

**2262 78TH AVE SE**

KING COUNTY PARCEL No. 5315101697  
CRITICAL AREA STUDY



# 2262 78TH AVE SE

---

## KING COUNTY PARCEL No. 5315101697 CRITICAL AREA STUDY

PREPARED FOR:

**JOHN AND JUNG TODA**

PREPARED BY:

**PETERMAN CONSULTING, LLC**  
12450 80TH AVE S  
SEATTLE, WA 98178  
(206) 666-8736



JUNE 17TH, 2024

---

TOM PETERMAN MEH, PWS  
BIOLOGIST

---

DATE

---

## TABLE OF CONTENTS

INTRODUCTION	1
FEATURE SUMMARY	1
BACKGROUND	3
Existing Conditions	3
National Wetlands Inventory	3
Sensitive Wildlife and Plants	3
Forest Practice Rules	3
Soil Information	4
METHODS	5
Hydrophytic Vegetation	5
Wetland Hydrology	6
Hydric Soils	6
RESULTS	6
Stream S1	6
SUMMARY	7
BIOLOGIST QUALIFICATIONS	7
Tom Peterman	7
REFERENCES	8

---

## **LIST OF FIGURES**

Figure 1. Vicinity map	1
Figure 2. Feature map	2
Figure 3. Map of stream and buffer	7

## **LIST OF TABLES**

Table 1. Stream summary	2
Table 2. WETS precipitation analysis	4
Table 3. Definitions for USFWS plant indicator status	6

## **LIST OF APPENDICES**

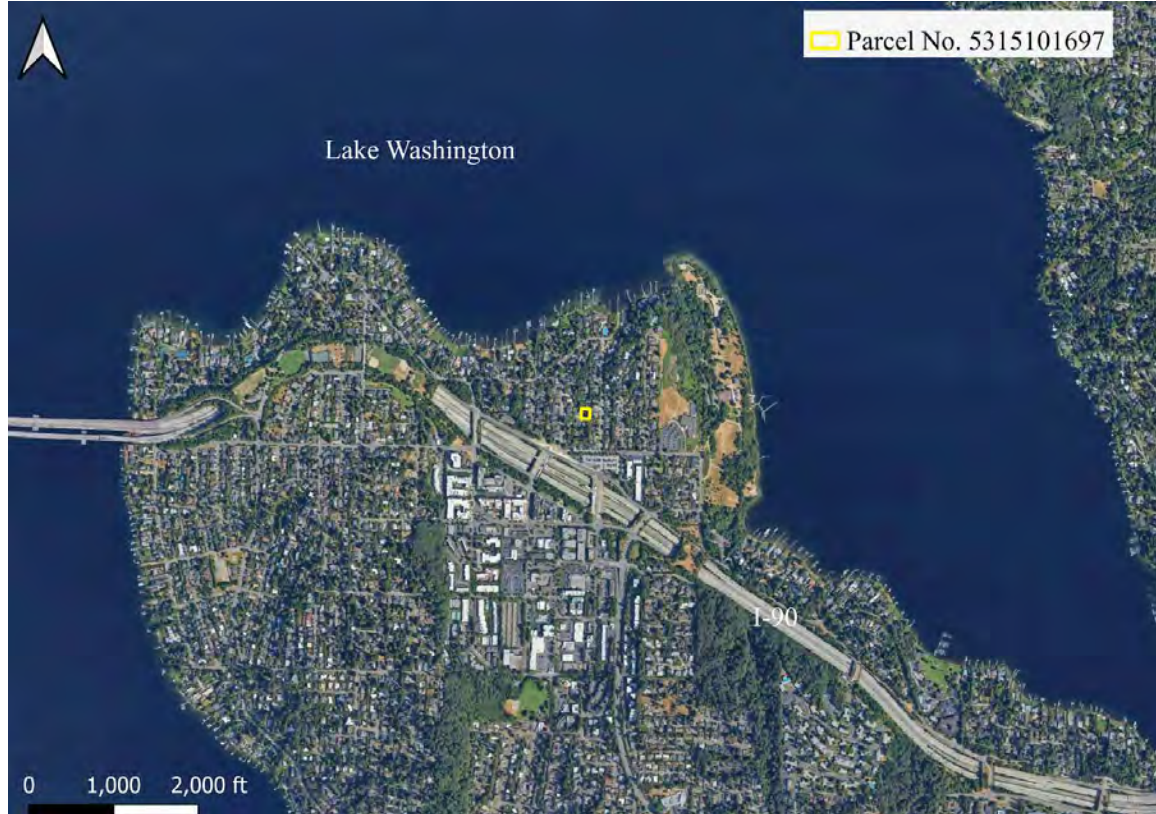
Appendix A. Critical Area Map
Appendix B. Datasheets
Appendix C. Queried Database Figures
Appendix D. Site Photos

