WETLAND DELINEATION REPORT AND SURFACE WATER EVALUATION

South Inland Empire Way Improvements
associated with the
Latah Glen Residential Community
S36, T25N, R42E

April 2025

Prepared by:
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EXECUTIVE SUMMARY AND FINDINGS

Environmental Inc. completed this Wetland Delineation Report and Surface Water Evaluation (Report) for the Latah Glen Residential Community (Project) on Spokane County Parcel #s 25361.0004 and 25364.0001 (Property) and the South Inland Empire Way Improvements located in the adjacent Washington Department of Transportation right-of-way (ROW) and adjacent parcel number 25361.0004. No wetland areas will be impacted or disturbed. Wetland buffer disturbances will occur, and buffer enhancement/restoration will ensure no net loss of wetland buffer functions and values will occur.

This Wetland Delineation was completed on behalf of and for the exclusive use of the client and/or its agents, consultants, and contractors. The scope of services performed to complete this report may not be appropriate to satisfy the needs of other users, and any other use or re-use of this report is at the sole risk of said user. The findings and conclusions contained in this report are based upon the currently accepted legal and regulatory requirements, agency guidance, and the best professional judgment of the preparer. The findings presented herein apply to those conditions observed on the site at the time of the evaluation. The timing of the field evaluation may not always coincide with the growing season, identifiable phenological stages of vegetation, or during the hydrological active (wet) season. Often time's secondary indicators, interpretation of vegetation and hydrology indicators and best professional judgment may be required to determine the presence or absence of wetlands. Future environmentally significant changes may occur at the site, which could result in future findings and conclusions differing from those contained in this report.

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1. INTRODUCTION

Environmental Inc. completed this Wetland Delineation Report and Surface Water Evaluation (Report) for the Latah Glen Residential Community (Project) on Spokane County Parcel #s 25361.0004 and 25364.0001 (Property) and the South Inland Empire Way Improvements located in the adjacent Washington Department of Transportation right-of-way (ROW) and adjacent parcel number 25361.0004. The Property is located in Spokane County, Washington in Section 36, Township 25N, Range 42E (Figure 1 Vicinity Map). This Wetland Delineation Report (Report) is based upon the requirements and definitions contained within Chapter 17E.070 Wetlands Protection of the Spokane Municipal Code (SMC).

The proposed development, Latah Glen Residential Community, encompasses the platting of approximately 39.44 acres into 142 single-family residential lots. The project scope includes the construction of public roadways and public utilities, and associated infrastructure improvements.

Primary access to the site will be through the extension of South Inland Empire Way through parcel number 25361.0004 (addressed as 3504 South Inland Empire Way) and improvements to the gravel road South Inland Empire Way through Washington State Route 195 Right of Way. Improvements to South Inland Empire Way will include full paving of the roadway, a five-foot-wide sidewalk along the east side, and a ten-foot-wide swale separating the sidewalk from the paved surface. Right-of-way dedication through parcel 25361.0004 (addressed as 3504 South Inland Empire Way) will be completed by the project developer.

A previous Wetland Delineation Report and Surface Waters Evaluation was completed in 2021. This updated 2025 Report is being completed to include the South Inland Empire Way Improvements.

1.1 Purpose

The purpose of the study was to document the presence or absence and extent of wetlands or surface waters located on the Property, adjacent to the Property, or within the vicinity of the South Inland Empire Way Improvement and determine jurisdictional status and regulatory requirements based upon the findings.

1.2 Regulatory Requirements

This Report delineates, describes, and maps the presence and extent of wetlands, jurisdictional waters of the United States and non-jurisdictional surface waters based upon definitions in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory. 1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region or Arid West (U.S. Army Corps of Engineers. 2008); Washington State Wetlands Identification and Delineation Manual (DOE. 1997); and Chapter 17E.070 Wetlands Protection of the Spokane Municipal Code.

Federal

Local, state and federal regulations apply to activities in and near wetlands. The Clean Water Act is a federal act that regulates the placement of fill in jurisdictional wetlands and waters of the United States. Section 404 of the Clean Water Act requires permits for filling jurisdictional wetlands and waters of the United States. Section 404 permits must be administered by the United States Army Corps of Engineers (USACE) and certified by the state agency (as outlined in Section 401 of the Clean Water Act). Work

within the boundaries of jurisdictional wetlands or the ordinary high water mark of waters of the United States are regulated under the USACE permitting process.

The USACE defines wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Generally, this definition requires the three parameters of hydrophytic vegetation, hydric soils, and wetland hydrology be simultaneously present. The USACE only regulates jurisdictional wetlands. Wetlands are considered jurisdictional by the USACE if they are closely associated with jurisdictional waters of the United States. The term waters of the United States has a broad meaning and incorporates both deepwater aquatic habitats and special aquatic sites, including wetlands, as follows:

a. The territorial seas;

b. Coastal and inland waters, lakes, rivers, and streams that are navigable waters of the United States, including adjacent wetlands;

c. Tributaries to navigable waters of the United States, including adjacent wetlands;

d. Interstate waters and their tributaries, including adjacent wetlands; and

e. All other waters of the United States not identified above, the degradation of or destruction of which could affect interstate commerce.

Final determination of jurisdictional wetlands and waters of the United States is subject to approval by the USACE. Wetlands and surface waters that are not under USACE jurisdiction may still require permits from local, county, or state agencies.

State

The Washington State Department of Ecology (DOE) defines and regulates wetlands as described in Washington State Wetlands Identification and Delineation Manual and Wetland Rating System for Eastern Washington (Hruby, T. 2014). The DOE wetland definition is based on the USACE wetland definition and includes areas where hydrophytic vegetation, hydric soils, and wetland hydrology are simultaneously present.

Local

Defined in Chapter 17E.070 Wetlands Protection of the Spokane Municipal Code.

2. METHODOLOGY

The analysis for wetlands conducted on this site is based on the routine (on-site) methodology of the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987) and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region or Arid West. This method requires that evidence of three parameters (hydrophytic vegetation, hydric soils, and wetland hydrology) be simultaneously present for a wetland determination (specific and problematic situations may not always require all three parameters be present simultaneously at the time of the onsite investigation).

Two levels of information, preliminary site research and a site-specific investigation have been gathered for this analysis for the purposes of determining the presence and extent or absence of wetlands and water bodies.

2.1 Preliminary Research

Environmental Inc. conducted a review of existing information to develop background knowledge of physical features and to identify the potential for wetland occurrence on or within the vicinity of the Property. The following information related to topography, drainage, and water features was obtained for preliminary review of the site conditions:

- National Wetland Inventory (NWI)/Spokane County Scout Map (Figure 2);
- Washington Department of Ecology Water Quality Atlas (Figure 3);
- Aerial Images showing 1 kilometer area (Figure 4);
- NRCS Web Soil Survey (Figure 5), and
- NRCS WETS precipitation data (Figure 6.).

2.2 Site Specific Investigation

An initial site investigation was completed on 5/18/21, follow up site investigations were completed on 3/31/25 and 4/4/25. Four data plots (DP) were established to evaluate for the three-wetland parameters of hydrology, hydric soils, and hydrophytic vegetation (Photographs 1-4; Appendix A. Wetland Data Forms). In addition to the DP's, the Property and adjacent areas were visually inspected (no associated DP's) for the three wetland parameters of hydrology, hydric soils, and hydrophytic vegetation as necessary to assist in identifying and determining wetland boundaries.

2.2.1 Data Plot 1

Data Plot 1 (DP1) did not meet the three wetland parameters and was not located within a wetland. DP1 was located within the ROW in a disturbed area. Approximately three plus feet of soil had recently been removed from this location (as shown on Figure 7. South Inland Empire Way Improvement Cross Section; and Figure 8. South Inland Empire Way Improvement Wetland Delineation), as such an atypical data form was utilized at DP1.

<u>Hydrology</u>

The United States Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Western Mountains, Valleys and Coast Region (Wetland Manual) identifies wetland hydrology indicators. According to the Wetland Manual and in order to meet wetland hydrology indicators, a water table or soil saturation is required within 12 inches or less of the surface. Under normal circumstances, and prior to the removal of approximately three plus feet of soil, wetland hydrology indicators would not be present at DP1. Based on topographical contours of the area prior to soil removal, the area was on a slope, and the water table was greater than three feet below the surface. Surface water would not be present on the sloped area, nor would any of the other wetland hydrology indicators be present on the sloped area as indicated by adjacent and/or undisturbed areas on similar elevation or contours. As such, wetland hydrology was not present at DP1.

<u>Soils</u>

The Wetland Manual states for most soils, the recommended excavation depth of a soil data plot is approximately 20 inches from the soil surface. Pre-disturbed soil evaluation was not possible at DP1 due to the removal of three plus feet of soil. Undisturbed native soils and soils at what would have been equivalent elevational contours in the immediate vicinity were examined and did not meet any of the hydric soil requirements. As such, hydric soils were not present at DP1.

Vegetation
Previous vegetation is unknown, however based upon historical aerial images and adjacent areas of similar topographical elevations and contours, vegetation could be similar to what was present at the data plot 3 location. As such, hydrophytic vegetation was not likely present.

2.2.2 Data Plot 2

Data plot 2 (DP2) met the three wetland parameters and was located within a wetland boundary.

Hydrology
Surface water and saturated soils were observed at DP2.

Soils
Hydric soils indicators were present at DP2.

Vegetation
Hydrophytic vegetation was present at DP2.

2.2.3 Data Plot 3

Data plot 3 (DP3) did not meet the three wetland parameters and was located within a wetland boundary.

Hydrology
Wetland hydrology was not observed at DP3.

Soils
Hydric soils indicators were not present at DP3.

Vegetation
Hydrophytic vegetation was not present at DP3.

2.2.3 Data Plot 4

Data plot 4 (DP4) did not meet the three wetland parameters and was located within a wetland boundary.

Hydrology
Wetland hydrology was not observed at DP4.

Soils
Hydric soils indicators were not present at DP4.

Vegetation
Hydrophytic vegetation was present at DP4.

3. RESULTS

One wetland area was identified in the vicinity of the South Inland Empire Way Improvements (Figure 8. South Inland Empire Way Improvement Wetland Delineation). No wetlands were identified on the Latah Glen Residential Community Development Property. The wetland boundary was identified based upon physical observation of the three wetland parameters, existing topographical data and aerial photograph interpretation. The wetland boundary was flagged, Storhaug Engineering subsequently surveyed the flagged wetland boundary.

The wetland is a palustrine emergent slope/depressional wetland area located on the adjacent parcel northwest of the Property and adjacent to the ROW. This wetland flows under State Route 195 in a culvert and appears to be connected via surface water to Hangman Creek. As such, this wetland is likely jurisdictional under Section 404 of the Clean Water Act. Final jurisdictional determination is made by the United States Army Corps of Engineers.

Wetland Rating

Wetland ratings were based upon the 2014 Washington State Wetland Rating System for Eastern Washington and definitions identified in Chapter 17E.070 Wetlands Protection of the Spokane Municipal Code. This wetland was rated as a depressional wetland and is rated as a Category III wetland (Appendix B. Wetland Rating Form).

Wetland Buffer

This wetland is a Category III wetland with a recommended 150 foot buffer based upon regulations outlined in Chapter 17E.070 Wetlands Protection of the Spokane Municipal Code. (Figure 8. South Inland Empire Way Improvement Wetland Delineation).

Impacts

No wetland impacts will occur; no dredging, no placement of fill within the wetland boundary or temporary disturbances within the wetland boundary will occur.

Approximately 22,000 square feet (sf) of wetland buffer will be disturbed (Figure 9. South Inland Empire Way Proposed Improvements).

4. WETLAND BUFFER RESTORATION

Impacts were avoided and minimized to the extent practicable. Impacts to the wetland were avoided entirely. Impacts to the associated wetland buffer were minimized by keeping the project footprint to the minimum necessary to meet the purpose and needs of the improvements. Unavoidable wetland buffer disturbances will be mitigated through wetland buffer restoration.

Approximately 22,000 square feet of wetland buffer will be restored and enhanced (Planting Area) to ensure no net loss of wetland buffer functions and values occurs. The Planting Area will be re-seeded with a native upland seed mix and re-planted with 100 trees and shrubs (Figure 10. Planting Plan Area).

Planting Specifications

A total of 100 plantings will be installed within the Planting Area. The quantity of plantings was determined by using 15 foot spacing (225 sf per planting) between plantings extrapolated over the 22,000 sf Mitigation Planting Area (22,000/225=100). All proposed mitigation plants are native to Spokane County.

