Interstate Bridge Replacement Program Columbia River Bridge Package

Wetland and Waterbodies Delineation Report - Oregon

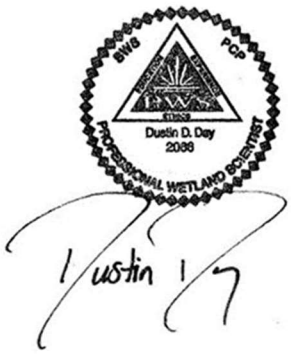
December 2023

FINAL

Interstate Bridge Replacement Program: Columbia River Bridge Package

Wetland and Waterbodies Delineation Report - Oregon

Prepared by:



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Professional Wetland Scientist (PWS) 2066

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ACRONYMS AND ABBREVIATIONS

CRC	Columbia River Crossing
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
FAC	facultative
I-5	Interstate 5
IBR	Interstate Bridge Replacement
MP	milepost
NWI	National Wetlands Inventory
ODOT	Oregon Department of Transportation
OHW	ordinary high water
R1UBV	riverine tidal, unconsolidated bottom, permanent-tidal
USACE	U.S. Army Corps of Engineers

1. INTRODUCTION

The Interstate Bridge Replacement (IBR) Program is a renewal of the previously suspended Columbia River Crossing (CRC) project. The Program would replace the aging Interstate Bridge across the Columbia River with a modern, seismically resilient multimodal structure. The proposed infrastructure improvements would be located along a 5-mile stretch of the Interstate 5 (I-5) corridor in Portland, Oregon, and Vancouver, Washington.

The IBR Program team is made up of a number of regional transportation partners, including the Oregon Department of Transportation (ODOT), Washington State Department of Transportation, Clark County Public Transportation Benefit Area (C-TRAN), Tri-County Metropolitan Transportation District (TriMet), Oregon Metro, Southwest Washington Regional Transportation Council, the Cities of Portland and Vancouver, and the Ports of Portland and Vancouver.

The IBR Program includes a series of projects within a 5-mile stretch of I-5 near milepost (MP) 306 in Oregon at the southern end, and extending north to approximately MP 2.75 in Washington. The IBR Program would implement the projects over a period of several years, starting with the construction of the Columbia River bridge crossing, referenced as Package 1. Package 1 includes a new pair of bridges over the Columbia River—one for northbound and one for southbound travel—built west of the existing Interstate Bridge. Package 1 also includes interchange improvements and connections to State Route 14 in Vancouver, Washington, and to Hayden Island in Portland, Oregon. When all highway, transit, and active transportation is moved to the new Columbia River bridges, the existing Interstate Bridge (both spans) would be removed.

The purpose of this delineation report is to document the presence, location, condition, and size of potentially jurisdictional wetlands and other waters of the state or U.S. within the Package 1 study area. Once verified by the U.S. Army Corp of Engineers (USACE), Oregon Department of State Lands (DSL), the Oregon Department of Environmental Quality (DEQ), and the City of Portland, this delineation will allow the IBR Program team to avoid, minimize, and/or mitigate the Program's impacts to wetlands and waters that are determined to be jurisdictional. This report focuses on the Oregon portion of the Package 1 project area; wetlands and waters identified within Washington are presented in a separate report.

Wetland delineation surveys were conducted in winter 2022/spring 2023 within areas potentially impacted by the IBR Program within ODOT rights of way and where right-of-entry permission was granted. Surveys were conducted to identify and delineate the boundaries of areas potentially under the jurisdiction of DSL, DEQ, and/or USACE. Based on the methods described below, the Columbia River was identified within the study area but no wetlands were observed. Additionally, based on visual observations from adjacent right of ways and parcels with granted right-of-entry, no additional wetlands or waterbodies were observed on parcels where right-of-entry permission was not granted.

2. LANDSCAPE SETTING AND LAND USE

The Package 1 study area is located along I-5 in northwestern Oregon and southwestern Washington and is bisected by the Columbia River. Figure 1 identifies the limits of the study area in Oregon for Package 1 (all figures are located in Appendix A unless otherwise noted).

The Columbia River dominates the landscape of the Oregon study area, which lies within the Willamette Basin (HUC 170900). In Oregon, the study area elevations vary from approximately 10 feet above mean sea level to about 20 feet above mean sea level in a relatively flat and low-lying floodplain.

Currently, the terrestrial portion of the study area in Oregon is used as a major transportation corridor and also supports both commercial and residential uses on Hayden Island. Figure 2 shows the tax lot maps of the study area.

A review of the National Wetlands Inventory (NWI) indicated that one riverine wetland is mapped within the study area (Figure 3).

- The Columbia River is mapped as a riverine tidal, unconsolidated bottom, permanent-tidal (R1UBV) system.

The portion of the study area on Hayden Island is predominantly urban, with some landscaped areas containing ornamental trees, shrubs, and herbs. Vegetation in the riparian and other undeveloped portions of the study area are dominated by Himalayan blackberry (*Rubus armeniacus* – facultative [FAC]), ornamental tree species, non-native cherry, (*Prunus* sp.), and other weedy species.

Soils mapped within the Oregon portion of the study area include Pilchuck-Urban land complex 0 to 3 percent slopes (33A), and water (W) (Figure 4).

- **Pilchuck-Urban land complex, 0 to 3 percent slopes (33A)** consists of excessively drained soil on flood plains of the Columbia and Willamette Rivers, formed in sandy alluvium or sandy dredge spoils. A typical profile in undisturbed areas (15 percent of complex) includes a surface layer of very dark grayish brown sand about 12 inches thick. The underlying material is dark grayish brown sand to a depth of 60 inches or more. About 35 percent of the complex has been influenced by 20 feet or more of sandy dredge material. About 35 percent of the complex is urban land covered by impervious surfaces. Moag, Rafton, Faloma, and Sauvie soils are included with the complex, as well as areas of cut and fill from silty or cobbly materials (up to 15 percent of the map unit). In areas where vegetation has become established, typical species include black cottonwood (*Populus balsamifera*), willow (*Salix* sp.), trailing blackberry (*Rubus ursinus*), forbs, and grasses. This soil is not classified as a hydric soil.

During the wet season, the site receives direct precipitation and overland runoff. A high groundwater table is influenced by water levels in the Columbia River. The Columbia River forms the northern border of the Oregon study area. North Portland Harbor passes south of the study area.

3. SITE ALTERATIONS

Mainstem aquatic habitat in the lower Columbia River has been substantially altered from its historic condition by a variety of factors, including basin-wide water management operations, construction, and operation of mainstem hydroelectric projects, and other human practices that have degraded water quality and habitat.

Flood control measures have been implemented that affect the entire lower river environment. Levees and river embankments were constructed in the early 1900s on both sides of the river, isolating much of the floodplain from all but the highest flows. Later, as the floodplain underwent increased development, elaborate pumping operations were implemented on the Oregon side to prevent overbank flow.

In addition, construction of the mainstem Columbia River dams, culminating in completion of the Bonneville Dam in 1938, effectively regulates flows and limits flooding events. Currently, 23 mainstem and more than 300 tributary dams regulate the flow of the Columbia River to the Pacific Ocean (Bottom et al. 2005).

Increased urbanization and land use changes in the study area over the last century have decreased the number of wetlands in the study area. Transportation corridors and other developments have fragmented historic wetland systems, leaving a few highly constrained systems located outside of the study area. The terrestrial portion of the study area in Oregon is predominantly developed with commercial and residential structures and associated parking and landscaping. The other dominant alteration is I-5, in the middle of the study area, and local surface streets on Hayden Island.

4. PRECIPITATION DATA AND ANALYSIS

Precipitation recorded at the Portland International Airport weather station on March 1 and March 22, 2023, was 0.01 and 0 inches, respectively. Approximately 1.49 inches of rain fell during the two weeks immediately preceding March 1, and approximately 2.55 inches of rain fell during the two weeks immediately preceding March 22. The total precipitation recorded for March 2023 was 5.40 inches. Total precipitation recorded for the water year through March 22 was 29.59 (NRCS 2023b).