---

## INTRODUCTION

Peterman Consulting, LLC has been contracted to perform a critical areas assessment and to prepare a critical area study for the property located at 2262 78th Ave SE (King County parcel No. 5315101697) in the city of Mercer Island (Figure 1). The site is within Section 01 Township 24N, and Range 04E, W.M. The purpose of this assessment and report is to document all wetlands, streams, and buffers that are on or within 300 feet of the subject property.

**Figure 1. Vicinity map**



## FEATURE SUMMARY

A Peterman Consulting biologist visited the subject property on May 30th, 2024 to conduct an assessment to identify any wetlands or streams that are within 300 feet of the subject property.

Peterman Consulting did not identify any areas that contained all three wetland criteria as defined in the U.S. Army Corps of Engineers' (USACE) *Federal Wetland Delineation Manual* (1987), and the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (2010). A critical area map and field datasheets are presented in Appendices A and B, respectively.

In addition to the wetland investigation, a stream evaluation was completed to identify all areas that would meet the definition of a natural water feature according to Washington Administrative Code (WAC) 222-16-030. Peterman Consulting identified one stream

feature (S1) located entirely offsite but within 300 feet of the subject property (Figure 2). During the May site visit there was flowing water observed. Observations were made of stream field indicators as defined in the Washington State Department of Ecology's (DOE) *Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State* (2016). The ordinary high water mark (OHWM) determination was made using visual observations during the site visit and with data from the Washington Department of Natural Resources' (WDNR) LiDAR Portal website (WDNR 2024a). Flagging of the OHWM was not completed as the stream is located entirely off site and to the north of the subject property.

According to Mercer Island City Code (MICC) Chapter 19.07 Stream S1 is a Type Ns stream as it does have any record of fish utilization and does not appear to have the potential to support fish habitat due to an observed channel width smaller than 2 feet. The stream's buffer was defined according to MICC 19.07.180. A summary of the stream is provided in Table 1.

**Table 1. Stream summary**

Feature	Stream Type <sup>1</sup>	Buffer Width <sup>1</sup>
S1	Type Ns	60 ft.

<sup>1</sup> According to MICC 19.07.180

**Figure 2. Map showing the location of Stream S1.**



## **BACKGROUND**

### **Existing Conditions**

The subject property is 0.28 acres in size and is already developed with a single family residence. The property is zoned R-8.4 The neighboring properties all have private residences. The topography of the subject property is generally flat. The vegetation on the subject property includes a mix of native and nonnative species.

### **Local Critical Areas Inventory**

A review of the Mercer Island Interactive City Web Map was conducted to identify any known critical areas with the vicinity of the subject property (Web Map 2024). According to Web Map, two Type N streams are on the subject property that connect offsite to the north (Appendix C). Additionally, the City maps a small portion near the north border that is a landslide area. No additional critical areas are mapped within 300 feet of the subject property.

