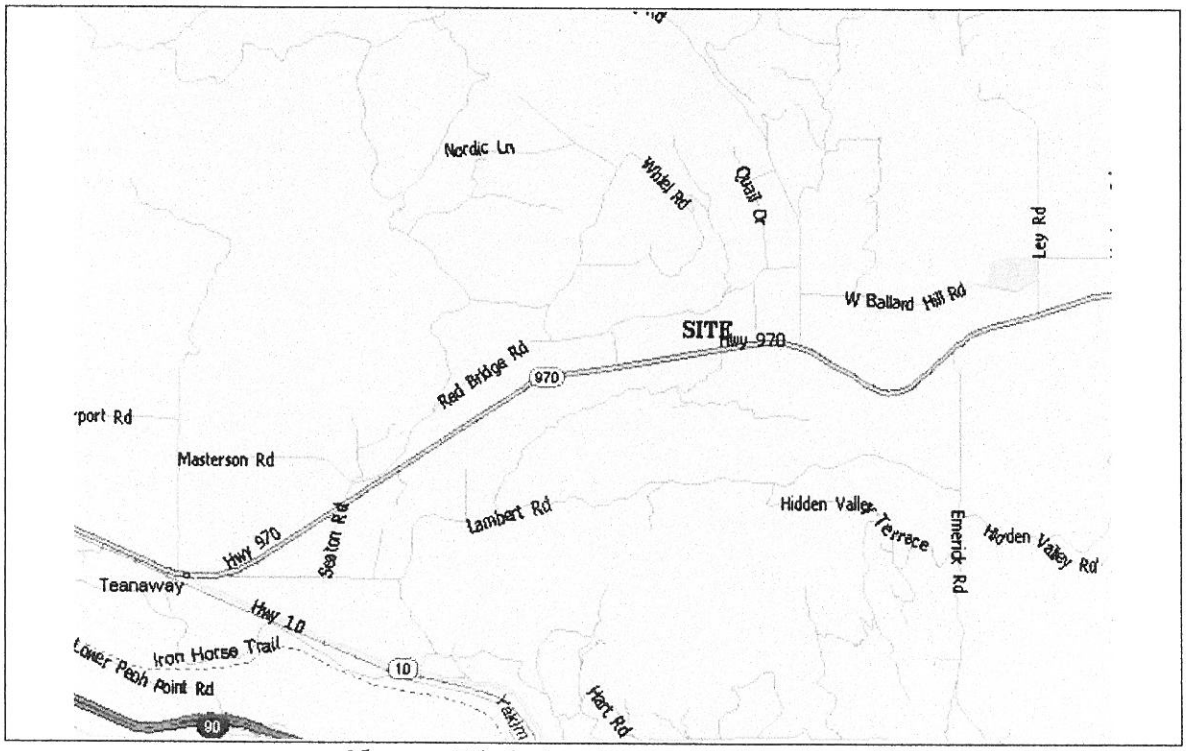
TAYLOR CLUSTER
KITTITAS COUNTY
CRITICAL AREAS REPORT

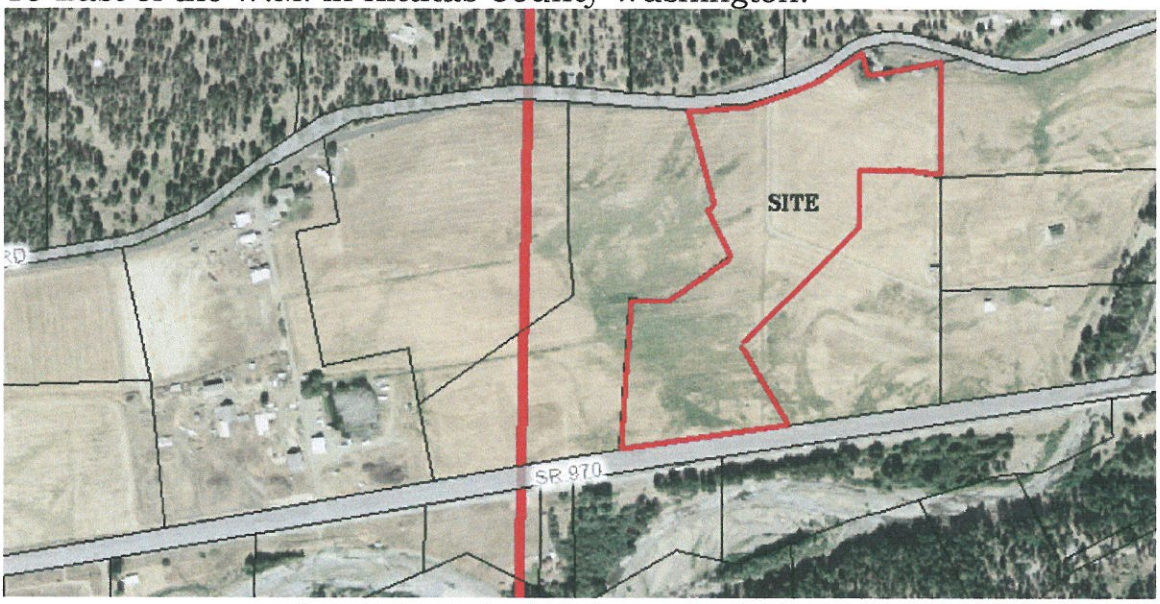
1.0 INTRODUCTION

This report describes our observations of any jurisdictional wetlands and streams on or within 100' of the site of the proposed Taylor rural cluster development, located off Red Bridge Road in unincorporated Kittitas County, Washington (the "site"). Specifically, the site is an irregular shaped 21 acre parcel bordered by SR 970 on the south, Red Bridge Road on the north, a U-fish/campground facility on the west and mowed/grazed pasture on the east.



Above: Vicinity Map of the site.

The site is located in western ½ of Section 25, Township 20 North, Range 16 East of the W.M. in Kittitas County Washington.



Above: Aerial photograph of the site.

As previously described, the site is pasture that is annually mowed and occasionally grazed by livestock. A gravel driveway enters the site on Red Bridge Road and goes south and then easterly off the site. A fence splits the site in half along the edge of the gravel road.

The site is proposed to be developed using clustering into 14 single family lots with associated roads, open space and stormwater facilities.

2.0 METHODOLOGY

Wetland and Streams

Ed Sewall of Sewall Wetland Consulting, Inc. conducted site visits to the property in April, May, June, August and early September of 2007. The site was reviewed using methodology described in the ***Washington State Wetlands Identification Manual*** (WADOE, March 1997). This is the methodology currently recognized by Kittitas County and the State of Washington for wetland determinations and delineations. The review also used the methodology described in the ***Corps of Engineers Wetlands Delineation Manual*** (Environmental Laboratory, 1987), as required by the US Army Corps of Engineers. Soil colors were identified

using the 1990 Edited and Revised Edition of the ***Munsell Soil Color Charts*** (Kollmorgen Instruments Corp. 1990).

