



DESIGN → PERMIT → MANAGE

# Stormwater Technical Memo

**To:** Celest Wilder  
**From:** Robert Balmelli PE  
**CC:** Project File  
**Date:** March 10, 2022  
**Re:** RBE No. 21045 – 2910 Jackson Drainage

---

## Project Summary

The project is to add a 3008 SF Single Family Residence and a 4000 SF Commercial Building to the 2.46 acre residential lot. The lot is currently developed and consists of two dwelling units that will be removed, and four storage buildings that will remain. The existing site is served by a gravel driveway and parking area that will remain.

The proposed site improvements were modeled using WWHM 2012 to determine the pre and post developed peak design flow rates. Because the new improvements replace existing hard surfaces, the total impervious area is not increased, therefore flow control is not required. In addition, gravel is being removed at new commercial building location which causes a reduction in the total amount of pollutant generating hard surface onsite, therefore water quality treatment is also not required. The site's original plat sheet flows all stormwater runoff to the West into the existing wetland. Runoff from the parking lot will continue to sheet flow into the Wetland area after construction to match the pre-existing conditions. Roof downspouts will be splashed blocked to the East and South and dispersed across the landscape area. Any additional roof runoff that does not infiltrate will then enter the existing swale that runs along the stream and get dispersed into the wetland area on the West end of the site.

Enclosures: WWHM Modeling Data Output  
Grading and Erosion Control Plan and Details  
NRCS Soils Survey Data



## Project Data Summary

Property Owner: Barricklow, Scott & Bonnie  
 2910 Jackson Hwy  
 Chehalis WA, 98532

Parcel No.: 010737000000  
 City Permit No. Pending  
 NRCS Soils Data: 118 – Lacamas Silt Loam, 0 to 3% slopes  
 172 – Reed Silty Clay Loam

## Project Modeling Area Summary

Applicable Criteria	Areas
Existing Site Impervious Coverage	29,621 SF
New Plus Replaced Impervious Surface	5,632 SF
Vegetation Area Converted to Lawn or Landscaped Area	6,860 SF
Impervious Surface Converted to Landscape	2,896 SF
Land Disturbing Area	17,900 SF

Based on the areas above the project triggers Minimum Requirements 1 through 5. Below is a discussion of how the project will address each minimum requirement.

### **Section 2.1 – Minimum Requirements**

#### **Minimum Requirement (MR) #1 – Stormwater Site Plans:**

The proposed project will create over 2,000 square feet of new impervious surfacing, and therefore a Stormwater Site Plan complying with minimum requirements #1 through #5 is required.

#### **MR #2 – Construction Storm Water Pollution Prevention Plan:**

All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters.

*“Projects which result in 2,000 square feet or more of new plus replaced hard surface area, or which disturb 7,000 square feet or more of land must prepare a Construction Stormwater Pollution Prevention Plan (SWPPP) as part of the Stormwater Site Plan.”*

The proposed project exceeds the thresholds of Section 2.5 and therefore a Construction Storm Water Pollution Prevention Plan is required for this project. A SWPPP has been created as a standalone document for this project and included with this Technical Memo.

**MR #3 – Source Control of Pollution:**

All known, available and reasonable source control BMPs shall be applied to the project to limit pollutants coming in contact with stormwater. The Source Control BMPs for this project will include Landscaping and Lawn/Vegetation Management.

**MR #4 – Preservation of Natural Drainage Systems/Outfalls:**

The site's natural discharge area will be maintained. The existing gravel yard area will continue to discharge to this area, the new dispersed roof runoff will also be conveyed to this area.

**MR #5 – On-Site Stormwater Management:**

Proposed stormwater discharges from the replaced impervious roof area will be dispersed through native vegetation using roof downspout splash blocks. Runoff will filter through the existing lawn and backyard area toward the existing vegetated berm. Small rainfall events will likely be infiltrated back into the soil with larger events eventually flowing along the berm westward to the existing discharge area at the western end of the site. The existing gravel yard area will continue to discharge to this area. WWHM model was ran for the pre and post developed condition. Based on the 100-year flows, the post developed condition provides a lower peak flow rate than the peak flow condition. Flow Control was deemed un-necessary.