### **National Wetlands Inventory**

The U.S. Fish and Wildlife Service's National Wetlands Inventory (NWI) was queried to determine if previously-identified wetlands are present on or near the subject property (USFWS 2024). According to the NWI Interactive Online Mapper, there are no wetlands mapped on the subject property (Appendix C). The nearest mapped wetlands is a palustrine emergent feature located approximately 1,500 feet away from the subject property.

### **Sensitive Wildlife and Plants**

The Washington Department of Fish and Wildlife's (WDFW) Priority Habitats and Species (PHS) database on-line mapper was queried to determine if state or federally listed fish or wildlife species occur on or near the subject property (WDFW 2024a). According to the PHS database, there are no priority habitats or species on the subject property (Appendix C).

Additionally, WDFW's SalmonScape on-line mapper was queried to determine if salmonids are known to use the subject property or surrounding area (WDFW 2024b). According to SalmonScape, there are no streams on the subject property and the nearest mapped stream is located 2,400 feet to the southeast (Appendix C).

The Washington Department of Natural Resources' (WDNR) Natural Heritage Information System was queried to determine if the subject property occurs in a location reported to contain high quality natural heritage wetland occurrences or occurrences of natural heritage features commonly associated with wetlands. According to WDNR data, there are no records of rare plants or high quality native ecosystems occurring on or in the vicinity of the subject property.

### **Forest Practice Rules**

The Washington Department of Natural Resources' (WDNR) Forest Practice Application Mapping Tool on-line mapper was queried to identify the water typing of any streams mapped by WDNR (WDNR 2024). According to WDNR, there are no streams on the

subject property (Appendix C). The nearest mapped stream with fish utilization is approximately 2,600 feet to the southeast and is designated as a Type F stream. Type F streams are known to be used by fish or meet the physical criteria to be potentially used by fish.

**Soil Information**

According to the Natural Resources Conservation Service’s (NRCS) Web Soil Survey (NRCS 2023), the soils within the majority of the subject property are listed as being 85 percent Kitsap silt loam and 15 percent minor components. Kitsap silt loam is not designated as a hydric soil. (Appendix C).

The other minor component soils on the property are Alderwood at 10 percent and not designated as hydric soils. Also listed are 3 percent of Bellingham and 1 percent of Tukwila and Seattle, all of which are designated as hydric soils. Onsite observations of soils confirmed loamy soils without hydric soil indicators (Appendix B).

**PRECIPITATION ANALYSIS**

During the site assessment, the SeaTac National Weather Station (NWS Station 457473) recorded a trace amount of rainfall (NOAA 2024a). In the 14 days preceding the site assessment, 1.26 inches of rainfall was recorded at the station.

The total precipitation recorded at the station from May 1st, 2023 through April 30th, 2024 (36.71 inches) was approximately 93 percent of the normal rainfall (39.34 inches) that occurs during a typical water year (NOAA 2024b). Table 2 below presents an analysis of the appropriate NRCS WETS table for the three months preceding the field investigation.

**Table 2. WETS precipitation analysis**

Preceding Month	WETS Rainfall Percentile (inches)		Rainfall <sup>1</sup> (inches)	Conditions <sup>2</sup>	Value <sup>3</sup>	Month Weight	Value
	30%	70%					
April	1.84	3.34	0.89	Dry	1	3	3
March	2.84	4.59	2.36	Dry	1	2	2
February	2.59	4.68	3.84	Normal	2	1	2
Sum:							7

<sup>1</sup> Observed rainfall for the month (NOAA 2023b)

<sup>2</sup> Dry conditions are below 30% WETS table value, Normal conditions are between 30% and 70% of the WETS table values, Wet conditions are above 70% of the WETS table value.

<sup>3</sup> Dry equals a value of 1, normal equals a value of 2, wet equals a value of 3

Bins were established to evaluate the overall rainfall period during the field investigation; drier (sum in 6-9), normal (sum is 10-14), wet (sum is 15-18). A sum of 7 indicates that hydrologic conditions are drier than normal. Additionally, data from the NRCS for the accumulated precipitation for that station shows that the accumulated precipitation has remained around the normal for most of the past year (Appendix C).