The following quantity, species and size will be utilized for planting. As needed, modifications may be required due to planting stock availability. The city of Spokane will be notified in writing should any species substitutions be required due to availability.

Proposed Plantings:

- Sixteen (16) black cottonwood (*Populus trichocarpa*) one inch caliper in size;
- Forty-one (41) serviceberry (*Amelanchier alnifolia*) two-gallon container stock; and
- Forty-three (43) wood's rose (*Rosa woodsii*) two-gallon container stock.

Specifications:

- The boundaries of the Planting Area are identified on the Planting Plan, the corners of the Planting Area shall be staked on site.
- Fifteen foot spacing was utilized to determine planting quantities. Actual placement of plants may vary based upon site conditions utilizing in part a "fit in the field approach" in which best professional judgment will be utilized to maximize species survivorship and species contribution to the overall functions and values of the site. This may include grouping of plants within the Planting Area.
- Mitigation plantings shall occur in the first fall upon completion of the South Inland Empire Way Improvements.
- Hand watering or irrigation may be necessary during the first few years and/or during the drier seasons to ensure higher survivorship.
- Additional specifications are identified on the Planting Plan (Figure 10).

Re-seeding

The Planting Area will be re-seeded with a Dryland Mix: "Inland Northwest Native Mix" at approximately 1 pound per 1,000 sf. This dryland mix consists of:

- Mountain Brome (*Bromus carinatus*),
- Idaho Fescue (*Festuca idahoensis*),
- Bluebunch Wheatgrass (*Pseudoroegneria spicata*),
- Slender Wheatgrass (*Elymus trachycaulus*),
- Sherman Big Bluegrass (*Poa secunda*).

Re-seeding will be completed in accordance with the specifications on the Planting Plan (Figure 10).

Monitoring

Plantings will be monitored annually for three years to ensure survival rates are sufficient to meet the goals and objectives. The overall goals and objectives of the buffer enhancement/restoration are to restore and enhance the wetland buffer area. The goals and objectives will be accomplished by achieving an overall survivorship of 75% of the plantings (100 plantings x 75% = 75 plantings) at the end of the three year monitoring period.

In the event the overall survivorship falls below 75% during the monitoring period, additional plantings will be placed to ensure the overall survivorship numbers are at or above the 75% goal.

Annual monitoring will occur in years 1, 2 and 3 following the installation of the plantings. Annual monitoring reports will document the number of surviving plantings by species, photo documentation as necessary and will include any recommendations or contingency actions should survivorship fall below 75%. Annual monitoring reports will be submitted to the city of Spokane prior to December 1st in years 1, 2 and 3 following the implementation of the plantings.

5. REGULATORY DOCUMENTS

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* FWS/OBS-79/31. Office of Biological Services, USFWS, Washington D.C.

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Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1973. *Vascular Plants of the Pacific Northwest*. University of Washington Press. Seattle, Washington.

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Hruby, T. 2004. Washington State wetland rating system for eastern Washington – Revised. Washington State Department of Ecology Publication # 04-06-15.

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U.S. Fish and Wildlife Service. 2016. *National List of Vascular Plant Species that Occur in Wetlands: Summary*. United States Department of the Interior, United States Fish and Wildlife Service. Washington D.C.

U.S. Fish and Wildlife Service. 2018. *National Wetlands Inventory (NWI). Wetlands Mapper*, United States Department of Interior. U.S. Fish and Wildlife Service. Washington D.C.

U.S. Geological Survey. 2006. 1:24,000. United States Geological Survey Denver, Colorado. Maptech, Inc. 1998. Version 3.01 Greenland, New Hampshire.

U.S. Geologic Survey (USGS). 1998. *USGS Topographic, 7.5 minute series topographic maps*. Maptech, Inc. Version 3.01 Greenland, New Hampshire

Washington Department of Ecology (DOE). 1997. Washington State Wetlands Delineation and Identification Manual.

Washington Department of Ecology (DOE). 2014. Eastern Washington Wetland Rating System.

Photograph 1. Data Plot 1 Location

Photograph 2. Data Plot 2 Location

Photograph 3. Data Plot 3 Location

Photograph 4. Data Plot 4 Location

Figure 1. Vicinity Map

Parcel Numbers 25361.0004 and 25364.0001

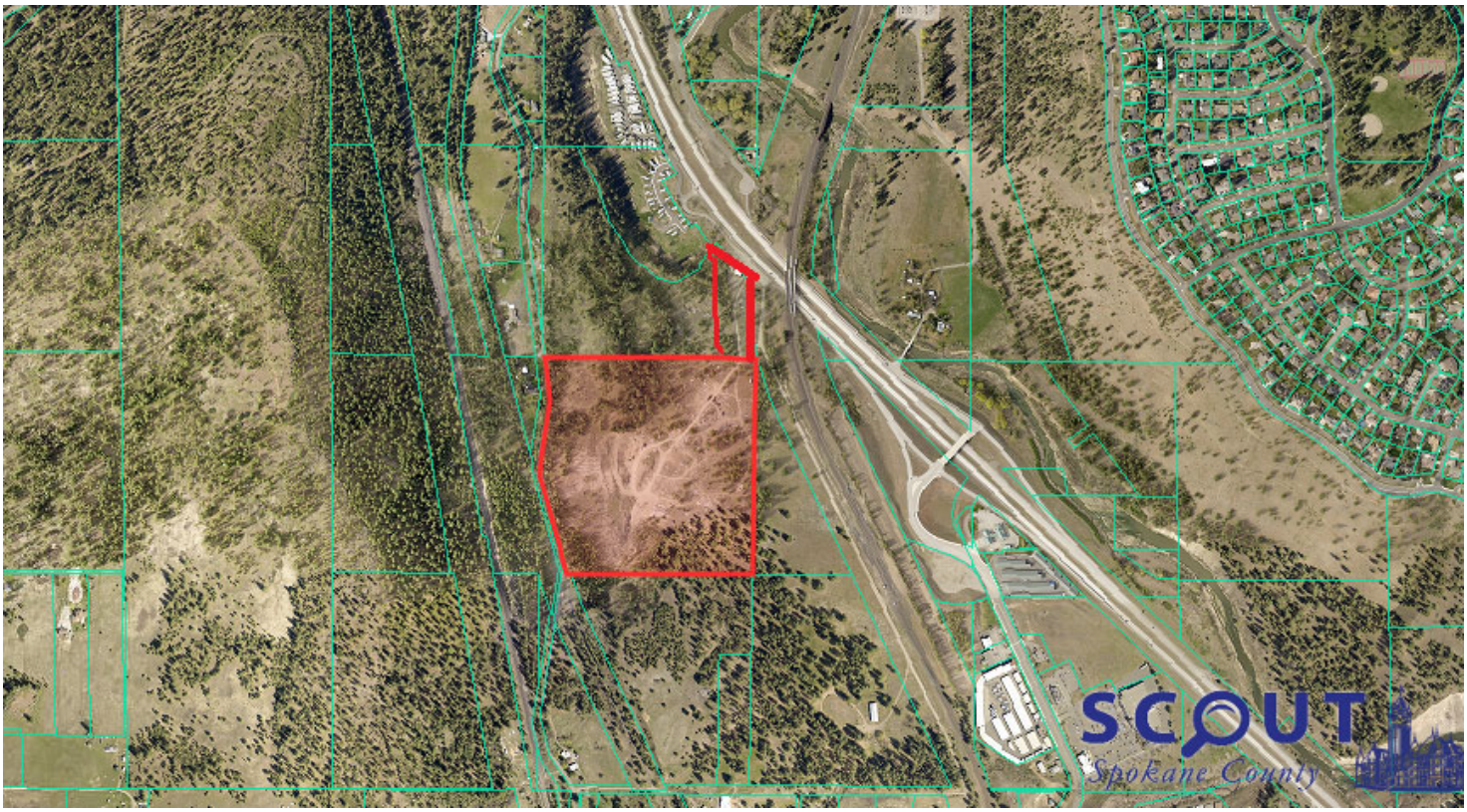
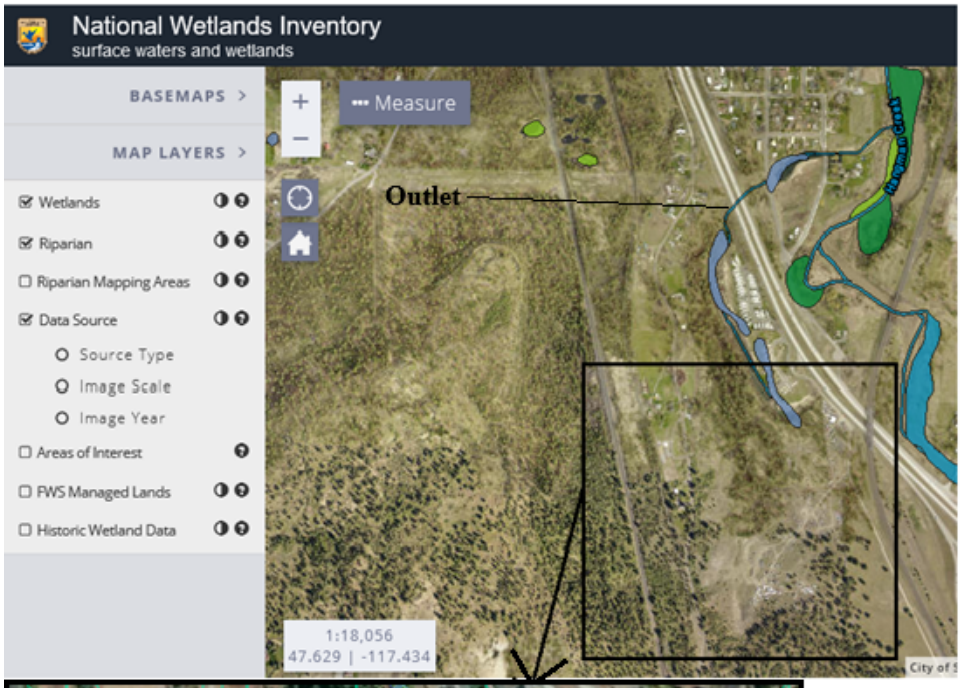