Basin ID	Impervious Gravel Parking (acre)	Impervious Roof Area (acre)	Disturbed Pervious / Landscape (acre)	Total Area (acre)
Pre Dev. Basin	0.49	0.19	1.78	2.46
Post Dev. Basin	0.39	0.28	1.79	2.46

### WWHM Data Output:

WWHM2012  
PROJECT REPORT

---

**Project Name:** 21045 Flow Control  
**Site Name:** 2910 Jackson Drainage  
**Site Address:** 2910 Jackson Hwy  
**City :** Chehalis  
**Report Date:** 2/10/2022  
**Gage :** Olympia  
**Data Start :** 1955/10/01  
**Data End :** 2008/09/30  
**Precip Scale:** 0.80  
**Version Date:** 2021/08/18  
**Version :** 4.2.18

---

Low Flow Threshold for POC 1 : 50 Percent of the 2 Year

---

High Flow Threshold for POC 1: 50 year

---

#### PREDEVELOPED LAND USE

**Name :** Basin 1  
**Bypass:** No

**GroundWater:** No

<u>Pervious Land Use</u>	<u>acre</u>
C, Lawn, Flat	1.78

Pervious Total 1.78

<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.19
DRIVEWAYS FLAT	0.49

Impervious Total 0.68



Basin Total 2.46

---

MITIGATED LAND USE

Name : Basin 1  
 Bypass: No

GroundWater: No

<u>Pervious Land Use</u>	<u>acre</u>
C, Lawn, Flat	1.79

Pervious Total 1.79

<u>Impervious Land Use</u>	<u>acre</u>
ROOF TOPS FLAT	0.28
DRIVEWAYS FLAT	0.39

Impervious Total 0.67

Basin Total 2.46

---



---

ANALYSIS RESULTS

Stream Protection Duration

---

Predeveloped Landuse Totals for POC #1  
 Total Pervious Area:1.78  
 Total Impervious Area:0.68

---

Mitigated Landuse Totals for POC #1  
 Total Pervious Area:1.79  
 Total Impervious Area:0.67

---

## Flow Frequency Return Periods for Predeveloped. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.363259
5 year	0.512258
10 year	0.615431
25 year	0.750627
50 year	0.854739
100 year	0.96171

## Flow Frequency Return Periods for Mitigated. POC #1

<u>Return Period</u>	<u>Flow(cfs)</u>
2 year	0.360698
5 year	0.509488
10 year	0.612644
25 year	0.747941
50 year	0.852214
100 year	0.959412

## Stream Protection Duration

## Annual Peaks for Predeveloped and Mitigated. POC #1

<u>Year</u>	<u>Predeveloped</u>	<u>Mitigated</u>
1956	0.335	0.333
1957	0.635	0.632
1958	0.270	0.268
1959	0.338	0.335
1960	0.445	0.442
1961	0.317	0.315
1962	0.205	0.203
1963	0.739	0.736
1964	0.402	0.400
1965	0.353	0.351
1966	0.246	0.245
1967	0.283	0.281
1968	0.226	0.224
1969	0.218	0.215
1970	0.261	0.259
1971	0.285	0.283
1972	0.489	0.487
1973	0.253	0.251
1974	0.405	0.402
1975	0.603	0.601
1976	0.443	0.440
1977	0.446	0.442
1978	0.461	0.458
1979	0.609	0.607
1980	0.313	0.311
1981	0.598	0.596
1982	0.427	0.424
1983	0.463	0.460
1984	0.328	0.326
1985	0.211	0.208

1986	0.395	0.393
1987	0.761	0.758
1988	0.202	0.200
1989	0.355	0.353
1990	0.697	0.695
1991	0.729	0.726
1992	0.270	0.268
1993	0.176	0.174
1994	0.185	0.183
1995	0.296	0.293
1996	0.439	0.436
1997	0.348	0.345
1998	0.513	0.510
1999	0.402	0.399
2000	0.447	0.445
2001	0.211	0.209
2002	0.353	0.350
2003	0.188	0.187
2004	0.370	0.367
2005	0.304	0.302
2006	0.365	0.362
2007	0.632	0.629
2008	0.742	0.739