According to the WETS table for Portland (WETS Station OR6751), the growing season in the area spans February 15 to November 29, a period of approximately 288 days. Average monthly precipitation for the month of March, based on data collected from 1991 through 2020, is approximately 4.83 inches. Average precipitation for the water year recorded during the same time period at the WETS station is 33.82 inches through March (NRCS 2023b).

Precipitation for the 2023 water year through the March 1 and March 22, 2023, site visits totaled 10.18 inches (Table 4-1). According to the National Oceanic and Atmospheric Administration, this represents 70 percent of the normal amount of rainfall for this period (NOAA NWS 2023).

Table 4-1. Yearly Precipitation for 2023 (January 1 through March 22, 2023) Portland, Oregon

Date	Precipitation for Water Year 2023 (inches)	Precipitation Previous 2 Weeks (inches)	Departure from Normal (inches)	Percent of Normal Precipitation
January 1, 2023–March 22, 2023	10.18	14.64	-4.46	70%

Source: NRCS 2023b

Table 4-2 shows the monthly precipitation data for the three months prior to the site visits using the 30 percent probability range around the average (March 1 and March 22, 2023). Precipitation was below normal for January and February 2023 and above normal for December 2022 and March 2023, and was approximately 85 percent of the average for the period. Sample plot data was interpreted with below-normal precipitation in mind.

Table 4-2. Monthly Precipitation for Three Months Prior to March 1 and March 22, 2023, Site Visit; Portland, Oregon

Date	Precipitation (inches)	Normal (inches)	Departure from Normal (inches)	Percent of Normal Precipitation
December 2022	8.62	7.35	1.27	117%
January 2023	3.71	6.36	-2.65	58%
February 2023	2.74	4.74	-2.00	58%
March 1-22, 2023	3.73	3.54	0.19	105%
Totals	18.80	21.99	-3.19	85%

Source: NRCS 2023b

During the 14-day period starting March 8, 2023, and including the March 22 site visit, precipitation was 2.55 inches, which was 0.22 inches more than the normal amount of rainfall for that period, according to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS 2023b).

5. METHODS

The wetland delineation relied and expanded upon previous delineation efforts performed for the CRC project, including a wetland and waters delineation report that was submitted to DSL for concurrence. The CRC delineation report (CRC 2008) received concurrence from DSL in September

2008 (DSL #WD 2008-0205). Additionally, information from the City of Portland's Wetland Inventory Project was also referenced (City of Portland 2023).

Field investigations for the IBR Program were conducted on March 1 and 22, 2023. Where possible, wetland surveys were conducted on all unpaved areas within the study area. However, right-of-entry permission for digging test pits was not granted for all parcels within the study area at the time of the field surveys. Appendix B includes a figure identifying parcels for which right-of-entry permission for digging test pits had been granted and that were physically surveyed during the field surveys, as well as those for which right-of-entry was either denied or for which no response was received. Parcels with no color received right-of-entry permission to access the site but test pits were not needed because the parcels were entirely developed with impervious surfaces. Only parcels for which right-of-entry had been specifically authorized were physically accessed during the delineation field surveys.

The surface streets and parcels for which right-of-entry permission was available were walked and assessed for wetland characteristics. Parcels where access had not been granted were observed from areas either within the public right of way or from parcels that were accessible. In these cases, recent aerial photography, soils data, NWI maps, and a visual survey from accessible locations were used to determine the likely presence or absence of wetlands. In this way, it was possible to assess all areas sufficiently for the presence or absence of wetland features.

The wetland delineation field work was conducted pursuant to the parameters detailed in the USACE Wetland Delineation Manual (Environmental Laboratory 1987) and the 2010 Regional Supplement (USACE 2010). The 1987 Manual and 2010 Regional Supplement require evidence of three parameters to determine that wetlands occur on a site: wetland hydrology, hydric soils, and hydrophytic vegetation. A detailed description of the 1987 Manual and Regional Supplement methods can be found on the USACE website (current URL: https://usace.contentdm.oclc.org/digital/collection/p266001coll1/id/4532/).

To meet the wetland hydrology criterion, soils in the study area must be inundated or saturated to the surface for a period in the growing season that is long enough to develop anaerobic conditions (at least 5 percent of the growing season). The growing season in the Portland area is approximately 288 days (from February 15 through November 29; Green et al. 1983), so 5 percent of the growing season in the study area is equal to a period of 14 days. The early growing season is generally the best time to assess the hydrology of a study area because inundation or saturation of the surface should be present during this time if the area is a wetland. When data must be collected outside of the early growing season, other primary indicators of wetland hydrology (drainage patterns, water marks, etc.) or two or more secondary indicators of wetland hydrology (oxidized root channels, water-stained leaves) may be used to evaluate wetland hydrology.

Dominant vegetation within the study area was identified using botanical references and classified using the National List of Plant Species that Occur in Wetlands: 1988 National Summary and 1993 Supplement: Northwest (Region 9) (Reed 1988, 1993). All areas where greater than 50 percent of the vegetation was hydrophytic (FAC or wetter) (i.e., grass areas) were further examined for indicators of wetland hydrology. This wetland delineation found no areas with 50 percent or more hydrophytic

vegetation, no positive indicators of wetland hydrology, and no hydric soil indicators. Sample plots detailing the conditions observed are found in Appendix C.

6. DESCRIPTION OF ALL WETLANDS AND NON-WETLAND WATERS

The following sections discuss the wetlands and non-wetland waters delineated within the study area. Figure 5 shows a recent aerial photograph of the study area. Appendix D presents ground-level photographs taken during the site visit.

6.1 Wetlands

No wetlands are mapped within the study area by the NWI, the City of Portland, or previous CRC delineations. In addition, no wetland characteristics were visually observed during the site visits or on aerial photographs. Based on the available information and visual observations, no wetlands occur within the IBR Program Package 1 study area in Oregon.

6.2 Non-Wetland Waters

The Columbia River flows from east to west through the study area. It is considered a traditional navigable water. It is the primary hydrologic feature of the study area. The City of Portland includes the Columbia River in its environmental zone overlay. The ordinary high water mark (OHWM) of the Columbia River was identified and recorded using a hand-held global positioning system (GPS) device. The OHWM was determined based on the visual observance of field indicators of ordinary high water events. During the site visits, a line established on the existing rock riprap from repeated seasonal high water elevations was observed and recorded. This physical OHWM is shown in Figures 6a through 6d.

Additionally, the USACE establishes ordinary high water elevations for the purpose of determining limits of jurisdiction under Section 10 of the Rivers and Harbors Act. The USACE-designated ordinary high water elevation for river mile 106 is 15.8 feet Columbia River Datum, 17.59 feet National Geodetic Vertical Datum of 1929, and 21.04 feet North American Vertical Datum of 1988. The USACE established ordinary high water mark of 21.04 feet for river mile 106 is shown in Figures 6a through 6d. The total area of non-wetland waters within the study area is approximately 79.28 acres as shown in Figures 6a and 6b. Table 6-1 provides a summary of the non-wetland waters (i.e., Columbia River) in the study area.

Table 6-1. Non-wetland Waters Summary

Unique Identifier Code	River Mile	Essential Fish Habitat? Yes/No	Ordinary High Water Width	Acres within the Study Area	Additional Info for Jurisdictional Determination	Access? Yes/No
Columbia River	106	N	2,630 feet	79.28	Fish presence; perennial	Yes

7. DEVIATION FROM LOCAL OR NATIONAL WETLAND INVENTORIES

Data from the NWI online mapper (USFWS 2023), from prior delineations (CRC 2008), and City of Portland Wetland Inventory Project (City of Portland 2023) were referred to for initial indicators of wetland presence within the study area. There is no officially published local wetland inventory for the study area. The results of the wetland delineation are generally consistent with the data from these sources.

The NWI mapped the Columbia River as a R1UBV wetland within the study area, which is consistent with the finding of the field survey. No other wetlands were mapped within the study area, and the results of the field investigation were consistent with this assessment.