Figure 2. National Wetland Inventory /Spokane County Interactive Map



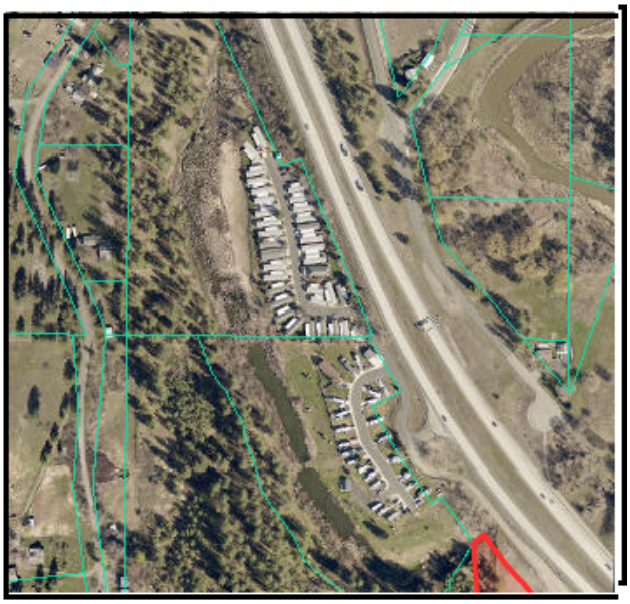
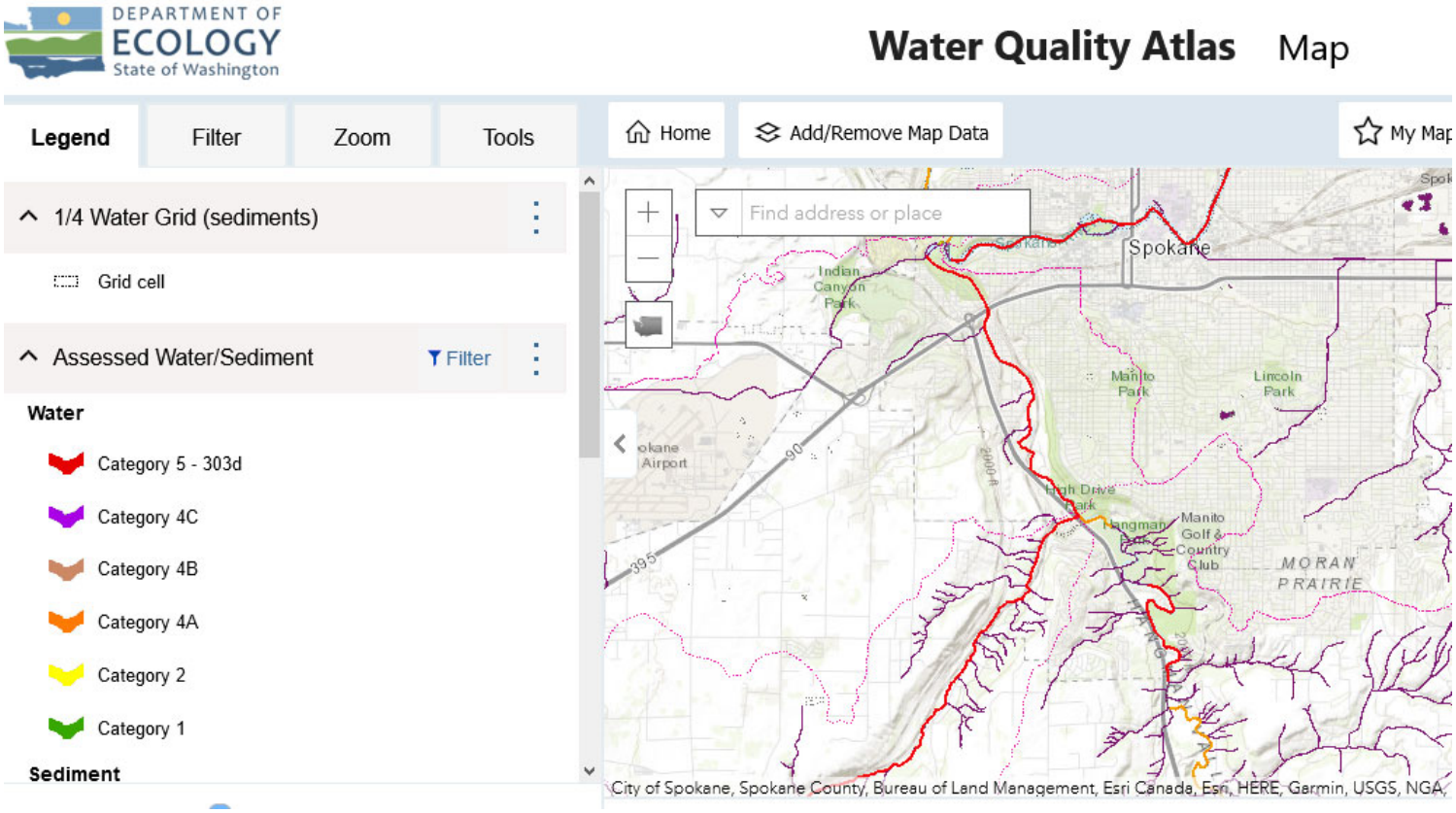


Figure 3. Washington Department of Ecology Water Quality Atlas



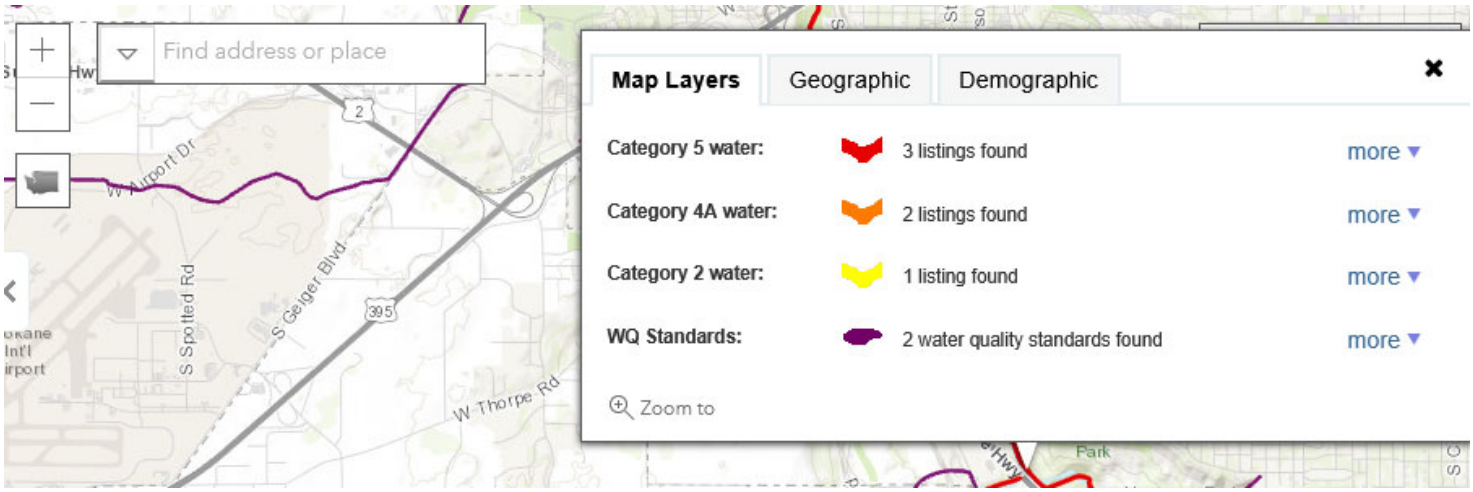


Figure 4. Aerial Images showing 1 kilometer area

Figure 5. NRCS Web Soil Survey

Map Scale: 1:4,670 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

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: Spokane County, Washington
Survey Area Data: Version 16, Aug 26, 2024

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

Date(s) aerial images were photographed: May 9, 2022—Aug 15, 2022

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.

Map Unit Legend

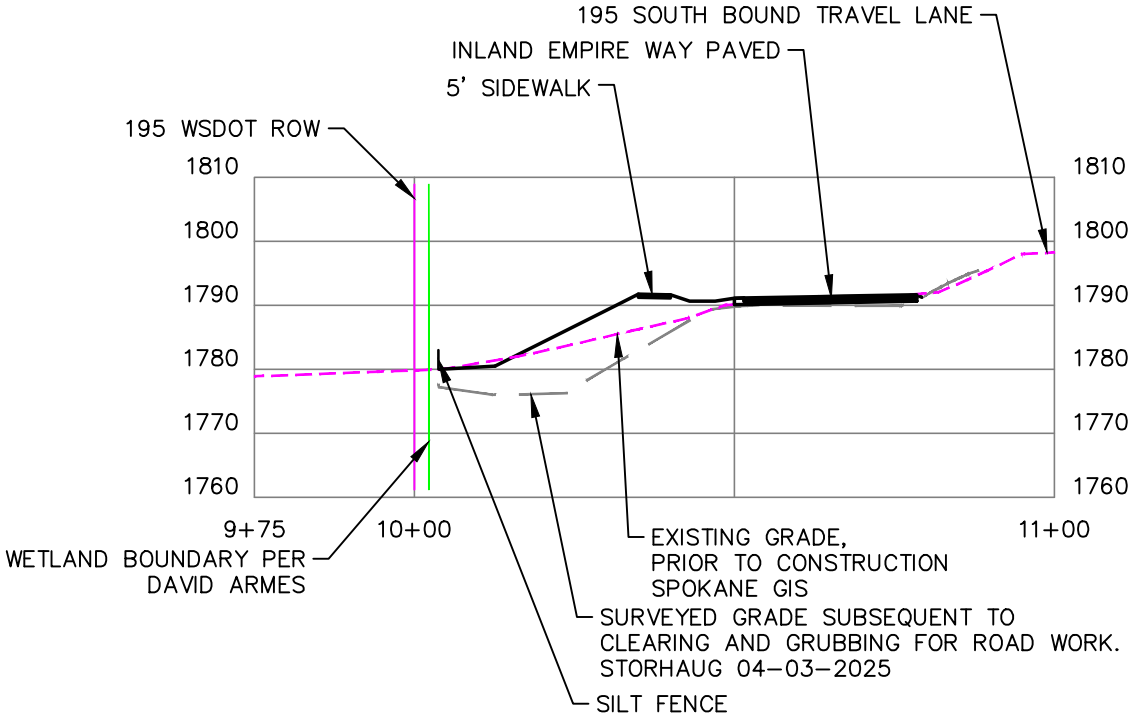
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1200	Endoaquolls and Fluvaquents, 0 to 3 percent slopes	4.3	4.0%
3055	Clayton-Hagen complex, 8 to 25 percent slopes	4.3	4.0%
3057	Hagen ashy sandy loam, 3 to 8 percent slopes	0.7	0.7%
3120	Marble loamy sand, 0 to 8 percent slopes	60.1	56.0%
3121	Marble loamy sand, 8 to 15 percent slopes	6.5	6.0%
3122	Marble loamy sand, 15 to 30 percent slopes	24.5	22.8%
3123	Marble loamy sand, 30 to 55 percent slopes	5.8	5.4%
4032	Lakespring ashy loam, 8 to 25 percent slopes	1.2	1.1%
Totals for Area of Interest		**107.3**	**100.0%**

Figure 6. NRCS WETS

Monthly Total Precipitation for SPOKANE 5.5 S, WA (CoCoRaHS)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	M	M	M	M	M	M	M	M	M	M	M	M	M
2001	M	M	M	M	M	M	M	M	M	M	M	M	M
2002	M	M	M	M	M	M	M	M	M	M	M	M	M
2003	M	M	M	M	M	M	M	M	M	M	M	M	M
2004	M	M	M	M	M	M	M	M	M	M	M	M	M
2005	M	M	M	M	M	M	M	M	M	M	M	M	M
2006	M	M	M	M	M	M	M	M	M	M	M	M	M
2007	M	M	M	M	M	M	M	M	M	M	M	M	M
2008	M	M	M	M	M	M	0.05	M	0.74	0.40	M	M	M
2009	M	0.85	M	M	M	1.18	0.54	1.25	0.80	M	M	2.38	M
2010	2.09	1.46	M	1.72	1.56	M	M	0.19	1.44	1.75	3.17	M	M
2011	M	0.90	3.15	2.22	2.53	1.00	0.57	0.00	M	1.02	1.58	1.11	M
2012	2.18	1.87	4.38	1.62	1.47	M	0.75	0.16	0.01	1.60	2.51	2.23	M
2013	0.82	0.66	M	1.09	1.30	2.40	T	1.45	2.02	0.29	M	0.73	M
2014	0.79	1.83	3.12	0.95	0.86	1.66	0.57	0.63	0.13	1.48	1.69	1.95	15.66
2015	2.07	1.12	2.72	0.93	0.50	0.10	0.99	0.28	0.48	0.73	1.46	M	M
2016	M	0.83	3.32	0.66	1.33	0.83	0.34	0.42	0.50	8.08	2.09	1.30	M
2017	1.86	4.66	3.58	1.25	1.19	1.06	T	0.01	1.37	2.17	3.36	M	M
2018	2.73	1.52	M	M	1.33	0.68	0.02	0.18	0.04	1.68	2.14	M	M
2019	1.72	2.46	0.43	M	1.91	0.43	0.57	0.49	2.26	1.99	0.57	2.05	M
2020	3.19	0.85	0.76	0.58	3.04	1.12	0.26	0.05	0.32	2.06	1.90	2.29	M
2021	2.70	0.72	0.47	0.24	0.15	0.60	0.03	0.09	0.79	1.58	2.38	1.23	10.98
2022	1.92	0.72	1.54	0.95	2.23	3.04	0.60	0.04	0.75	0.53	2.59	3.73	18.64
2023	1.49	0.73	0.87	1.60	2.09	0.77	0.09	0.80	0.94	0.47	2.34	3.88	M
2024	2.32	1.90	1.20	0.76	M	1.05	0.08	0.24	0.04	0.90	4.08	4.43	M
2025	1.50	2.50	1.79	M	M	M	M	M	M	M	M	M	M
Mean	1.96	1.50	2.10	1.12	1.54	1.14	0.34	0.39	0.79	1.67	2.28	2.28	15.09

Figure 7. South Inland Empire Way Improvement Cross Section



HORIZONTAL GRAPHIC SCALE
0 15 30
(IN FEET)
1 inch = 30 ft.

VERTICAL GRAPHIC SCALE
0 15 30
(IN FEET)
1 inch = 30 ft.