## **METHODS**

All accessible areas of the assessment area were traversed and soil data was collected according to the procedures described in the U.S. Army Corps of Engineers (USACE) *Federal Wetland Delineation Manual* (1987), and the Corps' *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (2010). Paired data plots and soil test pits were excavated to evaluate for wetland and upland conditions. Guidance from the Corps' *Regional Supplement* was used to evaluate the data at each data point.

Plants were determined to be more or less associated with wetlands based on their wetland indicator (FAC) status. The percent dominance for each plant strata was determined using the 50-20 Rule, which is the recommended method for selecting dominant species from a plant community in instances where quantitative data are available (USACE 2010).

In utilizing this rule, dominants are the most abundant species that individually or collectively accounts for more than 50 percent of the total coverage of vegetation in the stratum plus any other species that, by itself accounts for at least 20 percent of the total. The area within 300 ft of the parcel boundary was inspected either visually or through aerial photograph interpretation to determine if other critical areas are within the assessment area.

### **Hydrophytic Vegetation**

The U.S. Fish and Wildlife Service (USFWS) and the NWI have established a rating system that has been applied to commonly occurring plant species on the basis of their frequency of occurrence in wetlands (Table 3). Species indicator status expresses the range in which plants may occur in wetlands and non-wetlands (uplands).

Under this system, vegetation is considered hydrophytic when there is an indicator status of facultative (FAC), facultative wetland (FACW) or obligate wetland (OBL) (Table 3). The hydrophytic vegetation criterion for wetland determination is met when more than 50 percent of the dominant species in the plant community are FAC or wetter. The Corps' *National Wetland Plant List* (Lichvar 2018) was used to determine vegetation indicator status.

**Table 3. Definitions for USFWS plant indicator status**

<b>Plant Indicator Status Category</b>	<b>Indicator Status Abbreviation</b>	<b>Definition (Estimated Probability of Occurrence)</b>
Obligate Upland	UPL	Occur rarely (<1 percent) in wetlands, and almost always (>99 percent) in uplands
Facultative Upland	FACU	Occur sometimes (1 percent to <33 percent) in wetlands, but occur more often (>67 percent to 99 percent) in uplands
Facultative	FAC	Similar likelihood (33 percent to 67 percent) of occurring in both wetlands and uplands
Facultative Wetland	FACW	Occur usually in wetlands (>67 percent to 99 percent), but also occur in uplands (1 percent to 33 percent)
Obligate Wetland	OBL	Occur almost always (>99 percent) in wetlands, but rarely occur in uplands (<1 percent)
Not Listed	NL	Not listed due to insufficient information to determine status

**Wetland Hydrology**

Evidence of permanent or periodic inundation (water marks, drift lines, drainage patterns), or soil saturation to the surface for 12 consecutive days or more during the growing season meets the hydrology criterion. Oxidized root channels in the top 12 inches and hydrogen sulfide are primary indicators and water-stained leaves and geomorphic position are secondary indicators of wetland hydrology.

**Hydric Soils**

Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper soil horizons are considered hydric soils. Field indicators include histosols, the presence of a histic epipedon, a sulfidic odor, low soil chroma, and gleying. Soil conditions were compared to the Field Indicators of Hydric Soils detailed in the Corps’ *Regional Supplement*.

**RESULTS**

The site assessment resulted in the identification of one stream (S1). Wetland data plots were sampled on the subject property to evaluate for wetland conditions but neither hydric soil indicators or wetland hydrology indicators were observed.

**Stream S1**

A stream (S1) was observed entirely offsite that had flowing water during the May site assessment. The stream's ordinary high water mark was not delineated as it is located entirely off site of the subject property. The stream flows from south to north and is fed by a stormwater drainage ditch that itself connects with a series of stormwater pipes leading from SE 24th St (Appendix C). According to MICC 19.16.010, the definition of a watercourse does not include drainage ditches. The drainage ditch is piped along the north border of the subject property and is an open drainage ditch along the east border.