8. MAPPING METHOD AND ESTIMATED ACCURACY

The OHWM boundaries were recorded using a sub-meter (+/- 3.28 feet) accuracy GPS device, where possible. For parcels where access permission had not been granted, the OHWM boundary was established based on a combination of topographic data and aerial photo interpretation (1-foot pixel air photographs). These hand-digitized areas have an estimated accuracy of +/- 2.99 feet. Mapping and initial cartography were completed using ArcMAP software with accuracy within 1 to 2 meters.

9. ADDITIONAL INFORMATION

The Columbia River is considered a traditionally navigable water by the USACE.

10. RESULTS AND CONCLUSIONS

The results of the wetland and waters assessment documented that no wetlands occur within the study area. A single surface water, the Columbia River, is located within the study area in Oregon. The OHWM of the Columbia River along the north bank of Hayden Island was delineated within the study area. The Columbia River is a R1UBV water and is approximately 2,630 feet across from the south bank on Hayden Island to the north bank in Washington.

11. DISCLAIMER

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon DSL in accordance with OAR 141-090-0005 through 141-090-0055.

12. REFERENCES

Bottom D.L., C.A. Simenstad, J. Burke, A.M. Baptista, D.A. Jay, K. K. Jones, E. Casillas, and M.H. Schiewe. 2005. Salmon at River's End: The Role of the Estuary in Decline and Recovery of Columbia River Salmon. NOAA Technical Memorandum NMFS-NWFSC-68, Northwest Fisheries Science Center, NMFS, Seattle, Washington.

City of Portland. 2023. Wetland Inventory Project. Bureau of Environmental Services. https://www.portland.gov/bps/planning/environ-planning/industrial-ezones/about-wip

CRC (Columbia River Crossing). 2008. Interstate 5 Columbia River Crossing: Wetland Delineation Report for Oregon. Prepared by Parametrix, April 2008.

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

Green, G. L., Oregon State University. Agricultural Experiment Station., United States. Forest Service., United States. Soil Conservation Service. 1983. Soil survey of Multnomah County, Oregon. Washington, D.C.: Soil Conservation Service.

NRCS (U.S. Department of Agriculture, Natural Resource Conservation Service). 1983. Soil Survey of Multnomah County, Oregon. U.S. Department of Agriculture.

NRCS (U.S. Department of Agriculture Natural Resources Conservation Service). 2023a. Web Soil Survey. Available at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> Accessed May 5, 2023.

NRCS (U.S. Department of Agriculture, Natural Resource Conservation Service). 2023b. WETS Climate Summary Tables for Multnomah County. Available at <https://agacis.rcc-acis.org/> Accessed September 26, 2023.

National Oceanic and Atmospheric Administration National Weather Service. 2023. Online Weather Data for Portland, Oregon. Available at <https://www.weather.gov/wrh/Climate?wfo=pqr>

Reed, P.B., Jr. 1988. National List of Plant Species That occur in Wetlands: Northwest (Region 9). U.S. Fish and Wildlife Service, Biological Report 88(26.9).

Reed, P.B., Jr. 1993. 1993 Supplement to List of Plant Species That Occur in Wetlands: Northwest (Region 9). U.S. Fish and Wildlife Service, Supplement to Biological Report 88(26.9).

USACE (U.S. Army Corps of Engineers). 1989. Columbia River and Tributaries Review Study: Project Data and Operating Limits, North Pacific Division, CRT 69. Available at <http://www.nwd-wc.usace.army.mil/TMT/basin.html>

USACE (U.S. Army Corps of Engineers). 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J.S.

Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center.

USACE (U.S. Army Corps of Engineers). 2020. National Wetland Plant List, version 3.5. U.S. Army Corps of Engineers Engineer Research and Development Center Cold Regions Research and 6 Engineering Laboratory, Hanover, New Hampshire. Available at <http://wetland_plants.usace.army.mil/>. Accessed May 5, 2023.

USFWS (U.S. Fish and Wildlife Service). 2023. National Wetlands Inventory (NWI) Wetlands Mapper. Available at <https://www.fws.gov/wetlands/Data/Mapper.html>. Accessed May 5, 2023.

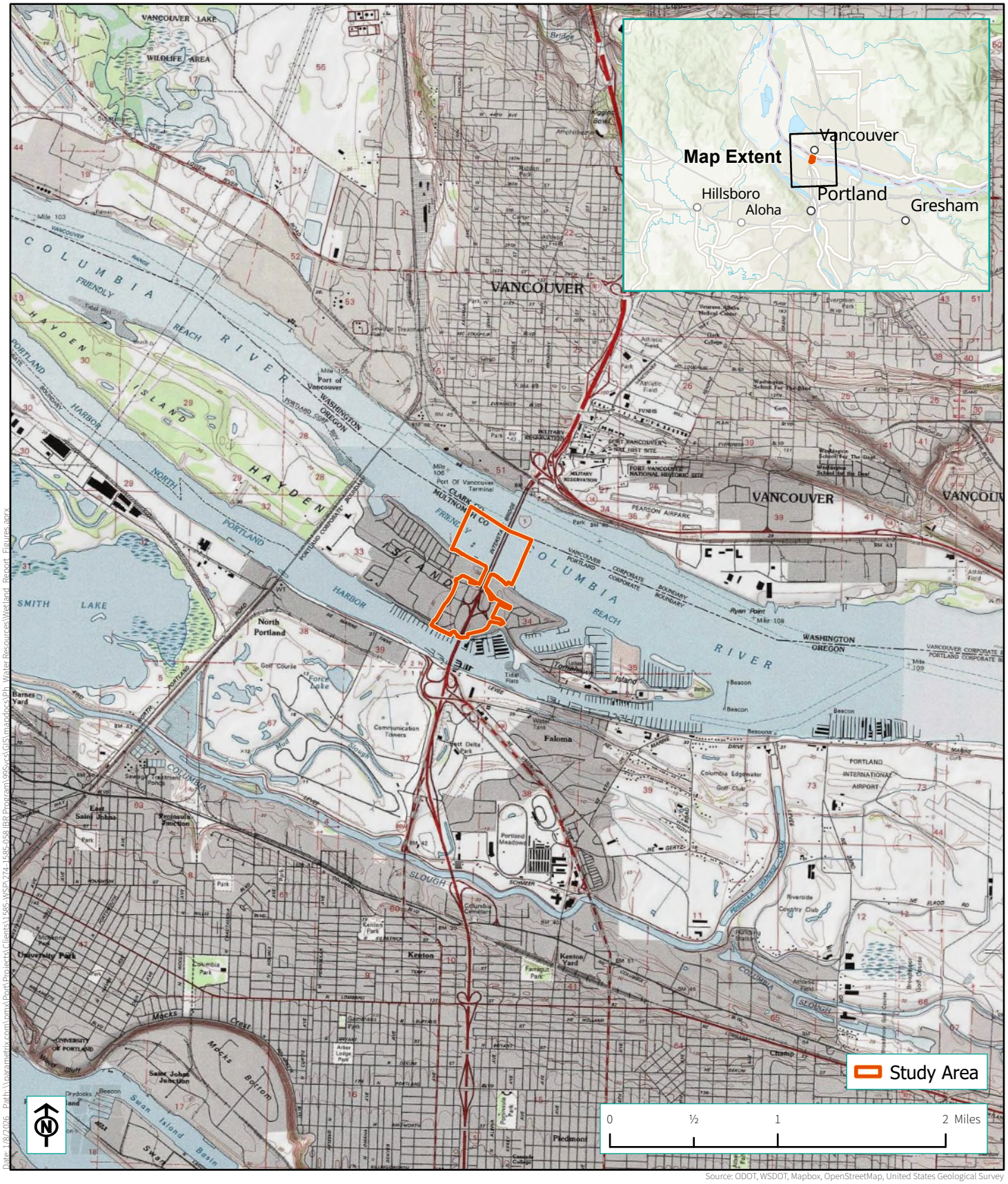
USFWS (U.S. Fish and Wildlife Service). 1989. National Wetlands Inventory, Portland, Oregon - Washington, USFWS Office of Biological Services.

USGS (U.S. Geological Service). 1990. Portland, Oregon - Washington, 15 minute Quadrangle.