---

**Stream Protection Duration**

**Ranked Annual Peaks for Predeveloped and Mitigated. POC #1**

<b>Rank</b>	<b>Predeveloped</b>	<b>Mitigated</b>
1	0.7612	0.7582
2	0.7419	0.7394
3	0.7391	0.7359
4	0.7293	0.7264
5	0.6973	0.6947
6	0.6347	0.6317
7	0.6318	0.6292
8	0.6092	0.6066
9	0.6029	0.6006
10	0.5983	0.5959
11	0.5130	0.5101
12	0.4894	0.4873
13	0.4629	0.4603
14	0.4609	0.4580
15	0.4472	0.4446
16	0.4457	0.4417
17	0.4447	0.4416
18	0.4430	0.4404
19	0.4385	0.4360
20	0.4274	0.4242
21	0.4051	0.4019
22	0.4022	0.3997
23	0.4022	0.3994
24	0.3952	0.3931
25	0.3697	0.3671

26	0.3647	0.3617
27	0.3554	0.3529
28	0.3532	0.3509
29	0.3529	0.3504
30	0.3480	0.3454
31	0.3376	0.3351
32	0.3351	0.3327
33	0.3277	0.3259
34	0.3175	0.3155
35	0.3132	0.3109
36	0.3045	0.3023
37	0.2956	0.2926
38	0.2848	0.2828
39	0.2830	0.2809
40	0.2704	0.2682
41	0.2701	0.2678
42	0.2608	0.2588
43	0.2532	0.2512
44	0.2464	0.2446
45	0.2261	0.2243
46	0.2176	0.2154
47	0.2115	0.2088
48	0.2110	0.2083
49	0.2053	0.2027
50	0.2019	0.2003
51	0.1880	0.1865
52	0.1850	0.1830
53	0.1756	0.1738

---

**Stream Protection Duration**

POC #1

The Facility PASSED

The Facility **PASSED.**

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.1816	1445	1409	97	Pass
0.1884	1250	1214	97	Pass
0.1952	1100	1064	96	Pass
0.2020	971	955	98	Pass
0.2088	869	841	96	Pass
0.2156	767	747	97	Pass
0.2224	683	661	96	Pass
0.2292	613	596	97	Pass
0.2360	546	533	97	Pass
0.2428	499	484	96	Pass
0.2496	451	438	97	Pass
0.2564	413	405	98	Pass
0.2632	376	366	97	Pass
0.2700	341	336	98	Pass
0.2768	320	311	97	Pass
0.2836	282	274	97	Pass



0.2904	252	250	99	Pass
0.2972	236	231	97	Pass
0.3040	216	211	97	Pass
0.3108	204	198	97	Pass
0.3176	182	178	97	Pass
0.3244	169	166	98	Pass
0.3312	151	149	98	Pass
0.3380	139	134	96	Pass
0.3448	129	125	96	Pass
0.3516	120	115	95	Pass
0.3584	110	110	100	Pass
0.3652	104	103	99	Pass
0.3720	99	99	100	Pass
0.3788	97	95	97	Pass
0.3856	91	91	100	Pass
0.3924	85	84	98	Pass
0.3992	79	78	98	Pass
0.4060	75	74	98	Pass
0.4128	73	71	97	Pass
0.4196	69	66	95	Pass
0.4264	64	62	96	Pass
0.4332	60	60	100	Pass
0.4400	59	58	98	Pass
0.4468	55	54	98	Pass
0.4536	51	51	100	Pass
0.4604	50	49	98	Pass
0.4672	46	44	95	Pass
0.4740	43	42	97	Pass
0.4808	41	40	97	Pass
0.4876	40	40	100	Pass
0.4944	37	37	100	Pass
0.5012	36	35	97	Pass
0.5080	32	31	96	Pass
0.5148	29	29	100	Pass
0.5216	29	29	100	Pass
0.5284	29	29	100	Pass
0.5352	25	25	100	Pass
0.5420	24	24	100	Pass
0.5488	23	23	100	Pass
0.5556	22	21	95	Pass
0.5624	20	20	100	Pass
0.5692	20	18	90	Pass
0.5760	17	17	100	Pass
0.5828	15	15	100	Pass
0.5896	14	14	100	Pass
0.5964	14	13	92	Pass
0.6032	12	12	100	Pass
0.6100	11	10	90	Pass
0.6168	9	9	100	Pass
0.6236	9	9	100	Pass
0.6304	9	8	88	Pass
0.6372	7	7	100	Pass
0.6440	7	7	100	Pass