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INLAND EMPIRE WAY

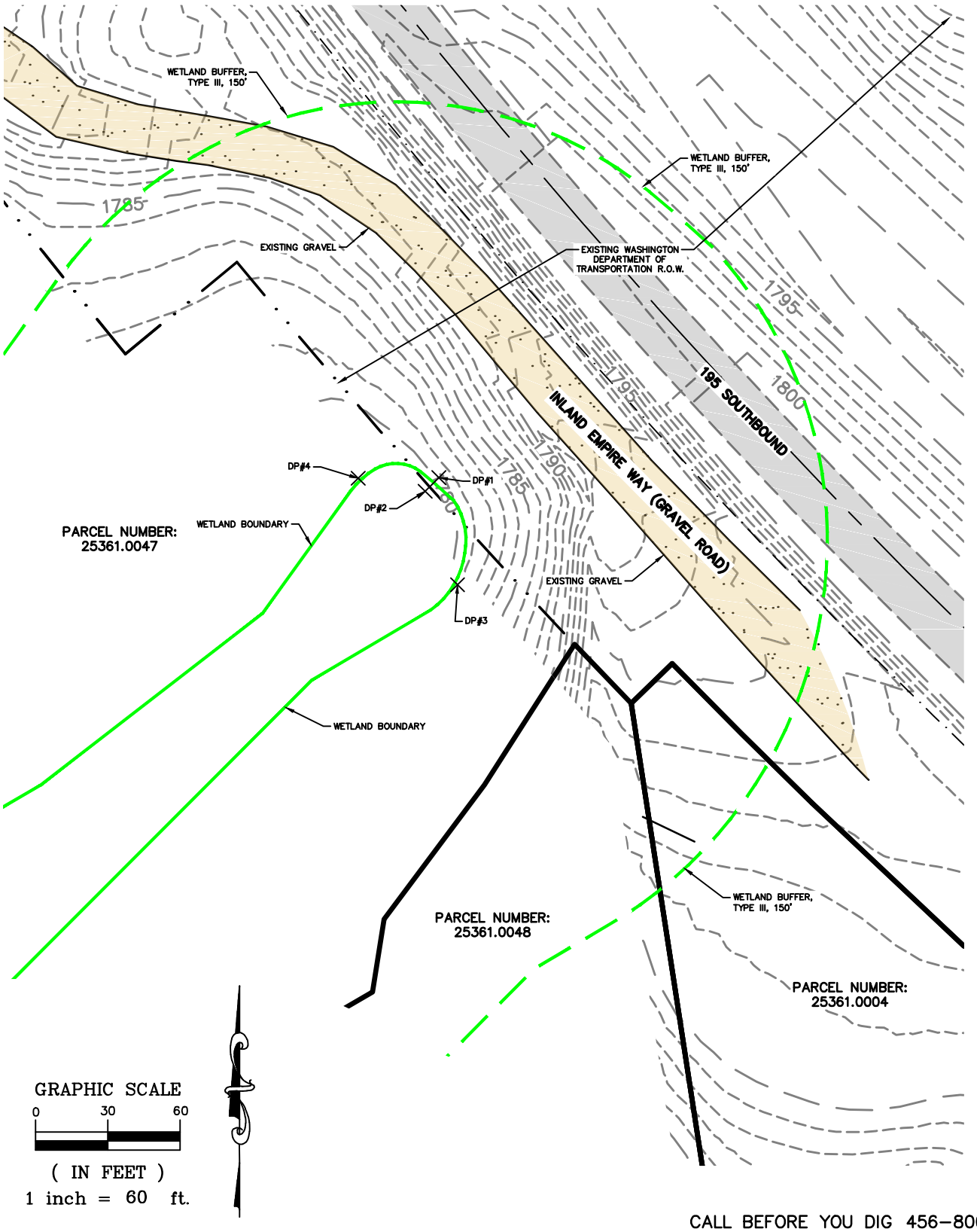
CIVIL IMPROVEMENTS AT WETLAND SECTION

SPOKANE, WA.

DRAWN	JCL	DATE	04/07/25	EXHIBIT	3
CHECKED	LC	SCALE	1" = 60'	PROJECT	19-342

X-19-342-wetland area.dwg 8.5x11 SECTION

Figure 8. South Inland Empire Way Wetland Delineation



CALL BEFORE YOU DIG 456-8000

INLAND EMPIRE WAY

WETLAND DELINEATION ON 04/07/2025

SPOKANE, WA.

DRAWN	JCL	DATE	04/07/25	EXHIBIT	1
CHECKED	LC	SCALE	1" = 60'	PROJECT	19-342

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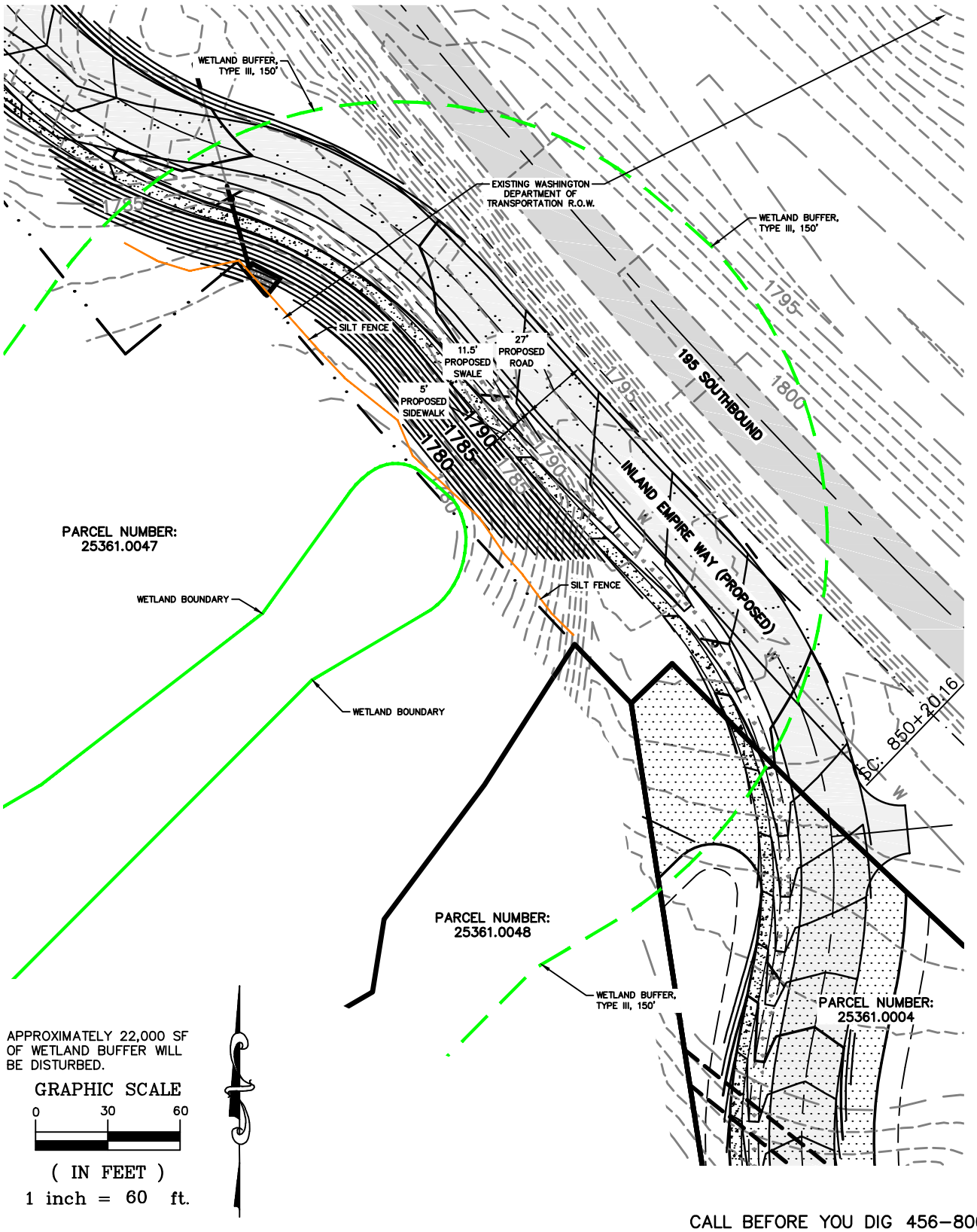
X-19-342-wetland area.dwg 8.5x11 WETLAND EXHIBIT

Figure 9. South Inland Empire Way Proposed Improvements



APPROXIMATELY 22,000 SF OF WETLAND BUFFER WILL BE DISTURBED.

GRAPHIC SCALE

0 30 60

(IN FEET)

1 inch = 60 ft.

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INLAND EMPIRE WAY

PROPOSED CIVIL IMPROVMENTS AT WETLAND
SPOKANE, WA.

DRAWN	JCL	DATE	04/07/25	EXHIBIT	2
CHECKED	LC	SCALE	1" = 20'	PROJECT	19-342

X-19-342-wetland area.dwg 8.5x11 PROPOSED IMPROVMENTS

Figure 10. South Inland Empire Way Planting Plan

REFERENCE NOTES SCHEDULE WETLAND RESTORATION

SYMBOL	DESCRIPTION	QTY
	DRY LAND HYDROSEED AREA - SEE DETAIL SHEET L2.0 FOR HYDROSEED SPECIFICATION.	22,000 SF

PLANT SCHEDULE WETLAND RESTORATION: TREES

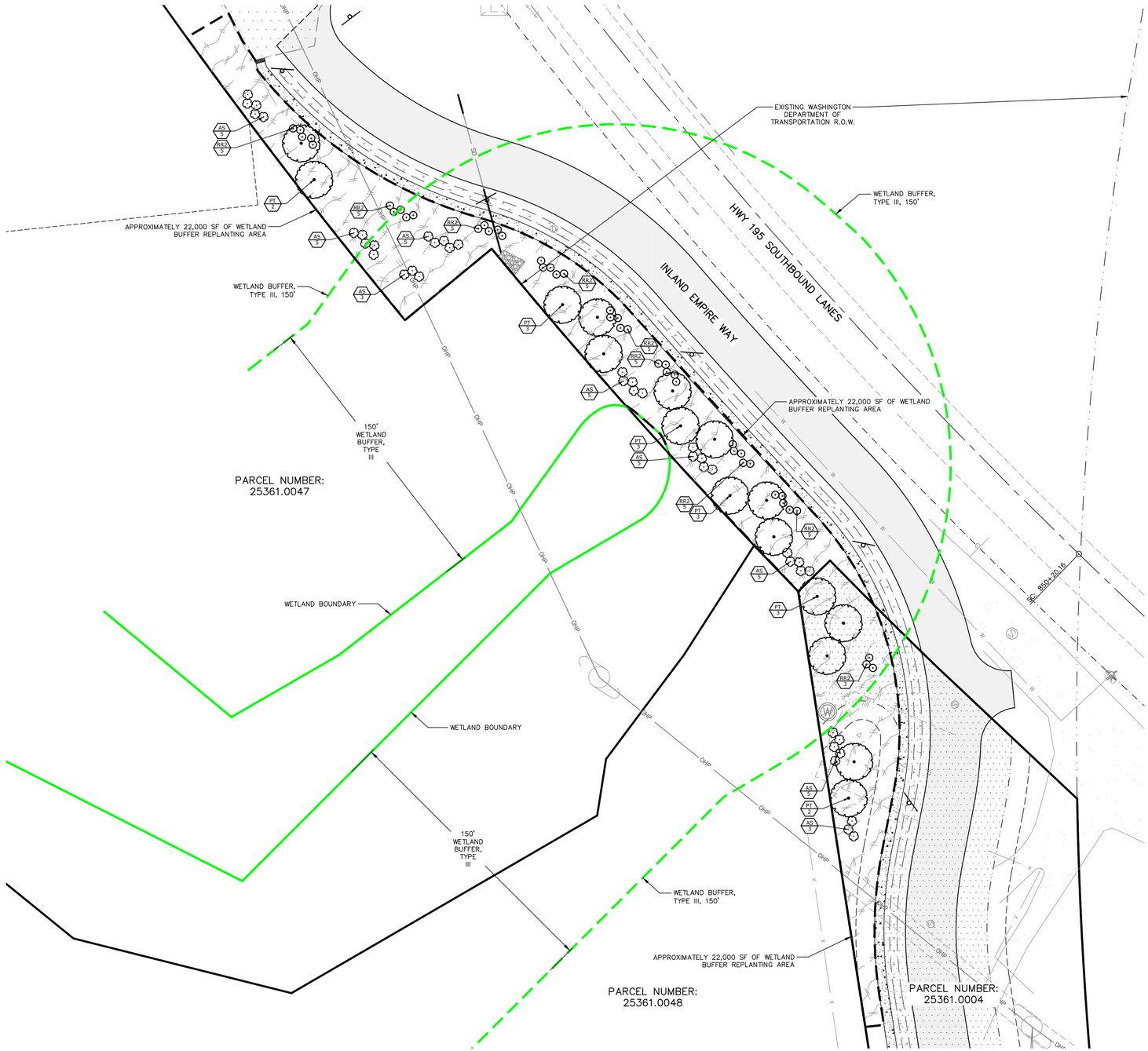
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	QTY
TREES						
	PT	POPULUS TRICHOCARPA	BLACK COTTONWOOD	1" CAL.	B&B	16

PLANT SCHEDULE WETLAND RESTORATION: SHRUBS

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
SHRUBS					
	AS	AMELANCHIER ALNIFOLIA	SERVICEBERRY	2 GAL.	41
+	RR2	ROSA RUGOSA	WOODS ROSE	2 GAL.	43

BUFFER REPLANTING AREA NOTES:

1. PROPOSED PLANTINGS IN BUFFER REPLANTING AREA TO BE INSTALLED THE FALL FOLLOWING COMPLETION OF INLAND EMPIRE WAY IMPROVEMENTS.
2. PROPOSED PLANTINGS IN BUFFER REPLANTING AREA TO ACHIEVE A SURVIVORSHIP RATE OF 75% AFTER THREE YEARS. IF PLANTING SURVIVORSHIP RATE FALLS BELOW 75%, CONTRACTOR TO REPLACE PLANTINGS.



GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
Leisa Rae Parker
1291
LICENSE NO.
EXPIRES ON 3/17/2026

LA - 1.0
LA - 2.1

REVISIONS			
DATE	BY	PROJECT	DESCRIPTION

NAVD88 = ESTABLISHED FROM GPS

NAVD88 ELEV. 1843.87

CBM NO. :

NAVD88 DATUM

0' 25' 50' 75'

SCALE IN FEET

BENCH MARK LOCATION: 5/8" REBAR WITH PLASTIC CAP PLS 48373 AT THE SOUTHEAST PROPERTY CORNER

SCALE		BY	DATES
	HORIZONTAL SCALE (22 x 34)	DRAWN: JCL	4/9/2025
	VERTICAL SCALE (22 x 34)	APPROVED: LB	4/9/2025

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19-342

PROJECT NAME: INLAND EMPIRE WAY

SEGMENT LIMITS:

PLANTING PLAN AREA

APN 25361.0001 & 25364.0001

PROJECT LIMITS: INLAND EMPIRE WAY

TYPE OF IMPROVEMENT: LANDSCAPE

PROJECT NO.

2023519

CALL BEFORE YOU DIG 1-800-424-5555

GENERAL NOTES:

1. CONTRACTOR IS REQUIRED TO READ ALL OF THE NOTES IN THESE PLANS PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO KEEP A FULL SET OF TO-SCALE LANDSCAPE PLANS ON SITE FOR THE DURATION OF LANDSCAPE INSTALLATION.
3. CONTRACTOR TO LOCATE UNDERGROUND UTILITIES, i.e., CABLES, CONDUIT, GAS, WATER, SEWER, ETC. PRIOR TO DIGGING. CONTRACTOR TO BE LIABLE AND PAY FOR REPAIR TO ANY AND ALL UTILITY DAMAGES AT NO EXTRA COST TO THE OWNER. CALL 811 BEFORE DIGGING, EXCAVATING, TRENCHING, DEMOLITION OR OTHER CONSTRUCTION.
4. NOT ALL SPRINKLER HEADS, VALVES, BACK-FLOW PREVENTION DEVICES, PIPING OR OTHER EQUIPMENT ARE SHOWN ON THIS PLAN. LOCATE ALL SPRINKLER HEADS, VALVES, BACK-FLOW PREVENTION DEVICES, PIPING OR OTHER EQUIPMENT IN THE FIELD PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICTS.
5. SCOPE OF WORK: THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION AND SERVICES NECESSARY TO COMPLETE THE CONSTRUCTION SHOWN ON THE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF ALL REQUIRED PERMITS AND INSPECTIONS. LOCAL CODES PREVAIL.
6. ALL PLANTER AND TURF AREAS TO RECEIVE 6" OF CLEAN TOPSOIL; PLANTER AREA TOPSOIL TO BE MIXED 50/50 WITH ORGANIC COMPOST. PLANTER AREAS TO RECEIVE 3" DEPTH (MIN.) MULCH OVER FINISHED TOPSOIL GRADE AFTER PLANTING UNLESS STATED OTHERWISE ON PLANS.
7. REFER TO DETAIL SHEET FOR PLANTING DETAILS. ALL PLANTS SHALL BE PLANTED THE DAY OF DELIVERY AND BE "MUDDED IN" DURING BACKFILLING - BACKFILL IS TO BE MIXED WITH WATER TO ACHIEVE A THICK MUD DURING BACKFILL OPERATIONS. EACH PLANT NEEDS A FORMED WATER WELL THAT MUST BE FILLED WITH WATER BEFORE LEAVING THE SITE. TREE WATER WELLS SHOULD BE FILLED 3-4 TIMES A WEEK DURING GROWING SEASON(S) TO ESTABLISH OVER AT LEAST THE FIRST YEAR OF PLANTING AS A SUPPLEMENT TO AUTOMATIC IRRIGATION.
8. SEE ENGINEERING DRAWINGS FOR DETAILED SITE, UTILITY AND DRAINAGE FEATURE INFORMATION.
9. PRESERVE AND PROTECT EXISTING HARDSCAPE TO REMAIN. DAMAGE TO HARDSCAPE INCURRED AS A RESULT OF LANDSCAPE INSTALLATION OPERATION TO BE REPAIRED/REPLACED AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS.
11. GENERAL CONTRACTOR TO PROVIDE ROUGH GRADE IN ALL TURF AREAS AND PLANTER BEDS WITHIN 0.10 FOOT OF GRADE SHOWN ON CIVIL DRAWINGS MINUS THE COMBINED TOTAL DEPTH OF TOPSOIL AND MULCH SPECIFIED AND AN ADDITIONAL 0.5 INCH DEPTH WITHIN 1 HORIZONTAL FOOT OF EXISTING AND/OR PROPOSED HARDSCAPES.
12. GENERAL CONTRACTOR TO CLEAR AND GRUB TURF AREAS AND PLANTING BEDS OF ALL WEEDS, ROOTS, LAWN AND DEBRIS; SPECIFIED LANDSCAPE AREAS TO BE SMOOTH AND CONTOURED AS SHOWN ON CIVIL DRAWINGS; ANY ROCK/DEBRIS LARGER THAN 1.5" TO BE REMOVED FROM TOP 12" OF SOIL AS MEASURED FROM FINISHED GRADES.
13. THE CONTRACTOR SHALL MAINTAIN A QUALIFIED SUPERVISOR ON THE SITE AT ALL TIMES DURING CONSTRUCTION THROUGH COMPLETION OF FINAL PUNCH-LIST WORK.
14. IMPORTED TOPSOIL SHALL CONSIST OF SANDY LOAM; NONTOXIC, FREE OF NOXIOUS WEEDS, GRASS, BRUSH, STICKS OR ROCKS GREATER THAN ½" IN DIAMETER, UNLESS OTHERWISE NOTED.
15. CONTRACTOR TO RAKE FINISH GRADE SMOOTH AND NATURAL. NO SLOPE TO EXCEED 3:1. SEE 'SLOPE ROUNDING' DETAIL ON LANDSCAPE DETAILS SHEET.

PLANTING NOTES:

1. A QUALIFIED SUPERVISOR SHALL BE ON-SITE AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.
2. ALL PLANT MATERIAL QUANTITIES SHALL BE VERIFIED PRIOR TO INSTALLATION. QUANTITIES LISTED IN SCHEDULES ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE NUMBER OF PLANTS SHOWN ON LANDSCAPE PLANS SHALL HAVE PRIORITY OVER THE NUMBER LISTED IN THE SCHEDULE, IF GIVEN.
3. ALL CONTAINER OR FIELD GROWN TREES, SHRUBS, VINES AND FLATTED GROUNDCOVERS SHALL BE PURCHASED BY THE CONTRACTOR. ALL SEEDED AND SOD TURF (INCLUDING HYDROMULCHES) SHALL BE PURCHASED BY THE CONTRACTOR. PAYING FOR THE PLANTING OF ALL PLANT MATERIALS; THE SPECIFIED GUARANTEE OF ALL PLANT MATERIALS; THE STAKING AND GUYING OF TREES AND THE CONTINUOUS PROTECTION OF ALL PLANT MATERIALS UPON THEIR ARRIVAL AT THE SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. GROUNDCOVER PLANTING UNDER TREES AND SHRUBS SHALL BE CONTINUOUS AS SHOWN ON PLANS.
5. ALL INSTALLED PLANT MATERIAL SHALL CONFORM TO THE CURRENT AMERICAN ASSOCIATION OF NURSERYMAN'S NATIONAL STANDARD SPECIFICATIONS.
6. ALL MATERIALS (PLANT MATERIALS, SOD, SEED, LANDSCAPE MULCHES, EDGING, ETC.) ARE SUBJECT TO APPROVAL BY THE OWNER AND/OR OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
7. ALL PLANT MATERIAL INSTALLED BY CONTRACTOR SHALL BE WARRANTED FOR EIGHTEEN MONTHS FROM DATE OF FINAL ACCEPTANCE. LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD AND/OR DYING PLANT MATERIAL (EXCEPT THOSE DUE TO VANDALISM OR NEGLECT) WITH PLANT MATERIAL EQUAL TO THE INSTALLED MATERIAL. GUARANTEE TO BE WRITTEN, DATED AND SIGNED BY CONTRACTOR ON CONTRACTOR'S LETTERHEAD.
8. CONTRACTOR TO PNEUMATICALLY APPLY (HYDROSEED) DRYLAND GRASS AREAS BETWEEN SEPTEMBER 15TH AND OCTOBER 1ST, OR MARCH 1ST AND APRIL 1ST.
9. NO SUBSTITUTIONS ARE PERMITTED WITHOUT THE WRITTEN CONSENT OF OWNER AND/OR OWNER REPRESENTATIVE.

1. SEED SHALL BE DELIVERED IN ORIGINAL, UNOPENED CONTAINERS SHOWING WEIGHT, CERTIFIED ANALYSIS, NAME AND ADDRESS OF MANUFACTURER, AND INDICATION OF CONFORMANCE WITH STATE AND FEDERAL LAWS, AS APPLICABLE.
2. CONTRACTOR TO BRING TO THE JOB SITE THE PACKING LIST FROM THE SEED SUPPLIER LISTING ALL THE SEED DELIVERED TO THE JOB SITE.
3. PROVIDE FRESH, CLEAN, NEW–CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS SPECIFIED BY SEED MANUFACTURER OR SUPPLIER.
4. PROVIDE MIXTURE COMPOSED OF GRASS AND FERTILIZER AS FOLLOWS:

4.1. TURF MIX: "IDEAL TURF" FROM PLANTS OF THE WILD OR APPROVED EQUAL
DRYLAND MIX: "INLAND NORTHWEST NATIVE MIX" FROM PLANTS OF THE WILD OR APPROVED EQUAL.