The *Washington State Wetlands Identification and Delineation Manual* and the *Corps of Engineers Wetlands Delineation Manual* both requires the use of the three-parameter approach in identifying and delineating wetlands. A wetland should support a predominance of hydrophytic vegetation, have hydric soils and display wetland hydrology. To be considered hydrophytic vegetation, over 50% of the dominant species in an area must have an indicator status of facultative (FAC), facultative wetland (FACW), or obligate wetland (OBL), according to the National List of Plant Species That Occur in Wetlands: Northwest (Region 9) (Reed, 1988). A hydric soil is "a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part". Anaerobic conditions are indicated in the field by soils with low chromas (2 or less), as determined by using the Munsell Soil Color Charts; iron oxide mottles; hydrogen sulfide odor and other indicators. Generally, wetland hydrology is defined by inundation or saturation to the surface for a consecutive period of 12.5% or greater of the growing season. Areas that contain indicators of wetland hydrology between 5%-12.5% of the growing season may or may not be wetlands depending upon other indicators. Field indicators include visual observation of soil inundation, saturation, oxidized rhizospheres, water marks on trees or other fixed objects, drift lines, etc. Under normal circumstances, indicators of all three parameters will be present in wetland areas.

Habitat

A general review of existing habitat data on file with agencies as well as on-site observations were made of wildlife usage of the site. This report does not reflect a species-specific study of any wildlife on or near the site. The following tasks were conducted;

A. A data search was conducted of the *Washington State Priority Habitat (PHS)* data bank for relevant data on listed threatened or endangered species known to use the site and/or surrounding areas.

B. A search was conducted of the *Washington Department of Natural Resources Natural Heritage* data bank for any relevant information on

threatened or endangered plant species and plant communities. All potential listed species were specifically searched for on the site.

C. A general field survey was conducted to note any wildlife or sign of wildlife using the site. General observation surveys were conducted both on 5 separate days as well as previous observations of wildlife use of the site when in the area. The entire project site was walked to insure all significant features were observed. The field survey included a review for any state or federally listed plant or animal species.

3.0 OBSERVATIONS

3.1 Existing Site Documentation.

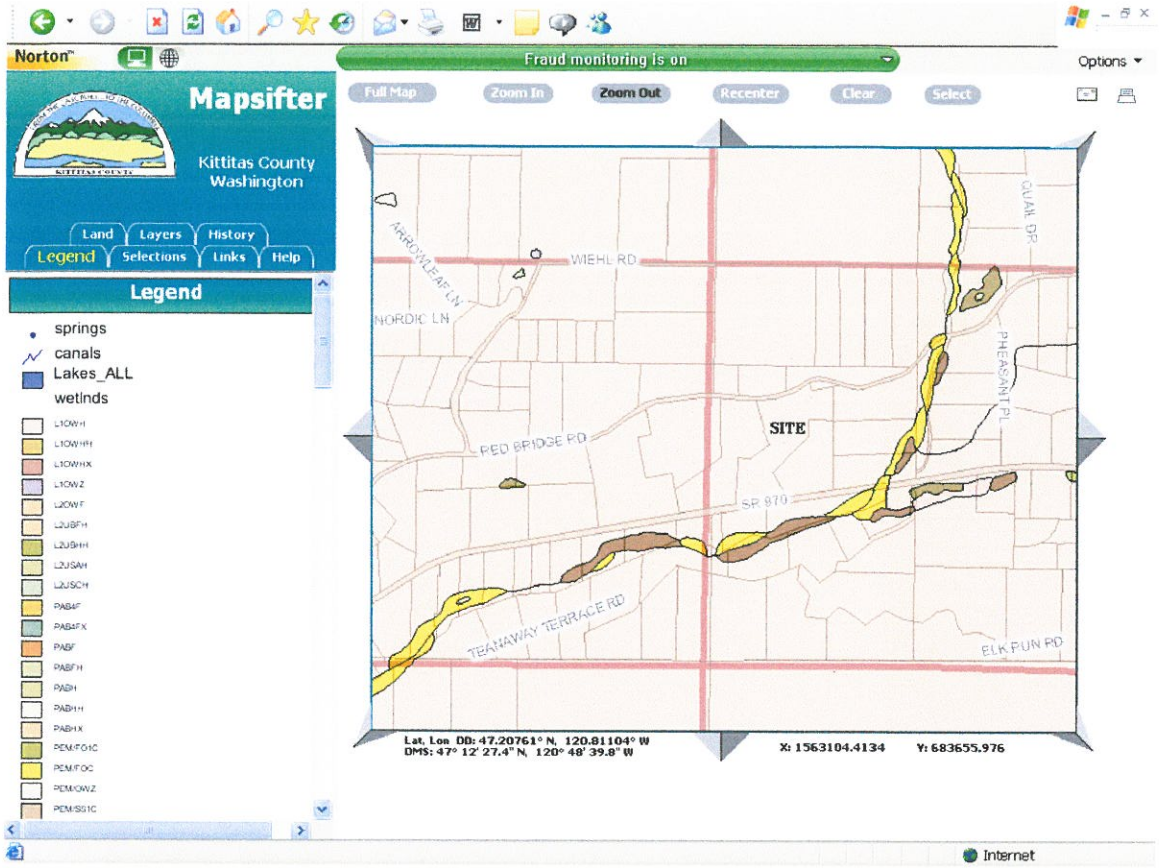
Prior to visiting the site, a review of several natural resource inventory maps was conducted. Resources reviewed included the National Wetland Inventory Map, Washington Department of Natural Resources (WADNR) FPARS Stream Typing map, the WADNR Natural Heritage data, Washington Department of Fish and Wildlife Priority Habitat data, National Wetlands Inventory Map, the Kittitas County GIS mapping information available on-line, as well as data on file at the Kittitas County NRCS office in regards to soil data for the site.

3.1.1 Soil Survey

According to data on file with the Kittitas County NRCS, the site is mapped entirely as Patnish-Mippon-Myzel complex, 0%-3% slopes (*see attached*). These soils are a mix of alluvium and volcanic ash based soil units, are occasionally flooded, and have a seasonal high water table in the Mippon type soils, of -33". These soils and this complex are *not* considered hydric or wetland soils.

3.1.2 National Wetlands Inventory (NWI)/Kittitas County Website

According to the NWI map for the site, there are no wetlands or streams on or near the site. The closest mapped wetlands are narrow bands of wetland along the Teanaway River to the east and south of the site. It should be noted that this inventory mapping was not field verified and was done completely by aerial photograph interpretation. Typically there is a level of error in this type of mapping.