0.6508	7	7	100	Pass
0.6576	7	7	100	Pass
0.6644	7	7	100	Pass
0.6712	6	6	100	Pass
0.6780	6	5	83	Pass
0.6848	5	5	100	Pass
0.6916	5	5	100	Pass
0.6984	4	4	100	Pass
0.7052	4	4	100	Pass
0.7120	4	4	100	Pass
0.7188	4	4	100	Pass
0.7256	4	4	100	Pass
0.7324	3	3	100	Pass
0.7392	3	2	66	Pass
0.7460	1	1	100	Pass
0.7528	1	1	100	Pass
0.7596	1	0	0	Pass
0.7664	0	0	0	Pass
0.7731	0	0	0	Pass
0.7799	0	0	0	Pass
0.7867	0	0	0	Pass
0.7935	0	0	0	Pass
0.8003	0	0	0	Pass
0.8071	0	0	0	Pass
0.8139	0	0	0	Pass
0.8207	0	0	0	Pass
0.8275	0	0	0	Pass
0.8343	0	0	0	Pass
0.8411	0	0	0	Pass
0.8479	0	0	0	Pass
0.8547	0	0	0	Pass

---

Water Quality BMP Flow and Volume for POC #1  
 On-line facility volume: 0 acre-feet  
 On-line facility target flow: 0 cfs.  
 Adjusted for 15 min: 0 cfs.  
 Off-line facility target flow: 0 cfs.  
 Adjusted for 15 min: 0 cfs.

---

LID Report

LID Technique	Used for	Total Volume	Volume	Infiltration	Cumulative	Percent
Water Quality	Percent	Comment	Through	Volume	Volume	Volume
Water Quality		Treatment	Facility	(ac-ft.)	Infiltration	Infiltrated
Treated		(ac-ft)	(ac-ft)		Credit	
Total Volume Infiltrated		0.00	0.00	0.00		0.00
0.00	0%	No Treat. Credit				
Compliance		with	LID	Standard		8
Duration Analysis Result = Passed						