5. FERTILIZER: PER SPECIFICATIONS
6. COORDINATE WITH CIVIL PLANS FOR STABILIZATION OF SLOPES TO RECEIVE HYDROSEED.
7. SEED SUPPLIER: PLANTS OF THE WILD, TEKOA WA 509–284–2848

1 HYDROSEED NOTES
NTS P-SE-TUR-10

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
Leisa Rae Baker
1291
LICENSE NO.
EXPIRES ON 5/7/2026

LA - 2.0
LA - 2.1

REVISIONS			
DATE	BY	PROJECT	DESCRIPTION

NAVD88 = ESTABLISHED FROM GPS
NAVD88 ELEV. 1843.87
CBM NO. :
NAVD88 DATUM
0' 25' 50' 75'
SCALE IN FEET
BENCH MARK LOCATION: 5/8" REBAR WITH PLASTIC CAP PLS 48373 AT THE SOUTHEAST PROPERTY CORNER
SCALE HORIZONTAL SCALE (22 x 34)
VERTICAL SCALE (22 x 34)

	BY	DATES
DRAWN:	JCL	4/9/2025
APPROVED:	LB	4/9/2025

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19–342

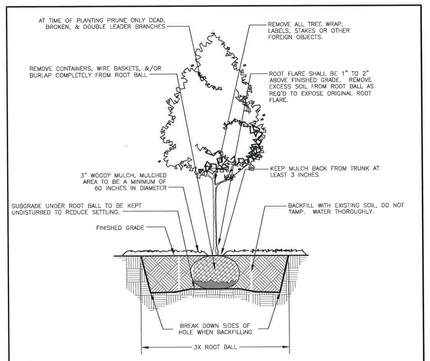
PROJECT NAME: INLAND EMPIRE WAY
SEGMENT LIMITS:
STANDARD NOTES AND DETAILS
APN 25361.0001 & 25364.0001
PROJECT LIMITS: INLAND EMPIRE WAY
TYPE OF IMPROVEMENT: LANDSCAPE
PROJECT NO.
2023519

CALL BEFORE YOU DIG 1-800-424-5555

CITY OF SPOKANE STANDARD LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL PLANT ALL TREES AND SHRUBS ON SITE ACCORDING TO DETAIL V-101 AND V-102. AFTER PLANTING, IF TREES ARE UNSTABLE STAKING MAY BE USED BUT ONLY AS NECESSARY. AT 6 MONTHS ALL TREE STAKING SHALL BE REMOVED. IF TREE IS STILL UNSTABLE AFTER 6 MONTHS TREE MAY NEED TO BE REPLACED.
2. TREE PROTECTION FENCING SHALL BE INSTALLED AROUND ALL STREET TREES PRIOR TO ANY SITE/DEMO/SOIL WORK PER CITY OF SPOKANE SPECIFICATIONS AND DETAIL. TREE PROTECTION FENCING SHALL REMAIN INTACT THROUGHOUT ALL PHASES OF DEMO AND CONSTRUCTION. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ENSURE THIS REQUIREMENT IS MET.
3. TREES SHALL BE STAKED AS NEEDED PER CITY OF SPOKANE STANDARDS.
4. TREES AND/OR SHRUBS PLANTED IN SIGHT TRIANGLES SHALL BE MAINTAINED TO PRESERVE CLEAR SIGHT LINES BETWEEN 3' AND 8' ABOVE GROUND PER SMC 17A.020.030(N) AND 17C.200.050(F).
5. ANY SUBSTITUTIONS OF PUBLIC/STREET TREES MUST HAVE WRITTEN APPROVAL FROM URBAN FORESTRY AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
6. STREET TREES BEING REMOVED SHALL BE DONE PRIOR TO ISSUANCE OF DEMO PERMIT.
7. CONTRACTOR RESPONSIBLE FOR THE HIRING OF A LICENSED CERTIFIED ARBORIST TO SUBMIT A PUBLIC TREE PERMIT APPLICATION FOR ALL WORK ON STREET TREES, INCLUDING REMOVALS, PRUNING, AND PLANTING. THIS APPLICATION SHOULD BE SUBMITTED AT LEAST 10 DAYS PRIOR TO WORK FOR THIS PROJECT, SHOWING START AND COMPLETION DATES.
8. STREET TREES IN CONTINUOUS PLANTING STRIPS MUST HAVE A TREE WELL AT THE BASE THAT IS NO LESS THAN 5' DIAMETER AND FREE OF TURF AND OTHER VEGETATION.
9. INDIVIDUAL TREE PLANTING VAULTS MUST HAVE THE CAPACITY TO HOLD A MINIMUM OF 100 CUBIC FEET OF UN-COMPACTED SOILS.
10. MODIFICATION TO THE APPROVED LANDSCAPE PLAN MUST HAVE WRITTEN APPROVAL FROM CITY OF SPOKANE PLANNING AND URBAN FORESTRY PRIOR TO INSTALLATION.
11. ROCK MULCH MAY ONLY BE USED AS AN ACCENT ONLY; ANY ROCK MULCH LOCATED WITHIN THE RIGHT OF WAY NEEDS TO BE A MINIMUM OF 1" BELOW THE LEVEL OF THE SIDEWALK OR CURB AND NEEDS TO BE LANDSCAPE ROCK INSTEAD OF PEA GRAVEL OR OTHER MATERIAL WITH FINES THAT CAN BE WASHED AWAY.
12. ALL MULCH AND LANDSCAPE FABRIC SHALL BE PULLED AWAY FROM CROWNS/ROOT FLARES OF ALL WOODY PLANTS 3-6" SO CROWNS/ROOT FLARES ARE VISIBLE.
13. ALL PROPOSED FENCING DEPICTED REQUIRES A SEPARATE FENCE PERMIT, PER SECTION 17C.111.245 FENCES.
14. ANY NEW SIGNAGE REQUIRES A SEPARATE SIGN PERMIT.
15. OBSERVE THE FOLLOWING MINIMUM SEPARATION DISTANCES FROM THE CENTERLINE OF A TREE TO OTHER STRUCTURES OR IMPROVEMENTS IN THE PLANTING STRIP SHALL BE AS FOLLOWS (PER CITY OF SPOKANE DESIGN STANDARDS (UNLESS STATED OTHERWISE ON LANDSCAPE PLANS):

- 10' TO EDGE OF SINGLE FAMILY RESIDENTIAL DRIVEWAY; 15' FROM EDGE OF COMMERCIAL OR MULTI-FAMILY DRIVEWAY (10 FEET MAY BE ALLOWED IN SOME CASES).
- 20' TO STREET LIGHT LUMINAIRE (15' MAY BE ALLOWED WHERE LIGHTING PATTERN IS NOT AFFECTED).
- 10' FROM FIRE HYDRANTS AND UTILITY POLES. LOWER LIMBS MUST BE PRUNED FOR FULL VISIBILITY OF THE HYDRANT. NO NEW UTILITY POLE LOCATIONS SHALL BE ESTABLISHED CLOSER THAN 10 FEET TO AN EXISTING TREE.
- AS REQUIRED TO PROVIDE AN ADEQUATE CLEAR VIEW TRIANGLE AS DEFINED BELOW AND SHOWN IN THE APPENDIX.
- 15' TO UNDERGROUND DUCT OR PIPE
- 5' FROM CURB CUT FOR DRAINAGE
- 20' FROM DRYWELL, UNLESS THE SPECIES PERMITS A CLOSER PLACEMENT DUE TO CROWN DIAMETER.



NOTES:

1. TREES BURIED TOO DEEP, OR WITHOUT EXPOSING ROOT FLARE WILL BE REJECTED & SHALL BE REMOVED & REPLANTED AT PROPER DEPTH.
2. ALL 'ADVENTITIOUS ROOTS' AND 'SUCKERS' SHALL BE PRUNED AWAY PRIOR TO PLANTING.
3. DEVIATIONS FROM THIS DETAIL SHALL ONLY BE ALLOWED WITH PERMISSION FROM THE CITY ARBORIST.
4. TREES NOT PLANTED IN CONFORMITY WITH THIS DETAIL WILL BE REJECTED BY THE CITY ARBORIST. REPLACEMENT OF REJECTED TREES WILL BE DONE AT THE CONTRACTOR'S EXPENSE & NOT BY THE CITY OF SPOKANE.
5. LOCATIONS OF TREES TO MEET THE REQUIREMENTS OF DESIGN STANDARDS 3.5-2. ≥ 15 FT FROM DRIVEWAYS, ≥ 10 FT FROM DRAINAGE INLETS, ≥ 20 FT FROM DRYWELLS, NOT OBSTRUCT TRAFFIC SIGNS OR SIGHT TRIANGLES, AND 15 FT FROM UNDERGROUND UTILITIES
6. AFTER PLANTING, IF TREES ARE UNSTABLE, STAKING MAY BE USED BUT ONLY AS NECESSARY. AT 6 MONTHS, ALL STAKING MATERIAL SHALL BE REMOVED. IF TREE IS STILL UNSTABLE, AFTER 6 MONTHS, TREE MAY NEED TO BE REPLACED.

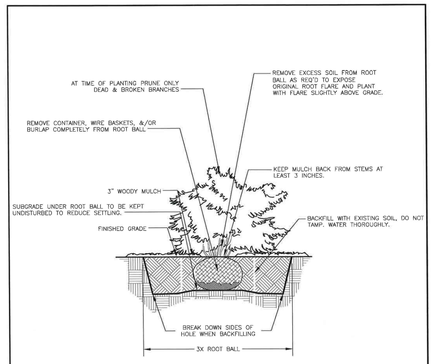
APPROVED BY		
ENGINEERING OPERATIONS MANAGER	KYLE TWOHIG	
PRINCIPAL ENGINEER, CONST.	KENNETH M. BROWN, P.E.	

ADOPTED:	2/1986
REVISED:	05/2015
SUPERSEDES:	04/2012
CHECKED BY:	SJS
SCALE:	N.T.S.
REVISED BY:	MLD

TREE PLANTING DETAILS
ALL TYPES, FORMS AND SPECIES

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **V-101**



NOTES:

1. SHRUBS BURIED TOO DEEP, OR WITHOUT EXPOSING ROOT FLARE WILL BE REJECTED & SHALL BE REMOVED & REPLANTED AT PROPER DEPTH.
2. DEVIATIONS FROM THIS DETAIL SHALL ONLY BE ALLOWED WITH PERMISSION FROM THE CITY ARBORIST.
3. SHRUBS NOT PLANTED IN CONFORMITY WITH THIS DETAIL WILL BE REJECTED BY THE CITY ARBORIST. REPLACEMENT OF REJECTED SHRUBS WILL BE DONE AT THE CONTRACTOR'S EXPENSE & NOT BY THE CITY OF SPOKANE.

APPROVED BY		
ENGINEERING OPERATIONS MANAGER	KYLE TWOHIG	
PRINCIPAL ENGINEER, CONST.	KENNETH M. BROWN, P.E.	

ADOPTED:	2/1986
REVISED:	05/2015
SUPERSEDES:	04/2012
CHECKED BY:	SJS
SCALE:	N.T.S.
REVISED BY:	MLD

SHRUB PLANTING DETAILS
ALL TYPES, FORMS AND SPECIES

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **V-102**

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
Leisa Rae Baker
LICENSE NO. 1291
EXPIRES ON 3/17/2026

LA - 2.1
LA - 2.1

REVISIONS			
DATE	BY	PROJECT	DESCRIPTION

NAVD88 = ESTABLISHED FROM GPS
NAVD88 ELEV. 1843.87
CBM NO. :
NAVD88 DATUM

0' 25' 50' 75'
SCALE IN FEET

BENCH MARK LOCATION: 5/8" REBAR WITH PLASTIC CAP PLS 48373 AT THE SOUTHEAST PROPERTY CORNER

SCALE: HORIZONTAL SCALE (22 x 34); VERTICAL SCALE (22 x 34)

	BY	DATES
DRAWN:	JCL	4/9/2025
APPROVED:	LB	4/9/2025

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19-342

PROJECT NAME: INLAND EMPIRE WAY
SEGMENT LIMITS: CITY OF SPOKANE DETAILS/NOTES
APN 25361.0001 & 25364.0001
PROJECT LIMITS: INLAND EMPIRE WAY
TYPE OF IMPROVEMENT: LANDSCAPE
PROJECT NO. 2023519

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Appendix A Wetland Data Forms

DATA FORM
ATYPICAL SITUATIONS

Applicant Name: Storhaug Engineering/Mr. William Nascimento. Date: 4/4/25

Project Name: South Inland Empire Way Improvements Location: DP1

A. VEGETATION:

1. Type of Alteration: Removed

2. Effect on the Vegetation: Removed

3. Previous Vegetation: Unknown, however based upon historical aerial images and similar topographical elevations and contours, vegetation could be similar to what was present at the data plot 3 location.

DATA POINT:

4. Hydrophytic Vegetation? YES____ NO___x___

B. HYDROLOGY:

1. Type of Alteration: Dredge/removal of approximately 3+ feet of top soil

2. Effect on the Hydrology: ground water 3+ feet below original grade

3. Previous Hydrology: Not present.

The United States Army Corps of Engineers Regional Supplement to the Corps of Engineers Wetland Delineation manual, Western Mountains, Valleys and Coast Region (Wetland Manual) identifies wetland hydrology indicators. Under normal circumstances, and prior to the removal of approximately 3+ feet of soil, wetland hydrology indicators would not be present. Based on topographical contours of the area prior to soil removal, the area was on a slope, and the water table was greater than 3 feet below the surface. According to the Wetland Manual, the water table or soil saturation is required within 12 inches or less of the surface; surface water would not be present on the sloped area; nor would any of the other wetland hydrology indicators be present on the sloped area as indicated by adjacent and/or undisturbed areas on similar elevation or contours. As such, wetland hydrology would not be present.

DATA POINT:

4. Wetland Hydrology? YES___ NO__x__

C. SOILS:

1. Type of Alteration: removal of 3+ feet of soil

2. Effect on the Soils: removed

3. Previous Soils: The previous soil was removed. Soils in the vicinity and at similar elevational contours was sampled and observed and did not meet the hydric soil requirements.