The onsite ditch is not a regulated watercourse because it is a human built excavation that conveys stormwater and is not identified by the state of Washington as a classified or unclassified stream. The Type N stream begins at the end of the culvert located approximately 35 feet offsite to the north on King County tax parcel No. 5315101680. The stream's location was mapped using onsite observations and the WDNR's public LiDAR data. Photos of the subject property are included in Appendix D.

## SUMMARY

In summary, the site assessment performed on May 30th, 2024 resulted in the identification of one stream (Appendix A). Stream S1 was not delineated because it is located entirely off site of the subject property. The soil analysis pits that were dug on the subject property did not indicate the presence of hydric soils or wetland hydrology. According to MICC 19.07.180, the buffer for S1 and all Type N streams is 60-feet from the observed ordinary high water mark (Figure 3). Buildings and other structures are to be set back 10 feet from the watercourse buffer.

**Figure 3. Map showing stream S1, buffer and setback.**



## BIOLOGIST QUALIFICATIONS

### Tom Peterman

Tom Peterman is a Biologist with training in wetland science and ecological restoration. Tom has professional experience in wetland and stream delineation, critical area restoration, mitigation planning and monitoring, and fish and wildlife assessments. Tom has earned a graduate degree and a certificate in wetland science and management from the University of Washington. Tom is

certified as a Professional Wetland Scientist (#3676) with the Society of Wetland Scientists. For a list of representative projects, please contact him at Peterman Consulting.

## REFERENCES

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

Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update. Washington State Department of Ecology Publication # 14-06-029.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2020. The National Wetland Plant List: 2020 Wetland Ratings. *Phytoneuron* 2016-30:1-17. Published 2018. ISSN 2153 733X.

Natural Resource Conservation Service (NRCS). 2024a. United States Department of Agriculture. Web Soil Survey [map online]. Queried June 12th, 2024. URL: <http://websoilsurvey.nrcs.usda.gov/>

Natural Resource Conservation Service (NRCS). 2024b. National Water and Climate Center. Daily Climatological Report, Monthly Climatological Report, WETS Table and Accumulated Precipitation Report. Accessed June 12th, 2024. URL: <http://agacis.rcc-acis.org/>

King County Spatial Information Website (imap). 2024. <https://kingcounty.gov/services/gis/Maps/imap.aspx>

U.S. Army Corps of Engineers (Corps). 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, MS: U.S. Army Engineer Research and Development Center.

U.S. Fish and Wildlife Service (USFWS). 2024. Wetland Mapper [map online]. National Wetlands Inventory Queried June 12th, 2024. URL: <http://www.fws.gov/wetlands/Wetlands-Mapper.html> Interactive Layer = "Wetlands".

Washington Department of Fish and Wildlife (WDFW). 2024a. PHS on the Web [map online]. Priority Habitats and Species Queried June 12th, 2024. URL: <http://wdfw.wa.gov/mapping/phs/>.

Washington Department of Fish and Wildlife (WDFW). 2024b. SalmonScape [map online]. All SalmonScape Species. Queried June 12th, 2024.. URL: <http://wdfw.wa.gov/mapping/phs/>.

Washington State Department of Natural Resources (WDNR). 2024a. LiDAR Portal. Queried June 12th, 2024. <https://lidarportal.dnr.wa.gov/>