---

**Perln and Implnd Changes**

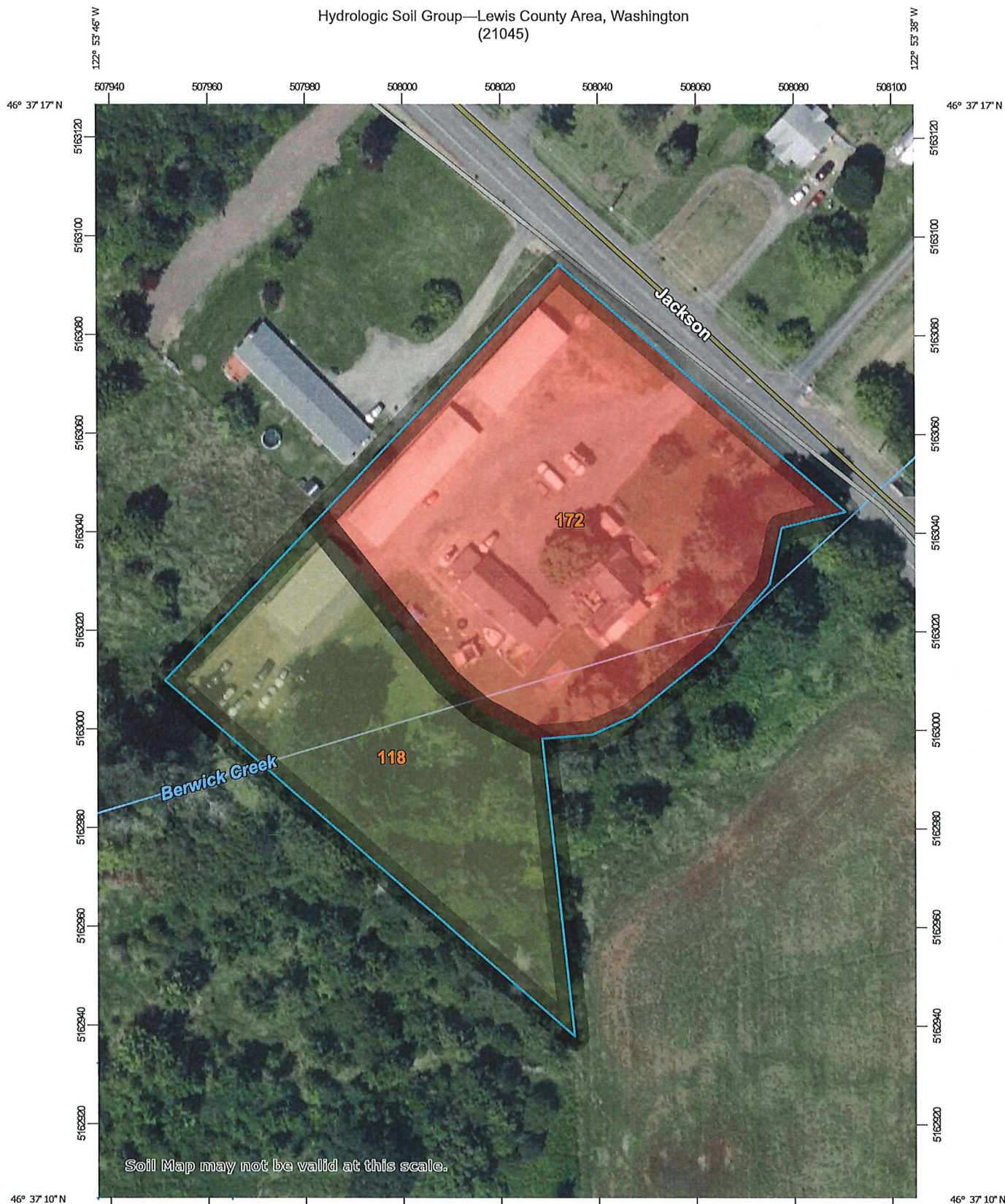
No changes have been made.

---

This program and accompanying documentation are provided 'as-is' without warranty of any kind. The entire risk regarding the performance and results of this program is assumed by End User. Clear Creek Solutions Inc. and the governmental licensee or sublicensees disclaim all warranties, either expressed or implied, including but not limited to implied warranties of program and accompanying documentation. In no event shall Clear Creek Solutions Inc. be liable for any damages whatsoever (including without limitation to damages for loss of business profits, loss of business information, business interruption, and the like) arising out of the use of, or inability to use this program even if Clear Creek Solutions Inc. or their authorized representatives have been advised of the possibility of such damages. Software Copyright © by : Clear Creek Solutions, Inc. 2005-2022; All Rights Reserved.



Hydrologic Soil Group—Lewis County Area, Washington  
(21045)



Soil Map may not be valid at this scale.

Map Scale: 1:1,080 if printed on A portrait (8.5" x 11") sheet.














































Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84





## MAP LEGEND

 Area of Interest (AOI)	 C
 Soils	 C/D
 Soil Rating Polygons	 D
 A	 Not rated or not available
 A/D	 Water Features
 B	 Streams and Canals
 B/D	 Transportation
 C	 Rails
 C/D	 Interstate Highways
 D	 US Routes
 Not rated or not available	 Major Roads
 Soil Rating Lines	 Local Roads
 A	 Background
 A/D	 Aerial Photography
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	
 Soil Rating Points	
 A	
 A/D	
 B	
 B/D	
 C	
 C/D	
 D	
 Not rated or not available	

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lewis County Area, Washington