APPENDIX A. FIGURES

Interstate BRIDGE Replacement Program

Figure 1
Project Location



Source: ODOT, WSDOT, Mapbox, OpenStreetMap, United States Geological Survey

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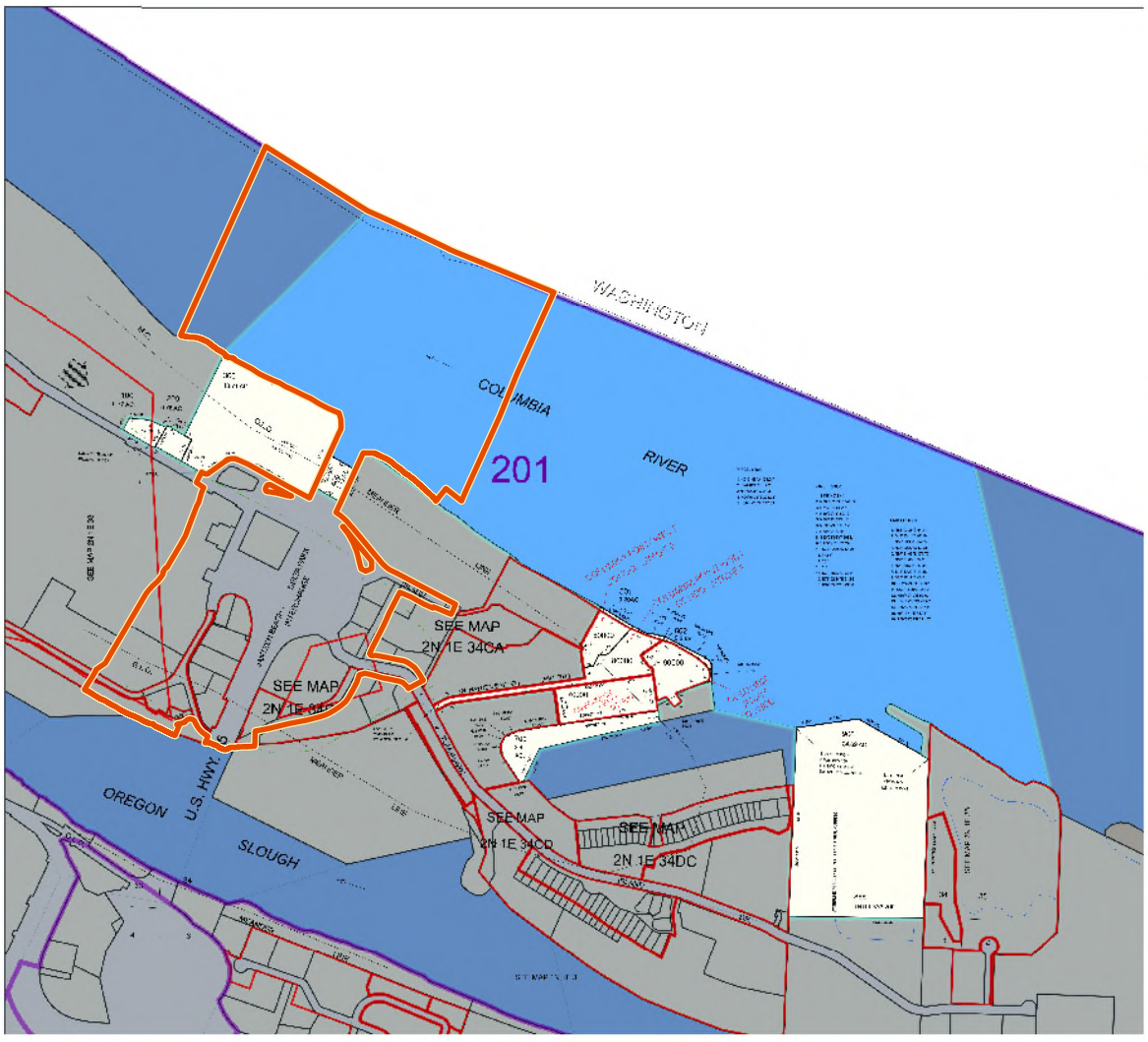
Figure 2
Tax Lot Map



2N1E34
PORTLAND

Multnomah County

SECTION 34 TOWNSHIP 2 N.
RANGE 1 E.
WILLAMETTE MERIDIAN

1" = 400'

Cancelled Numbers:

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY

2N1E34 PORTLAND

Study Area

0 250 500 1,000 Feet

Source: ODOT, WSDOT, Mapbox, OpenStreetMap, ORMAP

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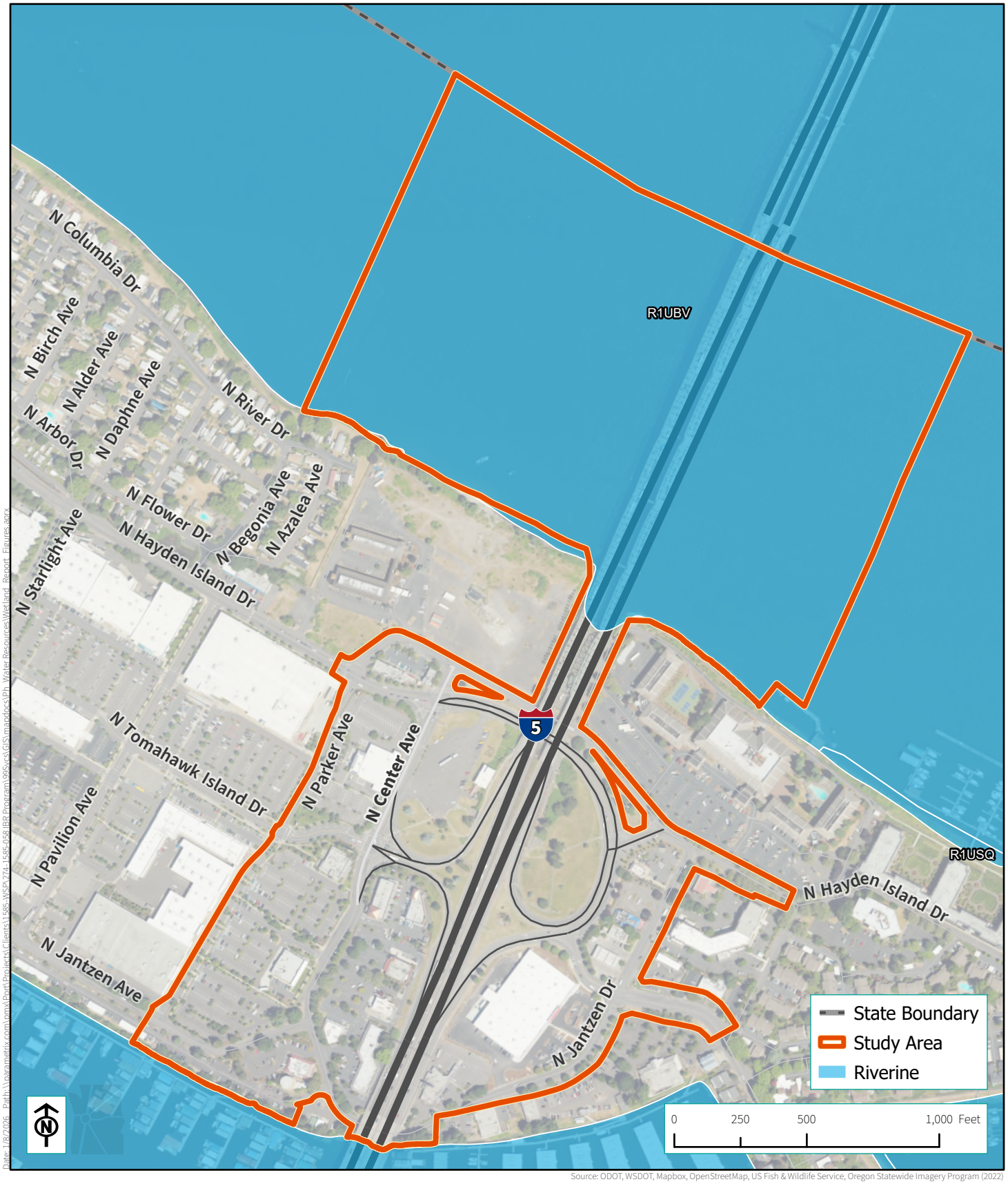
Interstate BRIDGE Replacement Program