DATA POINT:

Depth	Depth	Munsell Matrix		Mottle	
Inches	Inches	Color	Mottle Color	Abundance	Texture
0-6		10YR 5/4			loam
6-24		10YR 4/4			Sandy/loam

4. Hydric Soils? YES_____ NO_x__

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: South Inland Empire Way Improvements City/County: Spokane Sampling Date: 4/4/25

Applicant/Owner: Storhaug Engineering/Mr. William Nascimento State: WA Sampling Point: DP2

Investigator(s): David Armes Section, Township, Range: S36 T25N R42E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): E Lat: 47.62314 Long: -117.43917 Datum: _____

Soil Map Unit Name: 1200- Endoaquolls and Fluvaquents, 0 to 3 percent slopes NWI classification: none

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 _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Cornus sericea	15	YES	FACW
2. Salix discolor	15	YES	FACW
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 144sf)			
1. Phalaris arundinacea	20	YES	FACW
2. Typha latifolia	50	YES	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	100% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ 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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-24	10Y2/1	100%					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): 12

Water Table Present? Yes ✓ No _____ Depth (inches): 0

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 – Western Mountains, Valleys, and Coast Region

Project/Site: South Inland Empire Way Improvements City/County: Spokane Sampling Date: 4/4/25

Applicant/Owner: Storhaug Engineering/Mr. William Nascimento State: WA Sampling Point: DP3

Investigator(s): David Armes Section, Township, Range: S36 T25N R42E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): E Lat: 47.6231 Long: -117.43903 Datum: _____

Soil Map Unit Name: 1200- Endoaquolls and Fluvaquents, 0 to 3 percent slopes NWI classification: none

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 ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Cornus sericea	15	YES	FACW
2. Rosa woodsii	70	YES	FACU
3.			
4.			
5.			
	85 = Total Cover		
Herb Stratum (Plot size: 144sf)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	90% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ 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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR4/3	100%					loam	
10-24	10YR4/2	95%					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

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): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: South Inland Empire Way Improvements City/County: Spokane Sampling Date: 4/4/25

Applicant/Owner: Storhaug Engineering/Mr. William Nascimento State: WA Sampling Point: DP4

Investigator(s): David Armes Section, Township, Range: S36 T25N R42E

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): none Slope (%): 1-2%

Subregion (LRR): E Lat: 47.62323 Long: -117.43919 Datum: _____

Soil Map Unit Name: 1200- Endoaquolls and Fluvaquents, 0 to 3 percent slopes NWI classification: none

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 _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 144sf)			
1. Phalaris arundinacea	75%	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	75% = Total Cover		

% Bare Ground in Herb Stratum 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

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 = _____

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ 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 Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR4/3	100%					loam	
10-24	10YR4/2	95%					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

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): _____

Wetland Hydrology Present? **Yes** _____ **No** ✓

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

Remarks:

Appendix B Wetland Rating Form

RATING SUMMARY – Eastern Washington

Name of wetland (or ID #): South Inland Empire Way Improvements Date of site visit: 4/4/2025

Rated by Armes Trained by Ecology? ☑ Yes ☐ No Date of training 2012

HGM Class used for rating Depressional Wetland has multiple HGM classes? ☑ Yes ☐ No

NOTE: Form is not complete with out the figures requested (*figures can be combined*).
Source of base aerial photo/map Google Earth; Spokane County Scout Map

OVERALL WETLAND CATEGORY III (based on functions ☑ or special characteristics ☐)

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 22 - 27
_____ **Category II** - Total score = 19 - 21
X **Category III** - Total score = 16 - 18
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
		List appropriate rating (H, M, L)		
Site Potential	M	M	M	
Landscape Potential	H	M	M	
Value	H	L	L	**Total**
Score Based on Ratings	8	5	5	**18**

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

9 = H, H, H
8 = H, H, M
7 = H, H, L
7 = H, M, M
6 = H, M, L
6 = M, M, M
5 = H, L, L
5 = M, M, L
4 = M, L, L
3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Vernal Pools	
Alkali	
Wetland of High Conservation Value	
Bog and Calcareous Fens	
Old Growth or Mature Forest - slow growing	
Aspen Forest	
Old Growth or Mature Forest - fast growing	
Floodplain forest	
None of the above	**X**

Maps and Figures required to answer questions correctly for Eastern Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	D 1.3, H 1.1, H 1.5	Wetland Report
Hydroperiods (including area of open water for H 1.3)	D 1.4, H 1.2, H 1.3	Wetland Report
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	Wetland Report
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	Wetland Report
Map of the contributing basin	D 5.3	Wetland Report
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	Wetland Report
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Wetland Report
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	D 3.3	Wetland Report

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	R 2.4	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of wetland vs. width of stream (*can be added to another figure*)	R 4.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	L 1.1, L 4.1, H 1.1, H 1.5	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes and classes of emergents	H 1.1, H 1.5	
Hydroperiods	H 1.2, H 1.3	
Plant cover of **dense** trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of **dense, rigid** trees, shrubs, and herbaceous plants (*can be added to figure above*)	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which wetland is found (website)	S 3.3	

HGM Classification of Wetland in Eastern Washington

For questions 1 - 4, the criteria described must apply to the entire unit being rated.

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

1. Does the entire unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the water side of the Ordinary High Water Mark of a body of permanent open water (without any plants on the surface) that is at least 20 ac (8 ha) in size

☐ At least 30% of the open water area is deeper than 10 ft (3 m)

☑ NO - go to 2 ☐ **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

2. Does the entire wetland unit meet all of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks;

☐ The water leaves the wetland **without being impounded**.

☐ NO - go to 3 ☑ **YES** - The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 foot deep).

3. Does the entire wetland unit **meet all** of the following criteria?

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river;

☐ The overbank flooding occurs at least once every 10 years.

☑ NO - go to 4 ☐ **YES** - The wetland class is **Riverine**

NOTE: The Riverine wetland can contain depressions that are filled with water when the river is not flooding.

4. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO - go to 5 ☑ **YES** - The wetland class is **Depressional**

5. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1 - 4 APPLY TO DIFFERENT AREAS IN THE WETLAND UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

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

HGM classes within the wetland unit being rated	HGM Class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine (the riverine portion is within the boundary of depression)	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine

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

NOTES and FIELD OBSERVATIONS:

DEPRESSIONAL WETLANDS

Water Quality Functions - Indicators that the site functions to improve water quality

			Points (only 1 score per box)
D 1.0. Does the site have the potential to improve water quality?			
D 1.1. Characteristics of surface water outflows from the wetland:			
Wetland has no surface water outlet		points = 5	
☑ Wetland has an intermittently flowing outlet		points = 3	3
☐ Wetland has a highly constricted permanently flowing outlet		points = 3	
Wetland has a permanently flowing, unconstricted, surface outlet		points = 1	
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions of soils*)	Yes = 3	No = 0	0
D 1.3. Characteristics of persistent vegetation (Emergent, Scrub-shrub, and/or Forested Cowardin classes)			
Wetland has persistent, ungrazed, vegetation for > $^2/_3$ of area		points = 5	
Wetland has persistent, ungrazed, vegetation from $^1/_3$ to $^2/_3$ of area		points = 3	5
Wetland has persistent, ungrazed vegetation from $^1/_{10}$ to < $^1/_3$ of area		points = 1	
Wetland has persistent, ungrazed vegetation < $^1/_{10}$ of area		points = 0	
D 1.4. Characteristics of seasonal ponding or inundation:			
This is the area of ponding that fluctuates every year. Do not count the area that is permanently ponded.			
Area seasonally ponded is > ½ total area of wetland		points = 3	1
Area seasonally ponded is ¼ - ½ total area of wetland		points = 1	
Area seasonally ponded is < ¼ total area of wetland		points = 0	
Total for D 1	Add the points in the boxes above		**9**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 2.0. Does the landscape have the potential to support the water quality function of the site?			
D 2.1. Does the wetland receive stormwater discharges?	Yes = 1	No = 0	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1	No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1	No = 0	0
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3?			1
Source	Yes = 1	No = 0	
Total for D 2	Add the points in the boxes above		**3**

Rating of Landscape Potential If score is: ☑ **3 or 4 = H** ☐ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 3.0. Is the water quality improvement provided by the site valuable to society?			
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, or lake that is on the 303(d) list?	Yes = 1	No = 0	1
D 3.2.Is the wetland in a basin or sub-basin where water quality is an issue in some aquatic resource [303(d) list, eutrophic lakes, problems with nuisance and toxic algae]?	Yes = 1	No = 0	1
D 3.3. Has the site been identified in a watershed or local plan as important for maintaining water quality (*answer YES if there is a TMDL for the drainage or basin in which the wetland is found*)?	Yes = 2	No = 0	2
Total for D 3	Add the points in the boxes above		**4**

Rating of Value If score is: ☑ **2 - 4 = H** ☐ **1 = M** ☐ **0 = L** *Record the rating on the first page*

DEPRESSIONAL WETLANDS

Hydrologic Functions - Indicators that the site functions to reduce flooding and erosion

Points (only 1 score per box)

D 4.0. Does the site have the potential to reduce flooding and erosion?

D 4.1. Characteristics of surface water outflows from the wetland:

- Wetland has no surface water outlet — points = 8
- ☐ Wetland has an intermittently flowing outlet — points = 4
- ☐ Wetland has a highly constricted permanently flowing outlet — points = 4
- Wetland has a permanently flowing unconstricted surface outlet — points = 0

(*If outlet is a ditch and not permanently flowing treat wetland as "intermittently flowing"*)

4

D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or deepest part (if dry).*

- Seasonal ponding: > 3 ft above the lowest point in wetland or the surface of permanent ponding — points = 8
- Seasonal ponding: 2 ft - < 3 ft above the lowest point in wetland or the surface of permanent ponding — points = 6
- ☐ The wetland is a headwater wetland — points = 4
- ☐ Seasonal ponding: 1 ft - < 2 ft — points = 4
- Seasonal ponding: 6 in - < 1 ft — points = 2
- Seasonal ponding: < 6 in or wetland has only saturated soils — points = 0

6

Total for D 4 — Add the points in the boxes above: **10**

Rating of Site Potential If score is: ☐ **12 - 16 = H** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support the hydrologic functions of the site?

D 5.1. Does the wetland receive stormwater discharges? Yes = 1 No = 0	1
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generates runoff? Yes = 1 No = 0	1
D 5.3. Is more than 25% of the contributing basin of the wetland covered with intensive human land uses ? Yes = 1 No = 0	0
Total for D 5 — Add the points in the boxes above	**2**

Rating of Landscape Potential If score is: ☐ **3 = H** ☑ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

D 6.0. Are the hydrologic functions provided by the site valuable to society?

D 6.1. The wetland is in a landscape that has flooding problems.

Choose the description that best matches conditions around the wetland being rated. *Do not add points. Choose the highest score if more than one condition is met.*

The wetland captures surface water that would otherwise flow down-gradient into areas where flooding has damaged human or natural resources (e.g., houses or salmon redds), AND

- Flooding occurs in sub-basin that is immediately down-gradient of wetland — points = 2
- Surface flooding problems are in a sub-basin farther down-gradient — points = 1

☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. — points = 0

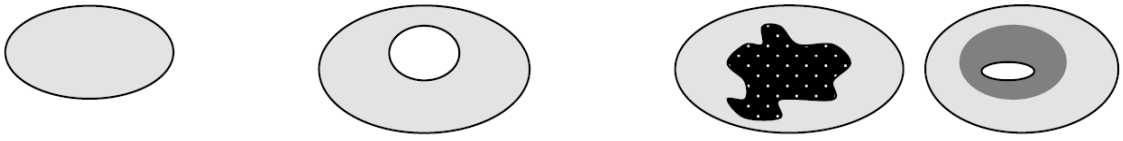
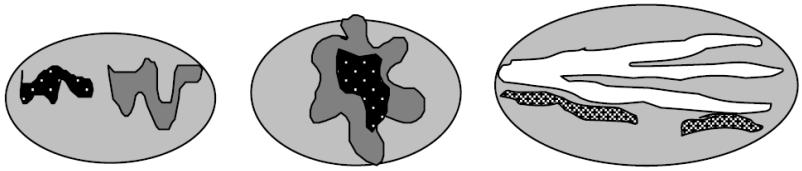
Explain why

☑ There are no problems with flooding downstream of the wetland — points = 0

0

D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan? Yes = 2 No = 0	0
Total for D 6 — Add the points in the boxes above	**0**