Above: Kittitas County Website w/ NWI Wetland overlay

3.1.3 Washington Department of Natural Resources FPARS Map

According to the WADNR Forest Practices Application Review System (FPARS) stream typing map overlay, there are no streams on the site (see attached map). The Teanaway River located to the south and east of the site is noted. Additionally, the old irrigation canal along the north side of Red Bridge Road is depicted as a Type F (fish bearing) stream. This canal is no longer functional and does not carry water anymore.

3.2 Field observations

3.1 Vegetation/Habitat types

The site is comprised of a single landscape type comprised of an agricultural field with a gravel road bisecting the field.

3.1.1 Agricultural Land

The site is vegetated with patches of weedy species and non-native and naturalized grasses including cheatgrass (*Bromus tectorum*), alfalfa (*Medicago sativa*), dandelion (*Taraxacum officinale*), english plantain (*Plantago lanceolata*), thistle (*Cirsium arvense*), quackgrass (*Agropyron repens*), orchard grass (*Dactylis glomerata*), yarrow (*Achillea millefolium*), and cat's ear (*Hypocharis radicata*).

Soils in the irrigated agricultural lands are cobbly loam with a soil color of 7.5YR 2.5/3. A series of soil pits were placed in a grid pattern across the site as well as 3 deep (4') test holes in order characterize soil and hydrology of the site. The water table was observed on the site in April to be at -36" depth, but observations in July, August and September revealed the test holes to be dry indicating the water table had dropped since the April observation.

The site was historically flood irrigated with water drawn off the Teanaway River near its crossing with Red Bridge Road. The system was damaged in flood events in the 1990's and was never utilized after this period. Water was directed along a ditch lone on the opposite side of Red Bridge Road from the site. Turnouts directed water under Red Bridge Road to the site where it was directed across the site in a series of ditches. A 1993 aerial photograph of the site obtained from WDFW Area Habitat Biologist Brent Renfrow depicts a series of ditches running in an east-west orientation from the dike along the Teanaway River to the east of the site. These ditches historically drained into the U-Fish pond. The portion of this ditch on the site no longer exists.

Wetlands

No areas meeting wetland criteria were found on or within 200' of the site. Water table monitoring through the irrigation season has revealed water tables on the site stay deeper than -36" and never rise to the -12" depth required to meet wetland hydrology criteria. It is suspected that irrigation has little effect on the sites groundwater hydrology as most irrigated lands are east of the site and separated by the Teanaway River, or down-gradiant to the west of the site approximately ¼ mile. As a result, no regional irrigated groundwater rise was noted on the site.

Teanaway River

The Teanaway River is located on the south side of SR97 approximately 190' south of the site at its closest point and separated by SR97. The Teanaway River is known to contain several species of salmonids including anadromous species as detailed in section 3.1.4. As a result, The Teanaway River appears to best meet the criteria of a Type 1 water as defined in KCC 17A.02.300 due to the fact it is a Shoreline of the State. Streams in Kittitas County are regulated as "Riparian Habitat" under chapter 17A.07.010 of KCC. Type 1 waters typically have a 40'-200' buffer measured from the ordinary high water mark. As stated in the Code; "*The riparian habitat buffer ranges above have been established to reflect the impact of certain intense land uses on riparian habitat functions and values. The director shall base a buffer size on the following criteria and shall establish the least restrictive width of buffer necessary to accommodate the following considerations:*

a. *Overall intensity of the proposed use;*

b. *The presence of a threatened, endangered or sensitive species or anadromous fish;*

c. *The shoreline's historical and current susceptibility to severe erosion, channel instability, or aggrading;*

d. *The presence of multiple channels or islands;*

e. *Use by the applicant of a buffer enhancement plan;*

f. *The width of a stream or river and the surface area and depth of a lake."*

4.0 Wildlife and Threatened and Endangered Species

WDFW Priority Habitat Data

A review of the WDFW Priority Habitat Maps and associated species specific reports for the area of the site revealed no observations of any priority species or habitats on the site. Approximately ½ mile north of the site has a PHS polygon#6 indicating large concentrations of elk and mule deer.

The closest feature indicated is the Teanaway River, which is listed as priority anadromous and resident fish presence. The priority species include summer steelhead, spring Chinook salmon, coho salmon, and Dolly Varden/bull trout. Additionally, an observation during electrofishing of 3 mountain sucker (*Catostomus platyrhynchus*), a state candidate species is indicated on the Teanaway east of the site where the Teanaway crosses under SR97.

Washington Department of Natural Resources Natural Heritage Program

A search was conducted of the WADNR Natural Heritage Information System for any significant features on the site. The WADNR Natural Heritage program records any known observations or know locations of rare plants and high quality ecosystems. The results of the data search of this information revealed know known or recorded rare plants or high quality ecosystems on the site.

Field Observations

During our site investigation no wildlife was observed on the site. Several hawks were noted flying over the site (red-tailed hawk & kestrel) but no nests or appropriate habitat exists for much wildlife on the site. Previous observations of the site and area surrounding the site in the fall, spring and winter indicate elk (*Cervus elaphus*) as well as mule deer (*Odocoileus hemionus*) are commonly found in the entire Teanaway Valley. Although we have not observed elk specifically on the site, we have observed herds immediately to the east of the Teanaway River as well as west of the site just west of the U-fish ponds in abutting pastures in and in close proximity to fenced horses. However, WDFW Priority habitat maps do not indicate the site itself as a specific priority habitat area.

Other wildlife undoubtedly utilize the site at some time, primarily passing through the Teanaway Valley or trying to access the Teanaway River from the north or west. Species observed by others in the vicinity of the site include cougar (*Puma concolor*), bobcat (*Lynx rufus*), turkey (*Meleagris gallopavo),* California quail (*Callipepla californica*), tukey vulture (*Cathartes aura*), bear (*Ursus americanus*), coyote (*Canis latrans*). Although these species may pass through the site from time to time, the mowed character of the site and its close proximity to human activity

have reduced its habitat value for most of these species other than for grazing or hunting in the case of coyotes and birds of prey.

No rare, threatened or endangered species were observed on the site.

5.0 REGULATIONS

In addition to the wetland regulations previously described for wetlands and streams, certain activities (filling and dredging) within "waters of the United States" may fall under the jurisdiction of the US Army Corps of Engineers (ACOE). The ACOE regulates all discharges into "waters of the United States" (wetlands) under Section 404(b) of the Clean Water Act.

Discharges (fills) into isolated and headwater wetlands up to 0.5 (1/2) acre are permitted under the Nationwide 39 Permit (NWP 39). However, discharges that result in over 0.1 (1/10th) acre of fill (and less than 0.5 acres) will require "Notification" and mitigation at a ratio of 1:1 (minimum). Washington State Department of Ecology has placed Regional Conditions on the Nationwide 39 permit that are more restrictive than the national regulations. The limits of fill can be modified if the agencies conclude that ESA fisheries could be impacted by the proposed wetland or stream fill activities.