Figure 3
NWI Wetlands



Source: ODOT, WSDOT, Mapbox, OpenStreetMap, US Fish & Wildlife Service, Oregon Statewide Imagery Program (2022)

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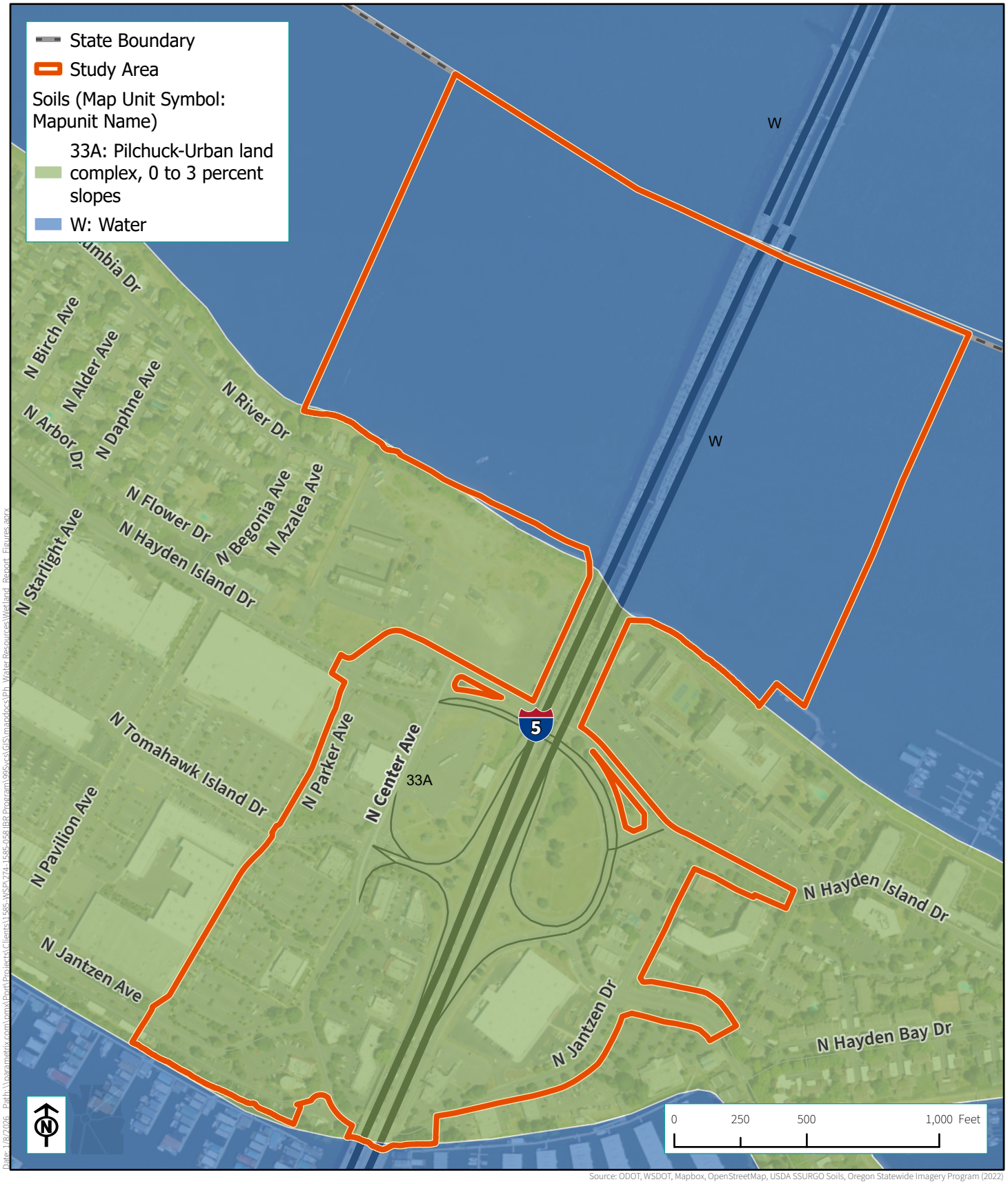
Interstate BRIDGE Replacement Program

Figure 4
Soils



Source: ODOT, WSDOT, Mapbox, OpenStreetMap, USDA SSURGO Soils, Oregon Statewide Imagery Program (2022)

Interstate BRIDGE Replacement Program

Figure 5
Recent Aerial (May 2023)

Source: ODOT, WSDOT, Mapbox, OpenStreetMap, Google Earth Aerial Imagery (May 2023)

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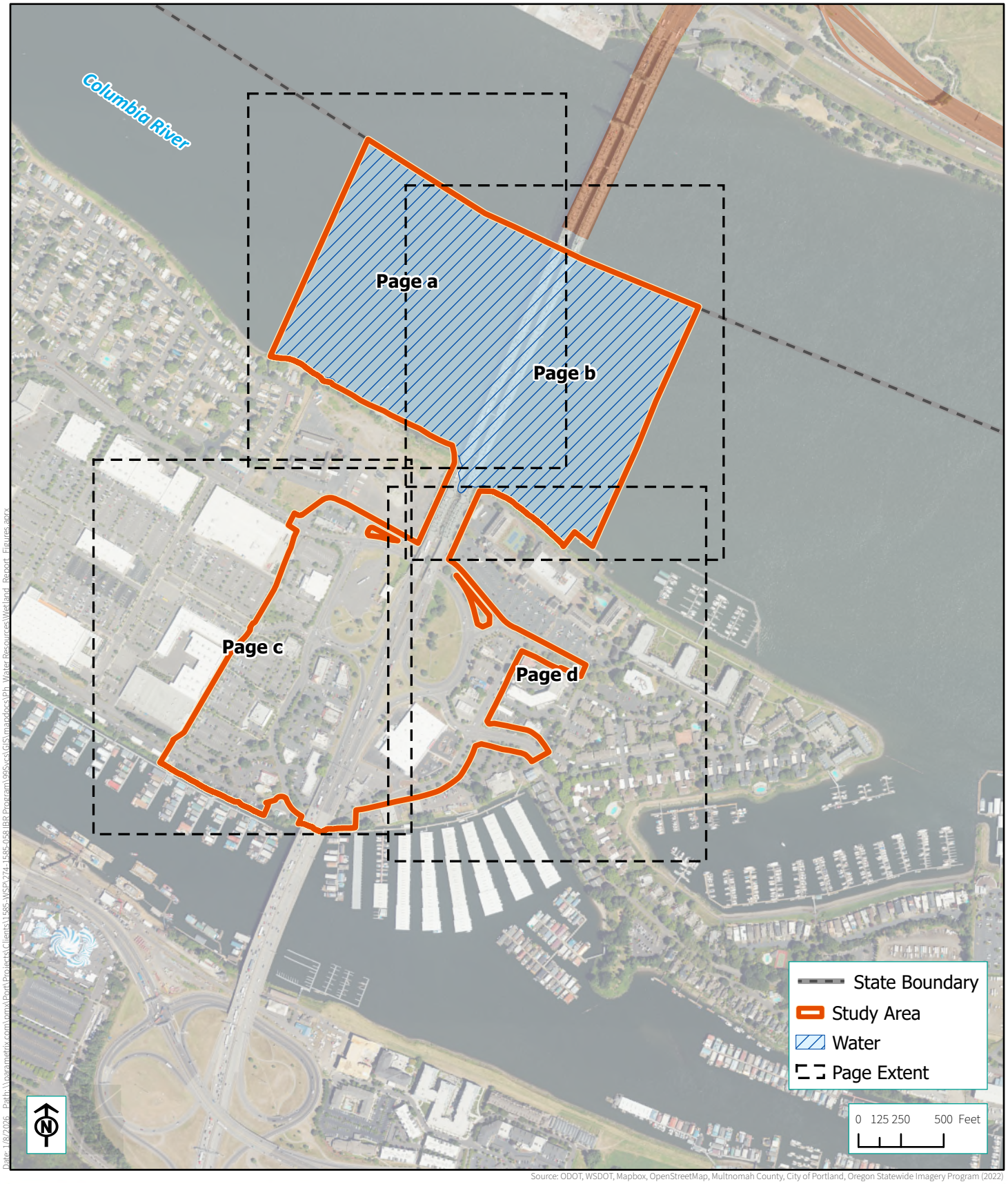
Figure 6
Delineated Resource Index