Survey Area Data: Version 21, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 21, 2021—Nov 22, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
118	Lacamas silt loam, 0 to 3 percent slopes	C/D	0.9	38.5%
172	Reed silty clay loam	D	1.4	61.5%
<b>Totals for Area of Interest</b>			<b>2.3</b>	<b>100.0%</b>

### Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

### Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

## Lewis County Area, Washington

### 118—Lacamas silt loam, 0 to 3 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2h8l  
*Elevation:* 250 to 1,200 feet  
*Mean annual precipitation:* 40 to 70 inches  
*Mean annual air temperature:* 48 to 50 degrees F  
*Frost-free period:* 125 to 200 days  
*Farmland classification:* Prime farmland if drained

#### Map Unit Composition

*Lacamas, drained, and similar soils:* 60 percent  
*Lacamas, undrained, and similar soils:* 30 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Lacamas, Drained

##### Setting

*Landform:* Flood plains, terraces

##### Typical profile

*H1 - 0 to 7 inches:* silt loam  
*H2 - 7 to 17 inches:* silt loam  
*H3 - 17 to 27 inches:* silty clay  
*H4 - 27 to 60 inches:* clay

##### Properties and qualities

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low  
(0.00 in/hr)  
*Depth to water table:* About 12 to 18 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.8 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* C/D  
*Ecological site:* F001XC003OR - Mesic Aquic Forest  
*Forage suitability group:* Seasonally Wet Soils (G002XV202WA)  
*Other vegetative classification:* Seasonally Wet Soils  
(G002XV202WA)  
*Hydric soil rating:* Yes



## Description of Lacamas, Undrained

### Setting

*Landform:* Flood plains, terraces

### Typical profile

*H1 - 0 to 7 inches:* silt loam

*H2 - 7 to 17 inches:* silt loam

*H3 - 17 to 27 inches:* silty clay

*H4 - 27 to 60 inches:* clay

### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Very low  
(0.00 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 6.8  
inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* C/D

*Ecological site:* F001XC003OR - Mesic Aquic Forest

*Forage suitability group:* Seasonally Wet Soils (G002XV202WA)

*Other vegetative classification:* Seasonally Wet Soils  
(G002XV202WA)

*Hydric soil rating:* Yes

### Minor Components

#### Klaber

*Percent of map unit:* 5 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

#### Prather

*Percent of map unit:* 3 percent

*Hydric soil rating:* No

#### Scamman

*Percent of map unit:* 2 percent

*Landform:* Terraces

*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Lewis County Area, Washington

Survey Area Data: Version 21, Aug 31, 2021

## Lewis County Area, Washington

### 172—Reed silty clay loam

#### Map Unit Setting

*National map unit symbol:* 2hbk

*Elevation:* 30 to 500 feet

*Mean annual precipitation:* 40 to 80 inches

*Mean annual air temperature:* 50 to 54 degrees F

*Frost-free period:* 150 to 200 days

*Farmland classification:* Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

#### Map Unit Composition

*Reed, drained, and similar soils:* 95 percent

*Minor components:* 5 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Reed, Drained

##### Setting

*Landform:* Flood plains, terraces

##### Typical profile

*H1 - 0 to 6 inches:* silty clay loam

*H2 - 6 to 14 inches:* silty clay loam

*H3 - 14 to 60 inches:* clay

##### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water*

*(Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)

*Depth to water table:* About 18 to 36 inches

*Frequency of flooding:* NoneFrequent

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* High (about 10.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 5w

*Hydrologic Soil Group:* D

*Ecological site:* F002XA008WA - Puget Lowlands Riparian Forest

*Forage suitability group:* Wet Soils (G002XV102WA)

*Other vegetative classification:* Wet Soils (G002XV102WA)

*Hydric soil rating:* Yes

### Minor Components

#### **Chehalis**

*Percent of map unit:* 4 percent

*Hydric soil rating:* No

#### **Alvor**

*Percent of map unit:* 1 percent

*Landform:* Terraces

*Hydric soil rating:* Yes

## Data Source Information

Soil Survey Area: Lewis County Area, Washington

Survey Area Data: Version 21, Aug 31, 2021