Due to the increasing emphasis on Endangered Species Act compliance for all fills of Waters of the United State and Waters of the State, both the Corps of Engineers and Washington Department of Ecology should be contacted regarding permit conditions, compliance, and processing prior to commitment to any fill of wetlands or streams.

6.0 PROPOSED PROJECT

The proposed Taylor Cluster includes 14 home sites on the north and central portions of the site. The southern 300' of the site abutting SR970 has been left in open space and will include a Class B well and the proposed septic system. Additionally, an equestrian trail will loop through this area. All of the proposed improvements are >200' from the Teanaway River and separated by SR970.

No impacts to regulated wetlands, streams, shoreline or their associated buffer areas are proposed by this project.

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

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

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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.

Kittitas County Code Title 17A

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

WDFW Priority Habitat Data Search dated April 23, 2007

WDNR Natural Heritage Data Bank

Personal Communication and site visit w/WDFW biologist Brent Renfrow May 2007

RECEIVING No. _____

P-07-XX

TAYLOR PERFORMANCE BASED CLUSTER PLAT

A PORTION OF THE WEST 1/2 OF SECTION 25, T.20N., R.16E., W.M., KITTITAS COUNTY, WASHINGTON.

APPROVALS

KITTITAS COUNTY DEPARTMENT OF PUBLIC WORKS

EXAMINED AND APPROVED THIS _____ DAY OF _____ A.D., 200__.

_____
COUNTY ENGINEER

KITTITAS COUNTY HEALTH DEPARTMENT

I HEREBY CERTIFY THAT THE TAYLOR CLUSTER PLAT HAS BEEN EXAMINED BY ME AND I FIND THAT THE SEWAGE AND WATER SYSTEM HEREIN SHOWN DOES MEET AND COMPLY WITH ALL REQUIREMENTS OF THE COUNTY HEALTH DEPARTMENT.

DATED THIS ____ DAY OF _____ A.D., 200__.

_____
KITTITAS COUNTY HEALTH OFFICER

CERTIFICATE OF COUNTY PLANNING DIRECTOR

I HEREBY CERTIFY THAT THE TAYLOR CLUSTER PLAT HAS BEEN EXAMINED BY ME AND FIND THAT IT CONFORMS TO THE COMPREHENSIVE PLAN OF THE KITTITAS COUNTY PLANNING COMMISSION.

DATED THIS ____ DAY OF _____ A.D., 200__.

_____
KITTITAS COUNTY PLANNING DIRECTOR

CERTIFICATE OF KITTITAS COUNTY TREASURER

I HEREBY CERTIFY THAT THE TAXES AND ASSESSMENTS ARE PAID FOR THE PRECEDING YEARS AND FOR THIS YEAR IN WHICH THE PLAT IS NOW TO BE FILED. PARCEL NO. 20-16-25000-0066

DATED THIS ____ DAY OF _____ A.D., 200__.

_____
KITTITAS COUNTY TREASURER

CERTIFICATE OF KITTITAS COUNTY ASSESSOR

I HEREBY CERTIFY THAT THE TAYLOR CLUSTER PLAT HAS BEEN EXAMINED BY ME AND I FIND THE PROPERTY TO BE IN AN ACCEPTABLE CONDITION FOR PLATTING. PARCEL NO. 20-16-25000-0066

DATED THIS ____ DAY OF _____ A.D., 200__.

_____
KITTITAS COUNTY ASSESSOR

KITTITAS COUNTY BOARD OF COMMISSIONERS

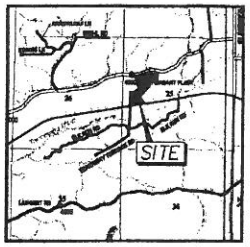
EXAMINED AND APPROVED THIS _____ DAY OF _____ A.D., 200__.

BOARD OF COUNTY COMMISSIONERS
KITTITAS COUNTY, WASHINGTON

BY: _____
CHAIRMAN

ATTEST:
_____CLERK OF THE BOARD

NOTICE: THE APPROVAL OF THIS PLAT IS NOT A GUARANTEE THAT FUTURE PERMITS WILL BE GRANTED.



VICINITY MAP - N.T.S.

NOTES:

"A" - EXISTING 60' ACCESS & UTILITY EASEMENT PER A.F.N. 199707300024 (INCLUDES 50' RADIUS CUL-DE-SAC AT TERMINUS OF EASEMENT)

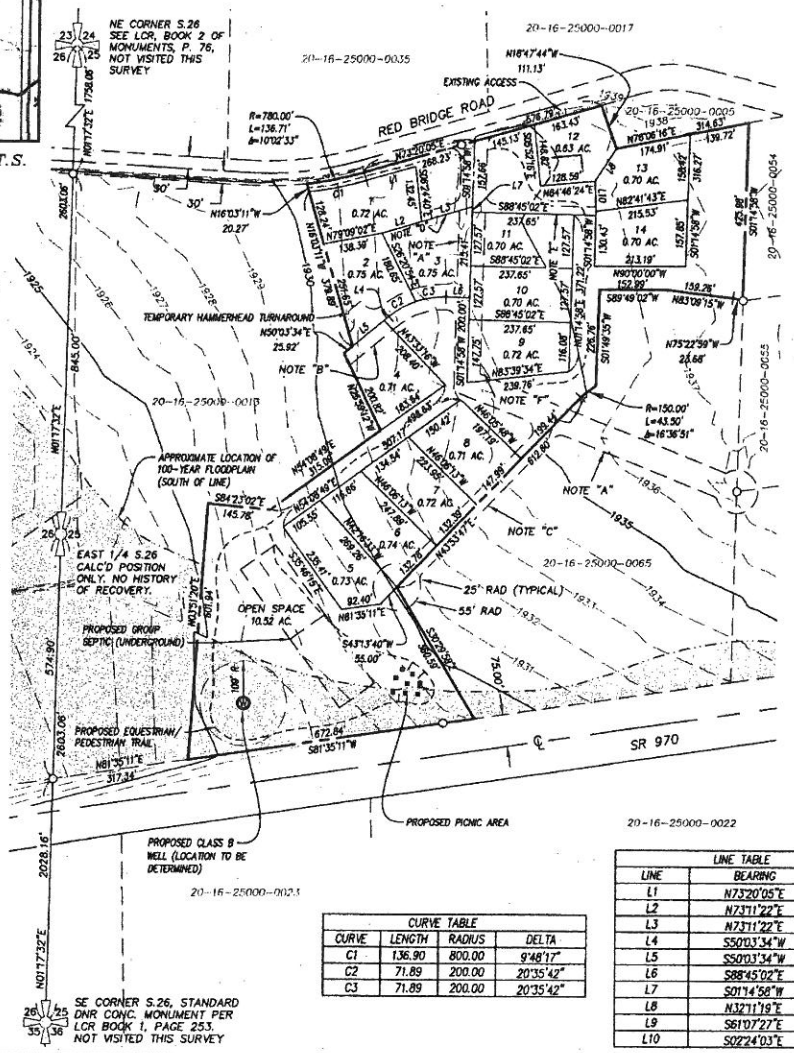
"B" - PROPOSED 60' ACCESS & UTILITY EASEMENT "Q"