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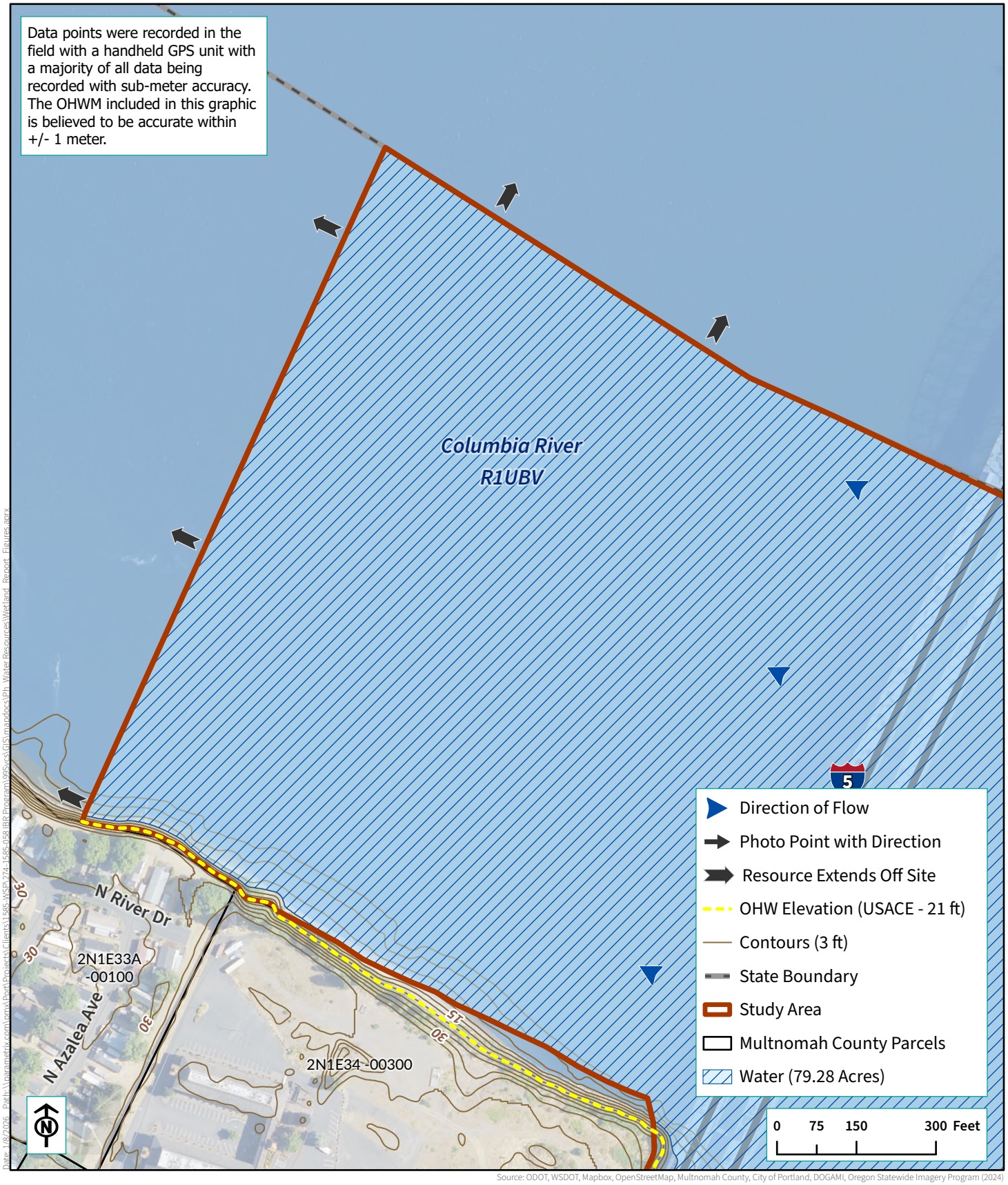
Interstate BRIDGE Replacement Program

Figure 6a
Delineated Resources



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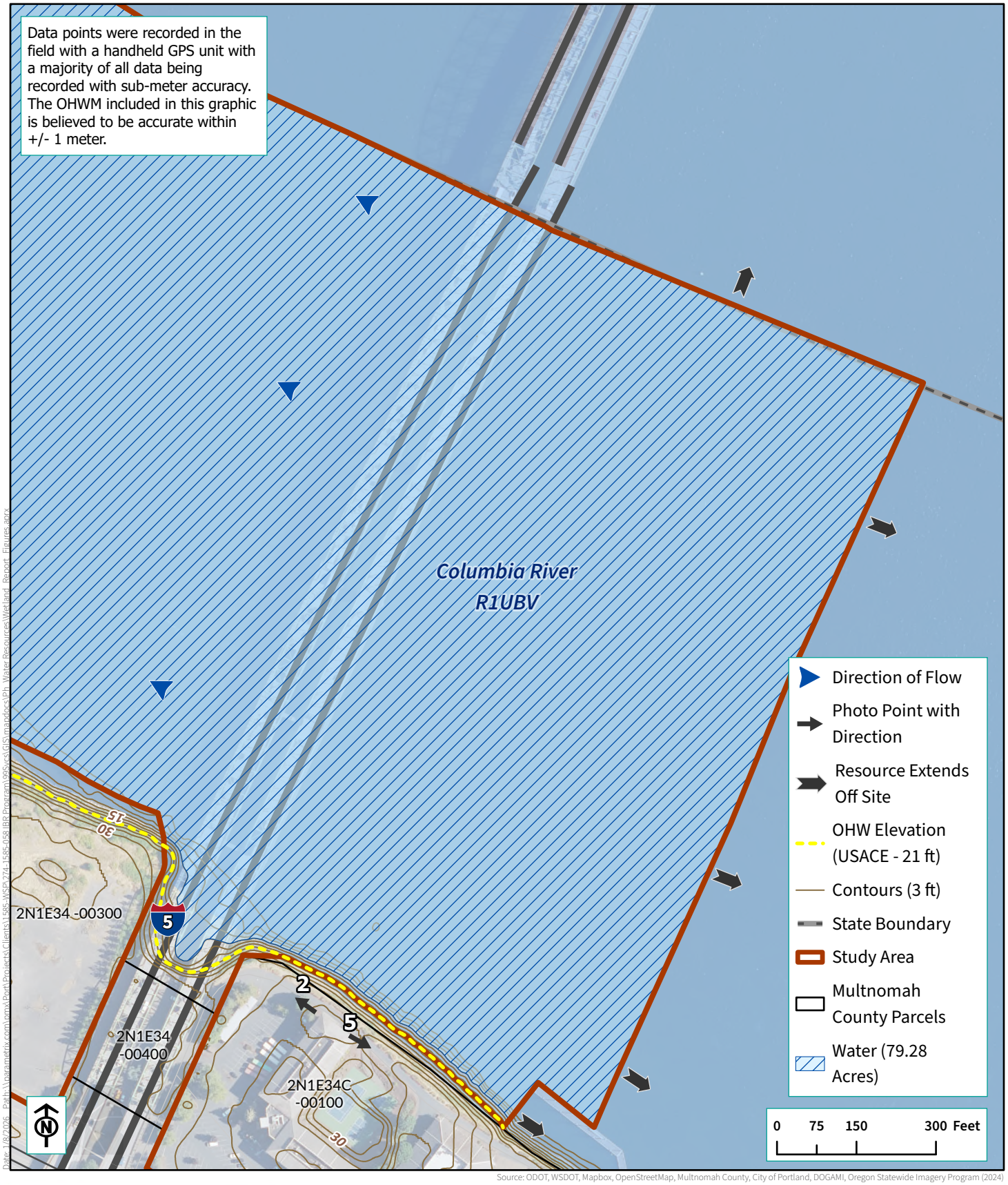
Interstate BRIDGE Replacement Program