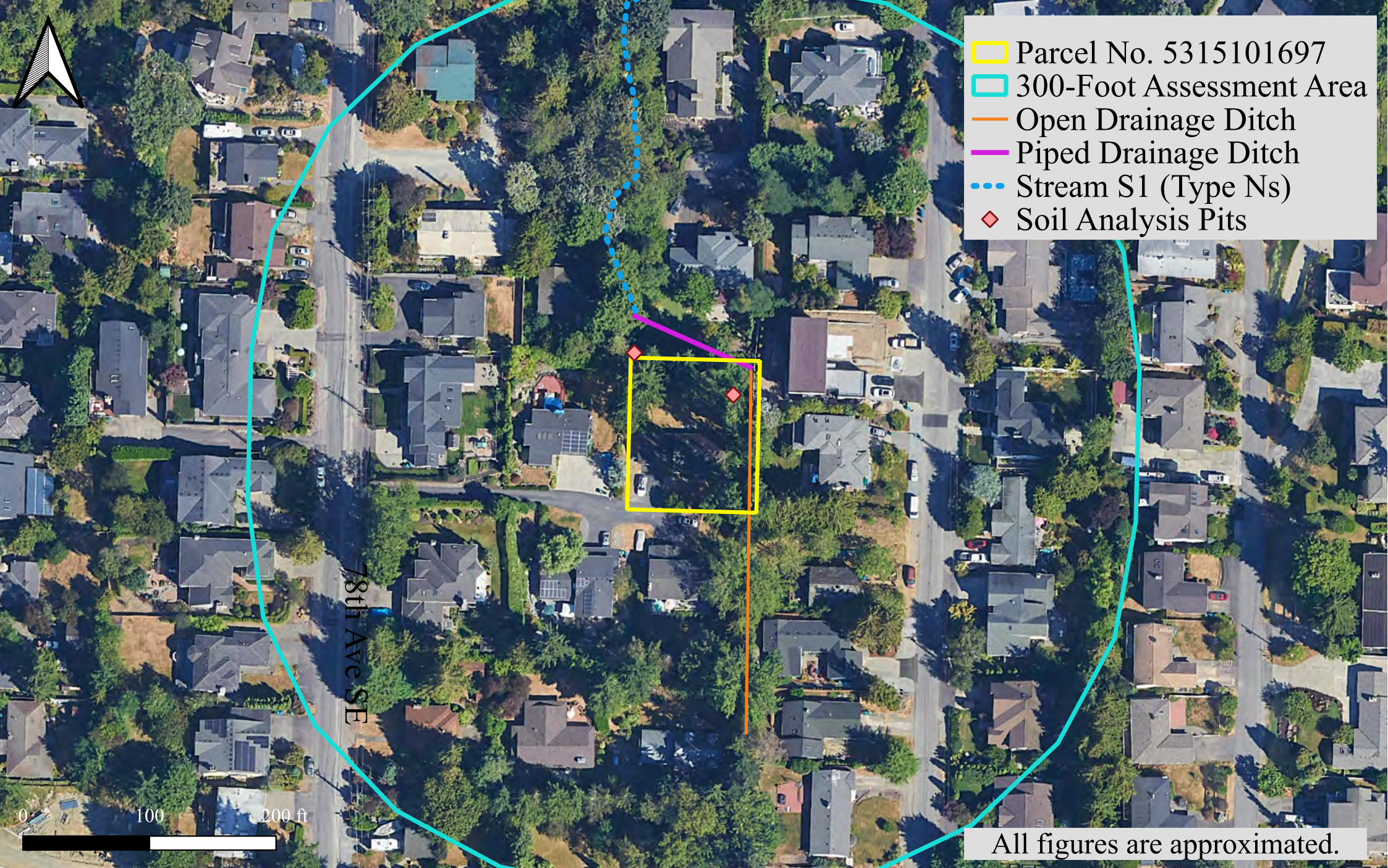
Washington Department of Natural Resources (WDNR). 2024b. Forest Practices Application Mapping Tool [map online]. Streams and Water Type Breaks. Queried June 12th, 2024. URL: <https://fortress.wa.gov/dnr/protectiongis/fpamt/index.html>

# **2262 78<sup>TH</sup> AVE SE**

---

KING COUNTY PARCEL NO. 5315101697  
CRITICAL AREA STUDY  
APPENDIX A: CRITICAL AREA MAP

---



- Parcel No. 5315101697
- 300-Foot Assessment Area
- Open Drainage Ditch
- Piped Drainage Ditch
- Stream S1 (Type Ns)
- Soil Analysis Pits

78th Ave SE

0 100 200 ft

All figures are approximated.