"C" - PROPOSED 40' ACCESS & UTILITY EASEMENT "R"

"D" - PROPOSED 20' ACCESS & UTILITY EASEMENT "S"

"E" - PROPOSED 20' ACCESS & UTILITY EASEMENT "T"

"F" - PROPOSED ADDITIONAL EASEMENT AREA FOR FUTURE TURN RADIUS OF ROAD



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	136.90	800.00	9°48'17"
C2	71.89	200.00	20°35'42"
C3	71.89	200.00	20°35'42"

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N73°20'05"E	119.76
L2	N73°11'22"E	96.11
L3	N73°11'22"E	123.54
L4	S50°03'34"W	14.43
L5	S50°03'34"W	95.59
L6	S88°45'02"E	54.79
L7	S01°14'58"W	12.52
L8	N3211'19"E	92.15
L9	S61°07'27"E	97.38
L10	S02°24'03"E	71.81

PERFORMANCE BASED CLUSTER PLATTING

OPEN SPACE (60.3%)	10.56 AC	60 POINTS
DEVELOPMENT AREA	10.44 AC	
(LOTS = 9.64 AC)		
(ROAD PRISM = 0.81 AC)		
CLASS B WELL		25 POINTS
COMMUNITY SEPTIC		10 POINTS
PASSIVE REC. FACILITIES		5 POINTS
ACTIVE REC. FACILITIES		10 POINTS
TOTAL	21.00 AC	100 POINTS

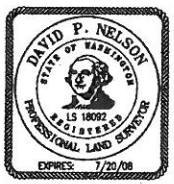
LEGEND

- SECTION CORNER AS NOTED
- QUARTER CORNER AS NOTED
- SET 1/2" REBAR & CAP
- FOUND REBAR & CAP, UNLESS OTHERWISE NOTED
- WELL
- TRAILS
- APPROXIMATE 100-YEAR FLOODPLAIN

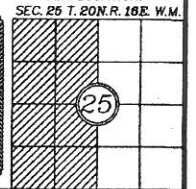
GRAPHIC SCALE

200' 0 100' 200'

(IN FEET)
1 inch = 200 ft.



INDEX LOCATION:
SEC. 25 T.20N.R. 16E. W.M.



RECORDER'S CERTIFICATE .....

Filed for record this.....day of ..... 20..... at.....M in book.....of.....at page.....at the request of .....DAVID P. NELSON.....
Surveyor's Name

.....
County Auditor

.....
Deputy County Auditor

SURVEYOR'S CERTIFICATE

This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Survey Recording Act at the request of...JOHN TAYLOR..... in....MAY.....2007.

DAVID P. NELSON 8/5/08/07.
DATE

Certificate No.....18092.....

Encompass
ENGINEERING & SURVEYING

108 EAST 2ND STREET
CLE ELUM, WA 98922
PHONE: (509) 674-7433
FAX: (509) 674-7419

PERFORMANCE BASED CLUSTER PLAT
PREPARED FOR
JOHN TAYLOR
A PORTION OF THE WEST 1/2 OF SECTION 25, TOWNSHIP 20 NORTH, RANGE 16 EAST, W.M.
KITTITAS COUNTY WASHINGTON

DWN BY	DATE	JOB NO.
M. FAIOLA	05/2007	P-07-XX
CHKD BY	SCALE	SHEET
D. NELSON	1"=200'	1 OF 2

FPARS - ARCIMS Mapping Application

DNR Home | FPARS Home | Forest Practices | FP Rules | FP Manual

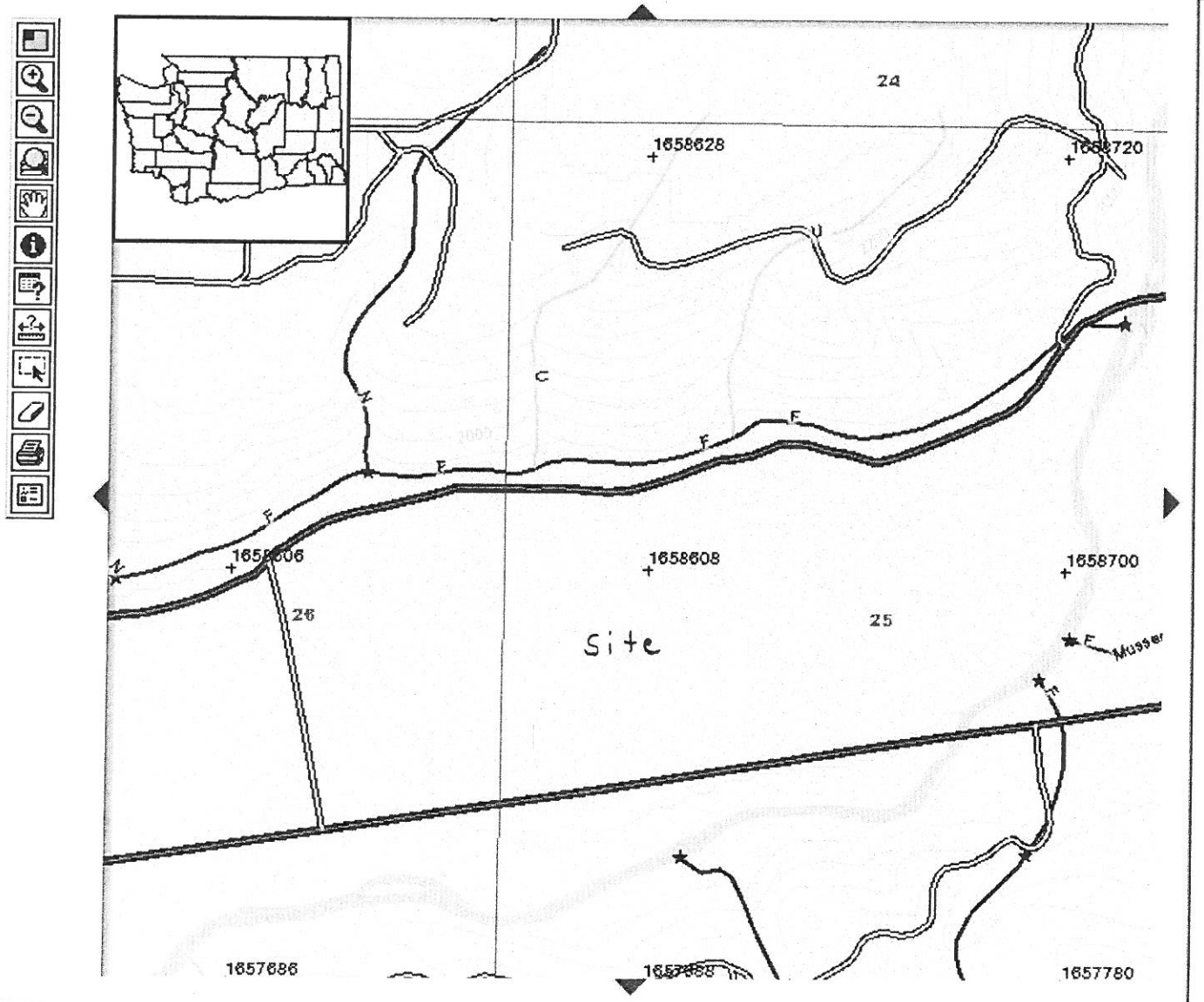
WASHINGTON STATE DEPARTMENT OF Natural Resources