Figure 6b
Delineated Resources



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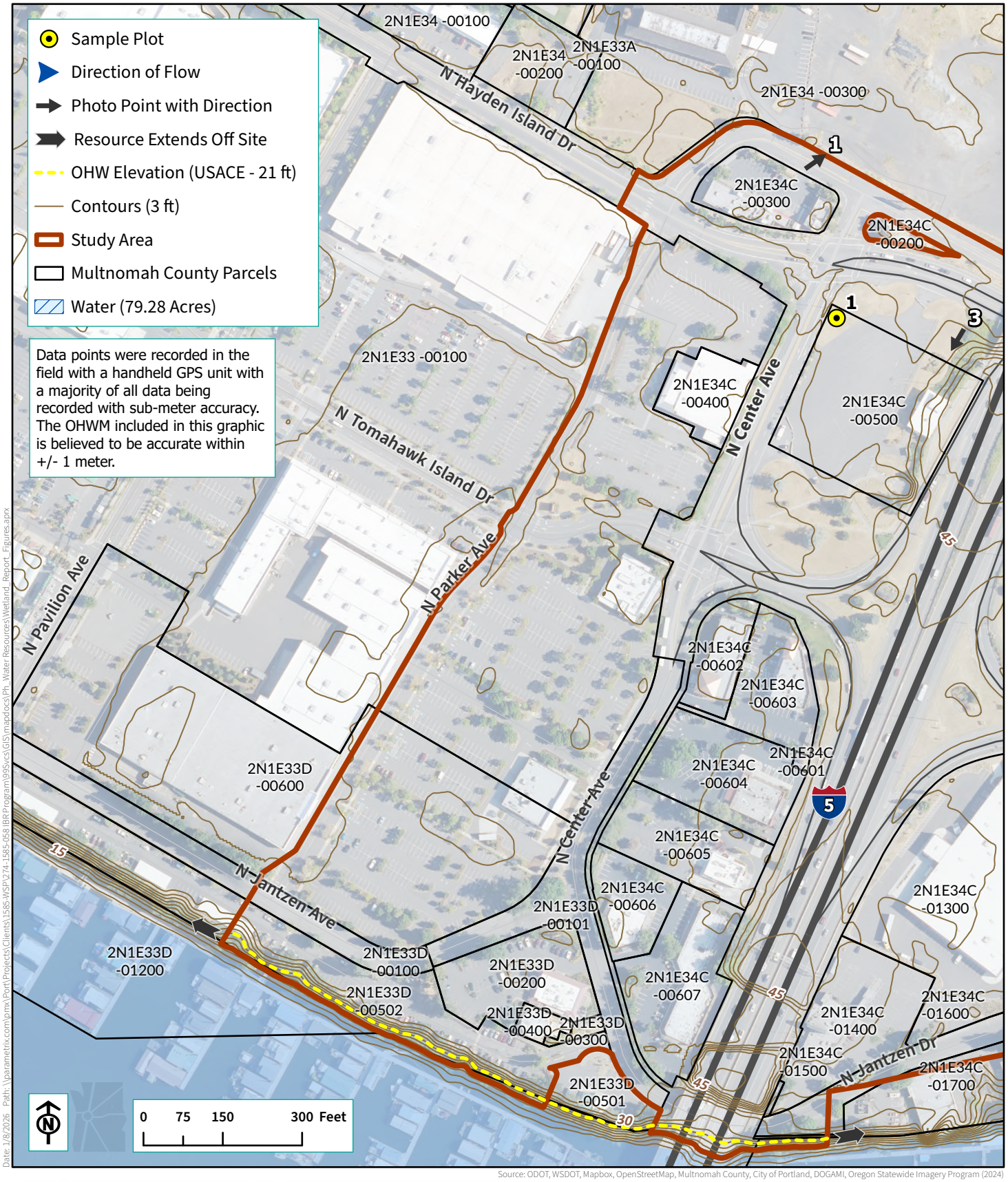
Interstate BRIDGE Replacement Program

Figure 6c
Delineated Resources



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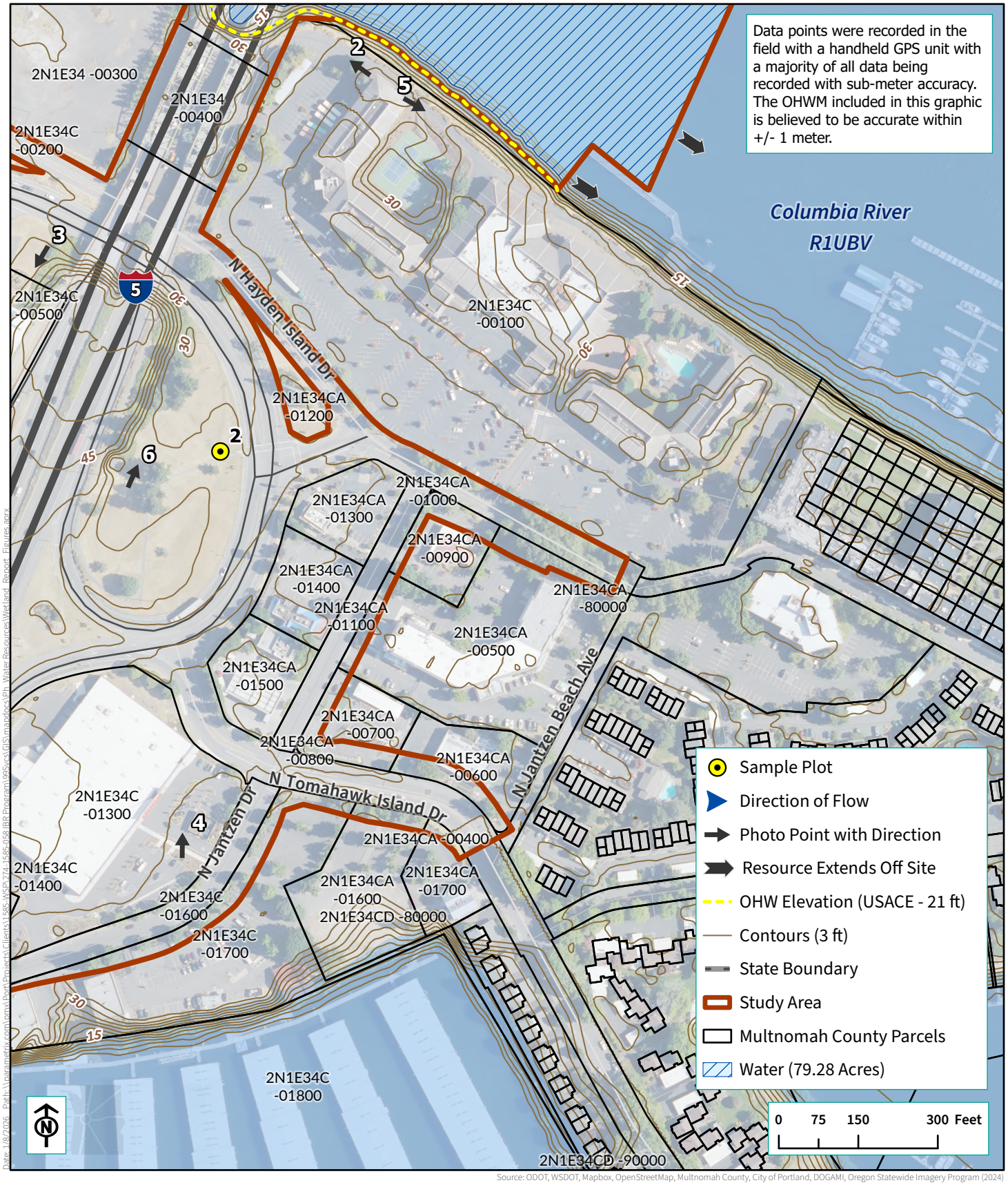
Interstate BRIDGE Replacement Program