Rating of Value If score is: ☐ **2 - 4 = H** ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS** - Indicators that site functions to provide important habitat	(only 1 score per box)
H 1.0. Does the wetland have the potential to provide habitat for many species?	
H 1.1. Structure of plant community: *Check the Cowardin vegetation classes present and categories of emergent plants. Size threshold for each category is > = ¼ ac or > = 10% of the wetland if wetland is < 2.5 ac.* ☑ Aquatic bed ☐ Emergent plants 0 - 12 in (0-30 cm) high are the highest layer and have > 30% cover ☑ Emergent plants > 12 - 40 in (> 30-100 cm) high are the highest layer with >30% cover ☑ Emergent plants > 40 in (> 100 cm) high are the highest layer with >30% cover ☐ Scrub-shrub (areas where shrubs have > 30% cover) ☐ Forested (areas where trees have > 30% cover) 4 or more checks: points = 3 3 checks: points = 2 2 checks: points - 1 1 check: points = 0	2
H 1.2. Is one of the vegetation types Aquatic Bed? Yes = 1 No = 0	1
H 1.3. Surface water H 1.3.1. Does the wetland have areas of open water (without emergent or shrub plants) over at least ¼ ac **OR** 10% of its area during the March to early June **OR** in August to the end of September? *Answer YES for Lake Fringe wetlands.* ☑ Yes = 3 points & go to H 1.4 No = go to H 1.3.2 H 1.3.2. Does the wetland have an intermittent or permanent, and unvegetated stream within its boundaries, or along one side, over at least ¼ ac or 10% of its area? *Answer yes only if H 1.3.1 is No.* ☐ Yes = 3 No = 0	3
H 1.4. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold. You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Russian olive, Phragmites, Canadian thistle, yellow-flag iris, and saltcedar (Tamarisk)* # of species 5 Scoring: > 9 species: points = 2 4 - 9 species: points = 1 < 4 species: points = 0	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among types of plant structures (described in H 1.1), and unvegetated areas (open water or mudflats) is high, moderate, low, or none. *Use map of Cowardin and emergent plant classes prepared for questions H 1.1 and map of open water from H 1.3. If you have four or more plant classes or three classes and open water, the rating is always high.*  **None** = 0 points **Low** = 1 point **Moderate** = 2 points All three diagrams in this row are **HIGH** = 3 points  Riparian braided channels with 2 classes	1

H 1.6. Special habitat features: *Check the habitat features that are present in the wetland. The number of checks is the number of points.* ☐ Loose rocks larger than 4 in OR large, downed, woody debris (> 4 in diameter) within the area of surface ponding or in stream. ☑ Cattails or bulrushes are present within the wetland. ☐ Standing snags (diameter at the bottom > 4 in) in the wetland or within 30 m (100 ft) of the edge ☐ Emergent or shrub vegetation in areas that are permanently inundated/ponded. ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 45 degree slope) OR signs of recent beaver activity ☐ Invasive species cover less than 20% in each stratum of vegetation (*canopy, sub-canopy, shrubs, herbaceous, moss/ground cover*)	1
Total for H 1 — Add the points in the boxes above	**9**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☑ **7 - 14 = M** ☐ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support habitat functions of the site?	
H 2.1 Accessible habitat (only area of habitat abutting wetland). If total accessible habitat is: *Calculate:* 0 % undisturbed habitat + (50 % moderate & low intensity land uses / 2) = 25% > 1/3 (33.3%) of 1 km Polygon — points = 3 20 - 33% of 1 km Polygon — points = 2 10 - 19% of 1 km Polygon — points = 1 < 10 % of 1 km Polygon — points = 0	2
H 2.2. Undisturbed habitat in 1 km Polygon around wetland. *Calculate:* % undisturbed habitat + (60 % moderate & low intensity land uses / 2) = Undisturbed habitat > 50% of Polygon — points = 3 Undisturbed habitat 10 - 50% and in 1 - 3 patches — points = 2 Undisturbed habitat 10 - 50% and > 3 patches — points = 1 Undisturbed habitat < 10% of 1 km Polygon — points = 0	1
H 2.3 Land use intensity in 1 km Polygon: > 50% of 1 km Polygon is high intensity land use — points = (-2) Does not meet criterion above — points = 0	0
H 2.4. The wetland is in an area where annual rainfall is less than 12 in, and its water regime is not influenced by irrigation practices, dams, or water control structures. *Generally, this means outside boundaries of reclamation areas, irrigation districts, or reservoirs* Yes = 3 No = 0	0
Total for H 2 — Add the points in the boxes above	**3**

Rating of Landscape Potential If Score is: ☐ **4 - 9 = H** ☑ **1 - 3 = M** ☐ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated*. Site meets ANY of the following criteria: — points = 2 ☐ It has 3 or more priority habitats within 100 m (see Appendix B) ☐ It provides habitat for Threatened or Endangered species (any plant or animal on state or federal lists) ☐ It is mapped as a location for an individual WDFW species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan Site has 1 or 2 priority habitats within 100 m (see Appendix B) — points = 1 Site does not meet any of the criteria above — points = 0	0

Rating of Value If Score is: ☐ **2 = H** ☐ **1 = M** ☑ **0 = L** *Record the rating on the first page*

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

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

Wetland Type	Category
Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.	
SC 1.0. Vernal Pools Is the wetland **less than 4000 ft²**, and does it meet at least **two** of the following criteria? ☐ Its only source of water is rainfall or snowmelt from a small contributing basin and has no groundwater input. ☐ Wetland plants are typically present only in the spring; the summer vegetation is typically upland annuals. *If you find perennial, obligate, wetland plants, the wetland is probably NOT a vernal pool.* ☐ The soil in the wetland is shallow [< 1 ft (30 cm) deep] and is underlain by an impermeable layer such as basalt or clay. ☐ Surface water is present for less than 120 days during the wet season. ☐ Yes - Go to **SC 1.1** ☐ No = **Not vernal pool** SC 1.1. Is the vernal pool relatively undisturbed in February and March? ☐ Yes – Go to **SC 1.2** ☐ No = **Not a vernal pool with special characteristics**	
SC 1.2. Is the vernal pool in an area where there are at least 3 separate aquatic resources within 0.5 mi (other wetlands, rivers, lakes etc.)? ☐ Yes = **Category II** ☐ No = **Category III**	
SC 2.0. Alkali wetlands Does the wetland meet **one** of the following criteria? ☐ The wetland has a conductivity > 3.0 mS/cm. ☐ The wetland has a conductivity between 2.0 and 3.0 mS, and more than 50% of the plant cover in the wetland can be classified as "alkali" species (see Table 4 for list of plants found in alkali systems). ☐ If the wetland is dry at the time of your field visit, the central part of the area is covered with a layer of salt. **OR** does the wetland unit meet two of the following three sub-criteria? ☐ Salt encrustations around more than 75% of the edge of the wetland ☐ More than ¾ of the plant cover consists of species listed on Table 4 ☐ A pH above 9.0. All alkali wetlands have a high pH, but please note that some freshwater wetlands may also have a high pH. Thus, pH alone is not a good indicator of alkali wetlands. ☐ Yes = **Category I** ☐ No = **Not an alkali wetland**	
SC 3.0. Wetlands of High Conservation Value (WHCV) SC 3.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☐ Yes - Go to **SC 3.2** ☐No - Go to **SC 3.3** SC 3.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value? ☐ Yes = **Category I** ☐ No = **Not WHCV** SC 3.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - **Contact WNHP/WDNR and to SC 3.4** ☐ No = **Not WHCV** SC 3.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not WHCV**	

SC 4.0. Bogs and Calcareous Fens

Does the wetland (or any part of the wetland unit) meet both the criteria for soils and vegetation in bogs or calcareous fens? Use the key below to identify if the wetland is a bog or calcareous fen. ***If you answer yes you will still need to rate the wetland based on its functions.***

SC 4.1. Does an area within the wetland have organic soil horizons (i.e., layers of organic soil), either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile? *See Appendix C for a field key to identify organic soils.*

☐ Yes - Go to **SC 4.3** ☐ No - Go to **SC 4.2**

SC 4.2. Does an area within the wetland have organic soils, either peats or mucks, that are less than 16 in deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?

☐ Yes - Go to **SC 4.3** ☐ No = **Is not a bog for rating**

SC 4.3. Does an area within the wetland have more than 70% cover of mosses at ground level AND at least 30% of the total plant cover consists of species in Table 5?

☐ Yes = **Category I bog** ☐ No - Go to **SC 4.4**

NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 5 are present, the wetland is a bog.

SC 4.4. Is an area with peats or mucks forested (> 30% cover) with subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 5 provide more than 30% of the cover under the canopy?

☐ Yes = **Category I bog** ☐ No - Go to **SC 4.5**

SC 4.5. Do the species listed in Table 6 comprise at least 20% of the total plant cover within an area of peats and mucks?

☐ Yes = **Is a Calcareous Fen for purpose of rating** ☐ No - Go to **SC 4.6**

SC 4.6. Do the species listed in Table 6 comprise at least 10% of the total plant cover in an area of peats and mucks, AND one of the two following conditions is met:

☐ Marl deposits [calcium carbonate ($CaCO_3$) precipitate] occur on the soil surface or plant stems

☐ The pH of free water is ≥ 6.8 AND electrical conductivity is ≥ 200 uS/cm at multiple locations within the wetland

☐ Yes = **Is a Category I calcareous fen** ☐ No = **Is not a calcareous fen**

SC 5.0. Forested Wetlands

Does the wetland have an area of forest rooted within its boundary that meets **at least one** of the following three criteria? (*Continue only if you have identified that a forested class is present in question H*

☐ The wetland is within the 100 year floodplain of a river or stream

☐ Aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species

☐ There is at least ¼ ac of trees (even in wetlands smaller than 2.5 ac) that are "mature" or "old-growth" according to the definitions for these priority habitats developed by WDFW (*see definitions in question H3.1*)

☐ Yes - Go to **SC 5.1** ☐ No = **Not a forested wetland with special characteristics**

SC 5.1. Does the wetland have a forest canopy where more than 50% of the tree species (by cover) are slow growing native trees (*see Table 7*)?

☐ Yes = **Category I** ☐ No - Go to **SC 5.2**

SC 5.2. Does the wetland have areas where aspen (*Populus tremuloides*) represents at least 20% of the total cover of woody species?

☐ Yes = **Category I** ☐ No - Go to **SC 5.3**

SC 5.3. Does the wetland have at least ¼ acre with a forest canopy where more than 50% of the tree species (by cover) are fast growing species (*see Table 7*)?

☐ Yes = **Category II** ☐ No - Go to **SC 5.4**

SC 5.4. Is the forested component of the wetland within the 100 year floodplain of a river or stream?

☐ Yes = **Category II** ☐ No = **Not a forested wetland with special characteristics**

Category of wetland based on Special Characteristics

Choose the highest rating if wetland falls into several categories

If you answered No for all types, enter "Not Applicable" on Summary Form

Appendix B: WDFW Priority Habitats in Eastern Washington

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

Count how many of the following priority habitats are within 330 ft (100 m) of the wetland unit: ***NOTE**: This question is independent of the land use between the wetland unit and the priority habitat.*

- ☐ **Aspen Stands**: Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- ☐ **Old-growth/Mature forests**: Old-growth east of Cascade crest – Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be >150 years of age, with 10 trees/ac (25 trees/ha) that are > 21 in (53 cm) dbh, and 1-3 snags/ac (2.5-7.5 snags/ha) that are > 12-14 in (30-35 cm) diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions. Mature forests – Stands with average diameters exceeding 21 in (53 cm) dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80-200 years old west and 80-160 years old east of the Cascade crest.
- ☐ **Oregon White Oak**: Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158 – see web link above*).
- ☐ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Caves**: A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human.
- ☐ **Cliffs**: Greater than 25 ft (7.6 m) high and occurring below 5000 ft elevation.
- ☐ **Talus**: Homogenous areas of rock rubble ranging in average size 0.5 - 6.5 ft (0.15 - 2.0 m), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☐ **Snags and Logs**: Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 20 in (51 cm) in western Washington and are > 6.5 ft (2 m) in height. Priority logs are > 12 in (30 cm) in diameter at the largest end, and > 20 ft (6 m) long.
- ☐ **Shrub-steppe**: A nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover).
- ☐ **Eastside Steppe**: Nonforested vegetation type dominated by broadleaf herbaceous flora (i.e., forbs), perennial bunchgrasses, or a combination of both. Bluebunch wheatgrass (*Pseudoroegneria spicata*) is often the prevailing cover component along with Idaho fescue (*Festuca idahoensis*), Sandberg bluegrass (*Poa secunda*), rough fescue (*F. campestris*), or needlegrasses (*Achnatherum* spp.).
- ☐ **Juniper Savannah**: All juniper woodlands.

Note: All vegetated wetlands are by definition a priority habitat but are not included in this list because they are addressed elsewhere.