Forest Practices Application Review System

Select a map: Activity Map

Legal Description: T 20 0 R 16 0 E S 25

Get Map | Refresh Site | Layers | Legend



Layers

Visible Active

- Townships
- Section Survey Lines
- Map Registration Tics
- Water Type Break
- Transportation
- WAU
- WRIA
- Streams
- Water Bodies
- Fire Shutdown Zones
- Contours - 40ft. interval
- County Boundary

Refresh Map

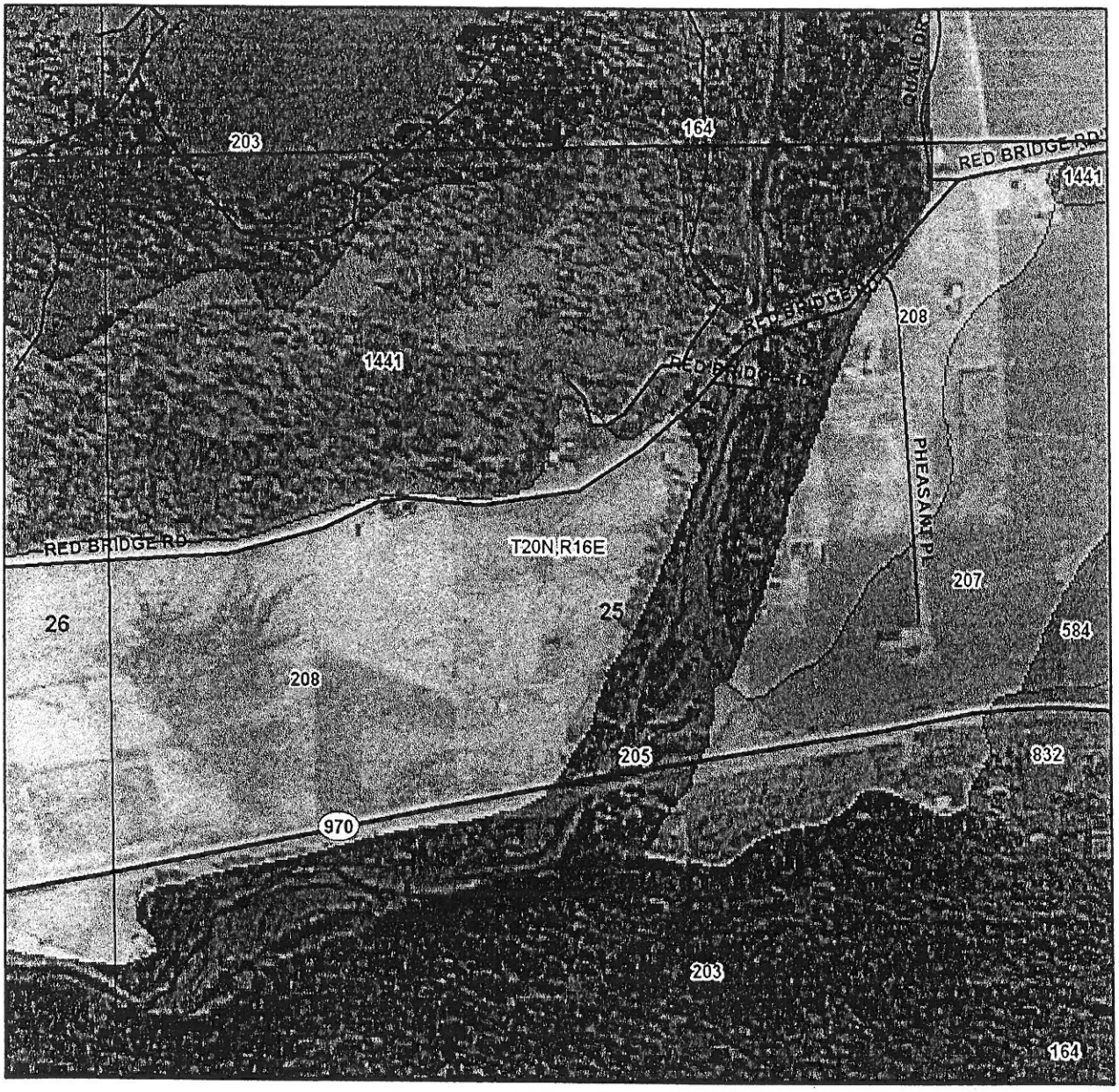
Privacy Policy | Disclaimer | Help | Webmaster

Date:5/08/2007

Soils Map

Customer(s): Ed Sewall
Sec.25;T20N;R16E

Field Office: ELLENSBURG SERVICE CENTER
Agency: USDA-NRCS
Assisted By: Allen A Aronica



The data used for this map/exhibit is provided "as is" without warranty of any kind. Further, the Natural Resource Conservation Service does not warrant, guarantee, or make any representations regarding the use of, or results from, the use of the data in terms of correctness, accuracy, reliability, currentness, or otherwise.