Figure 6d
Delineated Resources



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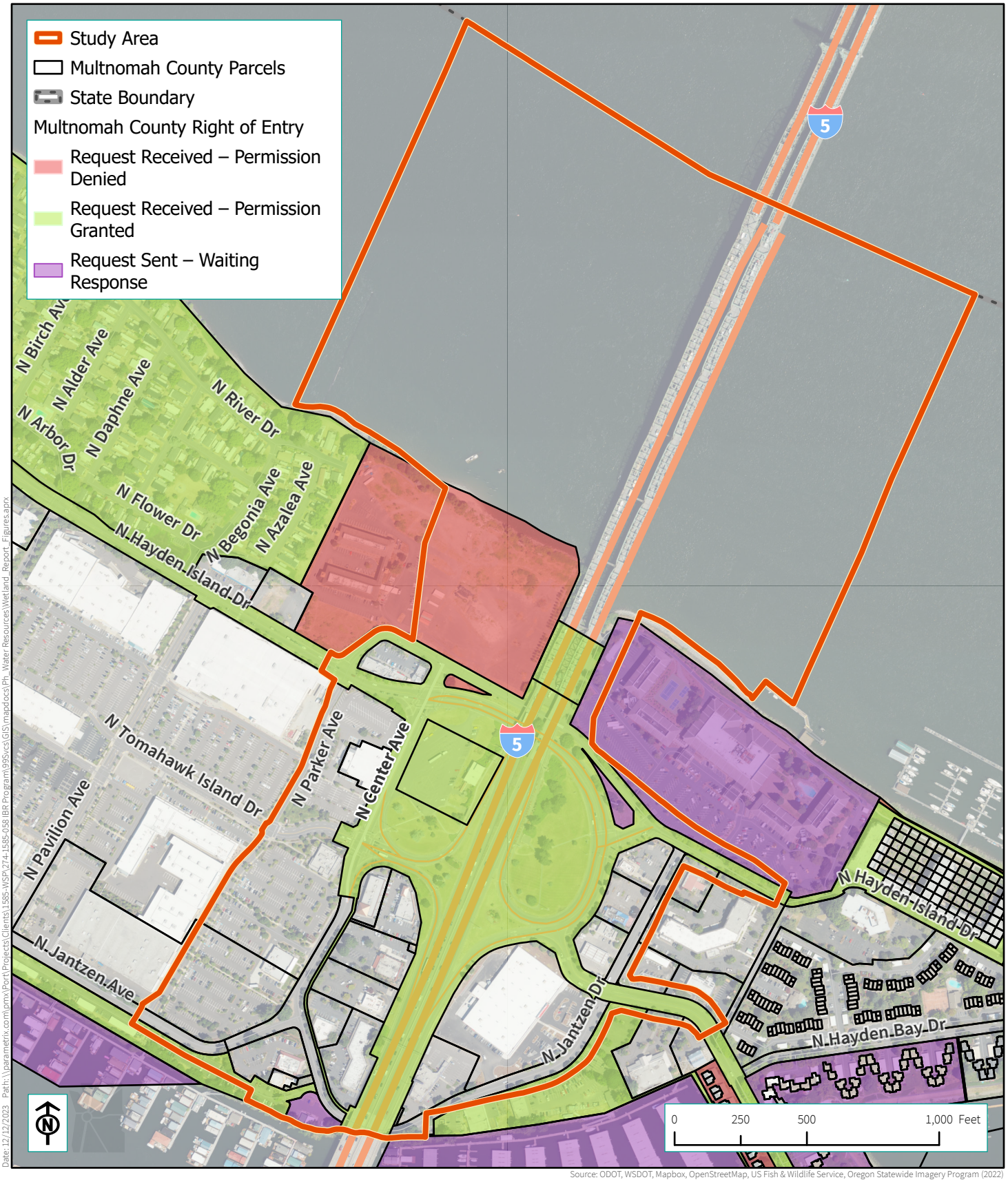
APPENDIX B. ACCESS PERMISSION FIGURE

Interstate BRIDGE Replacement Program

Right of Entry Status



Source: ODOT, WSDOT, Mapbox, OpenStreetMap, US Fish & Wildlife Service, Oregon Statewide Imagery Program (2022)

Date: 12/12/2023 Path: \\parametrix.com\prnx\Port\Projects\Clients\1585-WSP\274-1585-058 IBR Program\99Svcs\GIS\mapdocs\Ph_Water Resources\Wetland_Report_Figures.aprx

Oregon Department of Transportation

Washington State Department of Transportation

www.interstatebridge.org

APPENDIX C. DATA SHEETS

U.S. Army Corps of Engineers

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

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: IBR Program - Columbia Bridge Bridge Prackage | City/County: Portland/Multnomah | Sampling Date: 3/22/2023

Applicant/Owner: Oregon Department of Transportation | State: OR | Sampling Point: SP-1

Investigator(s): Dustin Day and Brian Knees | Section, Township, Range: Section 34, T02N, R01E W.M.

Landform (hillside, terrace, etc.): Island | Local relief (concave, convex, none): concave | Slope (%): <1

Subregion (LRR): LRR A, MLRA 2 | Lat: 45.61300 N | Long: 122.67984 W | Datum: 4326 Lat/Long

Soil Map Unit Name: Pilchuck-Urban land complex, 0 to 3 percent slopes (33A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Plot taken on west side of I-5, near intersection of N Center Ave and N Hayden Island Dr

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: 10)			
1. *Poa annua*	75	Yes	FAC
2. *Daucus carota*	5	No	FACU
3. *Plantago lanceolata*	20	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

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: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	75	x 3 =	225
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	100 (A)		325 (B)

Prevalence Index = B/A = 3.25

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** X

Remarks:
Vegetation mown consistently, throughout year.

SOIL

Sampling Point: SP-1

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Loamy/Clayey	
2-16	10YR 3/3	100					Loamy/Clayey	

[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)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ 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) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is 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 on 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

U.S. Army Corps of Engineers

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

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: IBR Program - Columbia Bridge Bridge Prackage | City/County: Portland/Multnomah | Sampling Date: 3/22/2023

Applicant/Owner: Oregon Department of Transportation | State: OR | Sampling Point: SP-2

Investigator(s): Dustin Day and Brian Knees | Section, Township, Range: Section 34, T02N, R01E W.M.

Landform (hillside, terrace, etc.): island | Local relief (concave, convex, none): concave | Slope (%): <1

Subregion (LRR): LRR A, MLRA 2 | Lat: 45.61201 N | Long: 122.67772 W | Datum: 4326 Lat/Long

Soil Map Unit Name: Pilchuck-Urban land complex, 0 to 3 percent slopes (33A) | NWI classification: n/a

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X 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 X	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Plot taken on west side of I-5, near intersection of N Center Ave and N Hayden Island Dr

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: 10)			
1. *Poa annua*	75	Yes	FAC
2. *Daucus carota*	5	No	FACU
3. *Plantago lanceolata*	20	No	FACU
4. *Trifolium repens*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum ____

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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	105 (A)		340 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation
X 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 X No ____

Remarks:
Vegetation mown consistently, throughout year.

SOIL

Sampling Point: SP-2

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-16	10YR 3/3	100					Loamy/Clayey	

[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.)

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- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ 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) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
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- ___ 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 on 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 X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

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

Wetland Hydrology Present? **Yes** ___ **No** X

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

Remarks:

APPENDIX D. PHOTOLOG

Photosheet

Photo No.	Date
1	March 1, 2023

View of the vacant portion of Parcel R323508 to the west of the Interstate Bridge on the north side of Hayden Island.

Photo No.	Date
2	March 1, 2023

View of Parcel 32352 and the Interstate Bridge on the north side of Hayden Island.

Photo No.	Date
3	March 1, 2023

View of Parcel R323515, west of the Interstate Bridge on Hayden Island and looking south.

Photo No.	Date
4	March 1, 2023

View of Parcel R323529, east of the Interstate Bridge on Hayden Island.

Photo No.	Date
5	March 1, 2023

View of Parcel 32352 on the north side of Hayden Island and east of the Interstate Bridge.

Photo No.	Date
6	March 1, 2023

View of the area directly east of the Interstate Bridge on Hayden Island.