Map Unit Description (WA)

Kittitas County Area, Washington

208 - Patnish-Mippon-Myzel complex, 0 to 3 percent slopes

Mean annual precipitation: 25 to 40 inches Frost-free period: 80 to 110 days

Mean annual temperature: 43 to 45 degrees F Farmland class: Not prime farmland

Patnish and similar soils

Extent: about 40 percent of the unit Soil loss tolerance (T factor):
Landform(s): flood plains

erodibility group (WEG):
Slope gradient: 0 to 3 percent Wind erodibility index (WEI): 6

Parent material: alluvium mixed with volcanic ash in the upper Land capability subclass, non-irrigated: 3c
part

Land capability subclass, irrigated: 3c
Restrictive feature(s): strongly contrasting textural stratification at ed

Hydric soil class: no
Flooding frequency: occasional

Hydrologic group: B
Ponding frequency: none

Representative soil profile:	Texture	Permeability	Available Water	pH	Kw	Kf
H1 -- 0 to 7 in	ashy loam	moderate	1.1 to 1.3 in	6.1 to 7.3	.32	.32
H2 -- 7 to 14 in	ashy loam	moderate	0.8 to 1.3 in	6.1 to 7.3	.28	.37
H3 -- 14 to 27 in	loam	moderate	1.4 to 2.3 in	6.1 to 7.3	.28	.37
H4 -- 27 to 35 in	very gravelly sandy loam	moderately	0.5 to 0.9 in	6.1 to 7.3		

.20 .37

H5 -- 35 to 60 in extremely cobbly loamy sand rapid 0.5 to 1.2 in 6.1 to 7.3 .05 .20

Ecological Site / Plant Association: Douglas-fir/common snowberry/pinegrass (CDS638)

Mippon and similar soils

Extent: about 30 percent of the unit

Soil loss tolerance (T factor):

Landform(s): stream terraces

Slope gradient: 0 to 3 percent

Wind erodibility index (WEI): 8

Parent material: alluvium

Land capability subclass, non-irrigated: 6w

Restrictive feature(s): strongly contrasting textural stratification at Land capability subclass, irrigated:

Seasonal high water table: approximately 33 inches

Drainage class: moderately well drained

Flooding frequency: occasional

Ponding frequency: none

Hydric soil class: no

Hydrologic group: C

Kittitas County Area, Washington

Representative soil profile:	Texture	Available Water	Permeability	pH	Kw	Kf
Oe -- 0 to 1 in	moderately decomposed plant material		very rapid	0.4 to 0.7 in	4.5 to 5.5	
H1 -- 1 to 12 in	very cobbly loam		moderate	0.9 to 1.1 in	6.1 to 7.3	.15 .32
H2 -- 12 to 18 in	very gravelly sandy loam		very rapid	0.4 to 0.5 in	6.1 to 7.3	.10 .32
H3 -- 18 to 60 in	extremely cobbly loamy sand		very rapid	1.3 to 2.5 in	6.1 to 7.3	.05 .20

Ecological Site / Plant Association: Douglas-fir/common snowberry/pinegrass (CDS638)

Myzel and similar soils

Extent: about 25 percent of the unit

Landform(s): alluvial fans

flood plains

Slope gradient: 0 to 3 percent

Parent material: alluvium with an influence of volcanic ash in the upper part

Restrictive feature(s): none

Flooding frequency: none

Ponding frequency: none

Soil loss tolerance (T factor):

erodibility group (WEG):

erodibility index (WEI): 6

Land capability subclass, non-irrigated: 3w

Land capability subclass, irrigated: 3w

ed

Hydric soil class: no

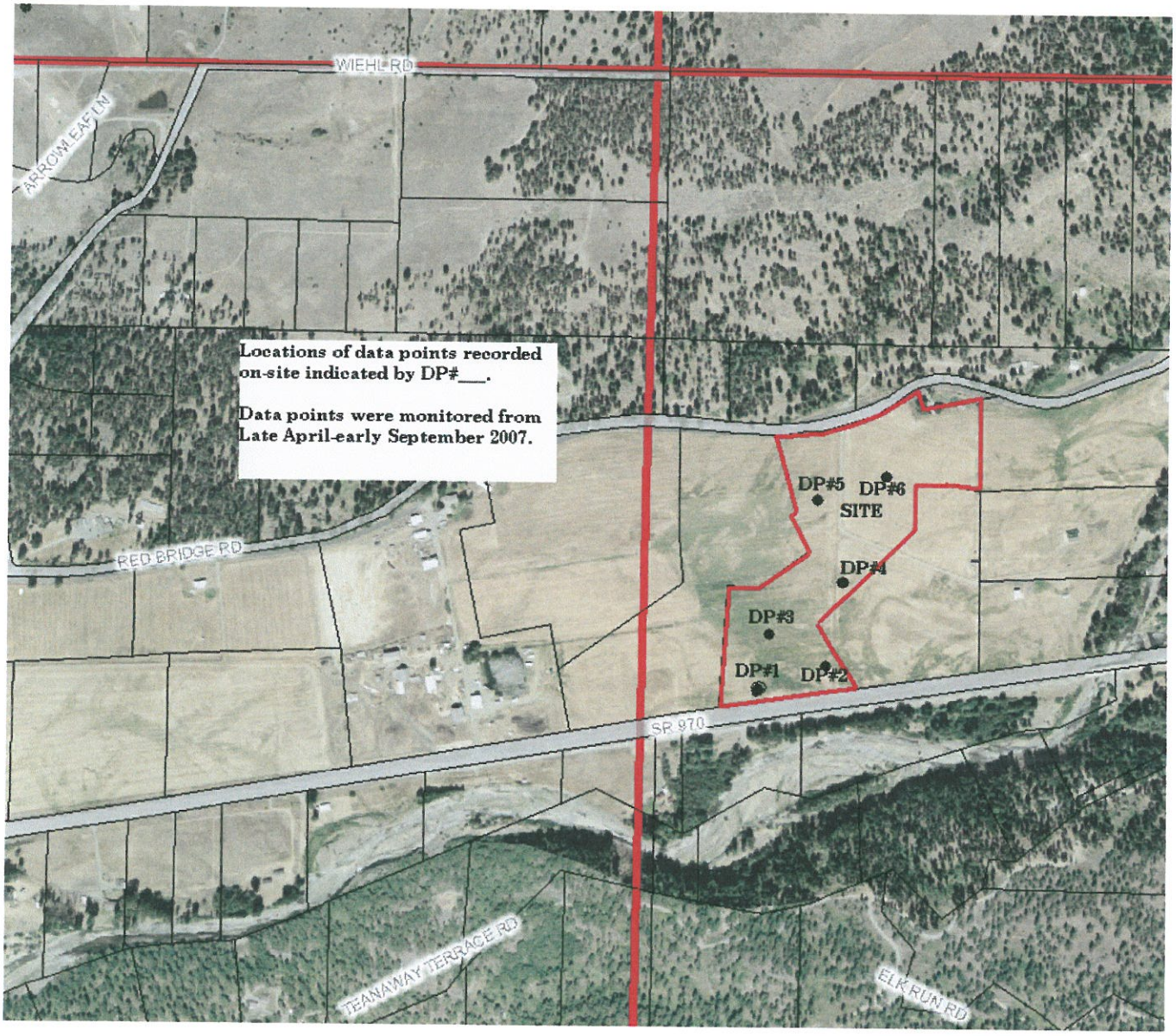
Hydrologic group: C

Available

Kf	Representative soil profile:	Texture	Permeability	Water	pH	Kw
.28 .28	H1 -- 0 to 6 in	ashy sandy clay loam	moderately	1.0 to 1.2 in	6.1 to 7.3	
.28 .28	H2 -- 6 to 22 in	ashy sandy clay loam	moderately	2.7 to 3.4 in	6.1 to 7.3	
.28 .28	H3 -- 22 to 38 in	ashy sandy clay loam	moderately	2.7 to 3.4 in	6.1 to 7.3	
.28	H4 -- 38 to 57 in	sandy clay loam	moderately	3.0 to 4.0 in	6.1 to 7.3	.20
.28	H5 -- 57 to 60 in	sandy clay loam	moderately	0.2 to 0.6 in	6.1 to 7.3	.17

Ecological Site / Plant Association: Douglas-fir/common snowberry/pinegrass (CDS638)

Survey Area Version: 0
Survey Area Version Date: 01/12/2007


WIEHL RD
ARROWLEAF LN
Locations of data points recorded on-site indicated by DP#___.
Data points were monitored from Late April-early September 2007.
DP#5
DP#6
SITE
DP#4
DP#3
DP#1
DP#2
RED BRIDGE RD
SR 970
TEANAWAY TERRACE RD
ELK RUN RD

ROUTINE WETLAND DETERMINATION DATA FORM
(*Washington State Wetlands Identification & Delineation Manual, 1997*)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

Project Name/#: Taylor Cluster Date: 4/26 → 9/3 2007 Investigator: Ed Sewall Data Point: DP# 1
Jurisdiction: Kittitas Co State: WA Atypical Analysis: Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Medicw sativa		NI	
2. Cichorum intybus		~I	
3. Cirsium arvense		~I	
4. Bromus tectorum		NI	
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 0 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments: all dryland weeds

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
16 in.	10YR 3/3		Sandy loam
___ in.			
___ in.			
___ in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: no indicators
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____, watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: no indicators dry
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y (N) Hydric soils: Y (N) Wetland hydrology: Y (N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)

ROUTINE WETLAND DETERMINATION DATA FORM
(Washington State Wetlands Identification & Delineation Manual, 1997)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

Project Name/#: Taylor Cluster Date: 4/24 → 9/3 2007 Investigator: Ed Sewall Data Point: DP #2
Jurisdiction: Kittitas Co State: WA Atypical Analysis: Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Poa bulbosa		NI	
2. Hypochaeris radicata		FACU	
3. Medicago sativa		FI	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 0 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments:

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
16 in.	10YR 3/3		compact gravelly loam
__ in.			
__ in.			
__ in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: No indicators
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____, watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: No indicators
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y (N) Hydric soils: Y (N) Wetland hydrology: Y (N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)

ROUTINE WETLAND DETERMINATION DATA FORM

(Washington State Wetlands Identification & Delineation Manual, 1997)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

Project Name/#: Taylor Cluster Date: April – Sept 2007 Investigator: Ed Sewall Data Point: DP#3
Jurisdiction: Kittitas Co State: WA Atypical Analysis: Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Medicago sativa		NI	
2. Poa bulbosa		NI	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 0 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments:

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
16 in.	10YR 3/3		compact cobbly loam
___ in.			
___ in.			
___ in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: no indicators
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____,watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: no indicators
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y(N) Hydric soils: Y(N) Wetland hydrology: Y(N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)

ROUTINE WETLAND DETERMINATION DATA FORM
(Washington State Wetlands Identification & Delineation Manual, 1997)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

April-Sept 2007

Project Name/#: Taylor Cluster | Date: | Investigator: Ed Sewall | Data Point: DP#4
Jurisdiction: Kittitas Co | State: WA | Atypical Analysis: | Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Dactylis glomerata		FACU	
2. Poa bulbosa		NI	
3. Bromus tectorum		NI	
4. Achillea millifolium		NI	
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 0 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments:

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
16 in.	10YR 3/2		sandy loam
__in.			
__in.			
__in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: no indicators
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____, watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: no indicators
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y(N) Hydric soils: Y(N) Wetland hydrology: Y(N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)

ROUTINE WETLAND DETERMINATION DATA FORM
(Washington State Wetlands Identification & Delineation Manual, 1997)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

Project Name/#: Taylor Cluster Date: April - Sept 2007 Investigator: Ed Sewall Data Point: DP#5
Jurisdiction: Kittitas Co State: WA Atypical Analysis: Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Poa bulbosa		NI	
2. Bromus tectorum		NI	
3. Medicago sativa		NI	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 0 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments:

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
4 in.	10YR 3/3		sandy loam
16 in.	7.5YR 2.5/3		
___ in.			
___ in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: no indicators
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____, watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: No indicators
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y (N) Hydric soils: Y (N) Wetland hydrology: Y (N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)

ROUTINE WETLAND DETERMINATION DATA FORM
(Washington State Wetlands Identification & Delineation Manual, 1997)

SEWALL WETLAND CONSULTING, INC.
1103 West Meeker Street
Kent, Washington 98032
(253) 859-0515

Project Name/#: Taylor Cluster | Date: April-Sept 2007 | Investigator: Ed Sewall | Data Point: DP#6
Jurisdiction: Kittitas Co | State: WA | Atypical Analysis: | Problem Area:

VEGETATION

Dominant plant species	Stratum	Indicator	Coverage %
1. Bromus tectorum		NI	
2. Phleum pratense		FAC	
3. Dactylis glomerata		FACU	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

% of species OBL, FACW and/or FAC: 33 Hydrophytic vegetation criteria met: Yes (No) Marginal
Comments: grazed + trampled

SOILS

Mapped Soil Series: Patnish-Mippon-Myzel On Hydric Soils List?: No Drainage Class:

Depth(0 in)	*Matrix color*	*Redox concentration color*	*Texture*
4 in.	10YR 3/3		compact loam
16 in.	7.5YR 2.5/3		sandy loam
in.			
in.			

Organic soil__, Histic epipedon__, Hydrogen sulfide__, gleyed__, redox concentrations__, redox depletions__, pore linings__, iron concretions__, manganese concretions__, organic matter in surface horizon (sandy soil)__, organic streaking (sandy soils)__, organic pan (sandy soil)__.
Hydric soil criteria met: Yes (No) Basis: no indicator
Comments:

HYDROLOGY

Recorded data__, inundation_____, saturation_____, watermarks_____, drift lines_____, sediment deposits_____, drainage patterns_____.
Wetland hydrology criteria met: Yes (No) Basis: no indicators
Comments:

SUMMARY OF CRITERIA

Soil Temp. at 19.7" depth:_____ Growing Season?: Yes
Hydrophytic vegetation: Y/(N) Hydric soils: Y/(N) Wetland hydrology: Y/(N)
Data point meets the criteria of a jurisdictional wetland?: Yes (No)