**PETERMAN CONSULTING, LLC**

Tom Peterman MEH, PWS  
tom@petermanconsultingllc.com, (206) 666-8736

Parcel #: 5315101697  
2262 78th Ave SE

Project # 333  
Date: 6/17/2024

# 2262 78<sup>TH</sup> AVE SE

KING COUNTY PARCEL No. 5315101697

CRITICAL AREA STUDY

APPENDIX B: DATASHEETS

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

Project/Site: 2262 78th Ave SE City/County: Mercer Island Sampling Date: 5/30/2024  
 Applicant/Owner: Toda State: WA Sampling Point: SP1  
 Investigator(s): TP Section, Township, Range: 1, 24, 4E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Kitsap silt loam NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>		Yes _____	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>			
Remarks:					

**VEGETATION – Use scientific names of plants.**

<u>Tree Stratum</u> (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>
1. <u>Fraxinus latifolia</u>	20	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. <u>Pseudotsuga menziesii</u>	20	Y	FACU	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. <u>Prunus sp. (Assumed FACU)</u>	10	N	FACU	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60</u> (A/B)
4. <u>Populus trichocarpa</u>	5	N	FAC	
	55	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft</u> )				<b>Prevalence Index worksheet:</b>
1. <u>Rubus armeniacus</u>	15	Y	FAC	Total % Cover of: _____ Multiply by: _____
2. <u>Symphoricarpos albus</u>	5	Y	FACU	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	20	= Total Cover		UPL species _____ x 5 = _____
<u>Herb Stratum</u> (Plot size: <u>6 ft</u> )				Column Totals: _____ (A) _____ (B)
1. <u>Poa sp. (Assumed FAC)</u>	95	Y	FAC	Prevalence Index = B/A = _____
2. <u>Veronica arvensis</u>	2	N	FACU	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Hedera helix</u>	2	N	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	99	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
% Bare Ground in Herb Stratum <u>1</u>				
Remarks:				



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

Project/Site: 2262 78th Ave SE City/County: Mercer Island Sampling Date: 5/30/2024  
 Applicant/Owner: Toda State: WA Sampling Point: SP2  
 Investigator(s): TP Section, Township, Range: 1, 24, 4E  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): \_\_\_\_\_  
 Subregion (LRR): \_\_\_\_\_ Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: \_\_\_\_\_  
 Soil Map Unit Name: Kitsap silt loam NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>		
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>		Yes _____	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____			
Remarks:					

**VEGETATION – Use scientific names of plants.**

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Fraxinus latifolia</u>	20	Y	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
2. <u>Thuja plicata</u>	20	Y	FAC	
3. <u>Aesculus hippocastanum</u>	2	N	NA	
4. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
	42	= Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				Prevalence Index worksheet:
1. <u>Rubus armeniacus</u>	25	Y	FAC	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
	25	= Total Cover		UPL species _____ x 5 = _____
Herb Stratum (Plot size: <u>6 ft</u> )				Column Totals: _____ (A) _____ (B)
1. <u>Ranunculus repens</u>	15	Y	FAC	Prevalence Index = B/A = _____
2. <u>Equisetum arvense</u>	15	N	FAC	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 <sup>1</sup> ___ 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) ___ 5 - Wetland Non-Vascular Plants <sup>1</sup> ___ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. <u>Hedera helix</u>	5	N	FACU	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
	35	= Total Cover		
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
1. _____				
2. _____				
% Bare Ground in Herb Stratum <u>25</u>				
Remarks:				

**SOIL**

Sampling Point: SP2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 2/2	100					loam	
3-8	10YR 3/3	100					loam	
8-13	10YR 4/3	100					loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>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<sup>3</sup>:**

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

<sup>3</sup>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 X

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 X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

Wetland Hydrology Present? Yes X No \_\_\_\_\_

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

Remarks:

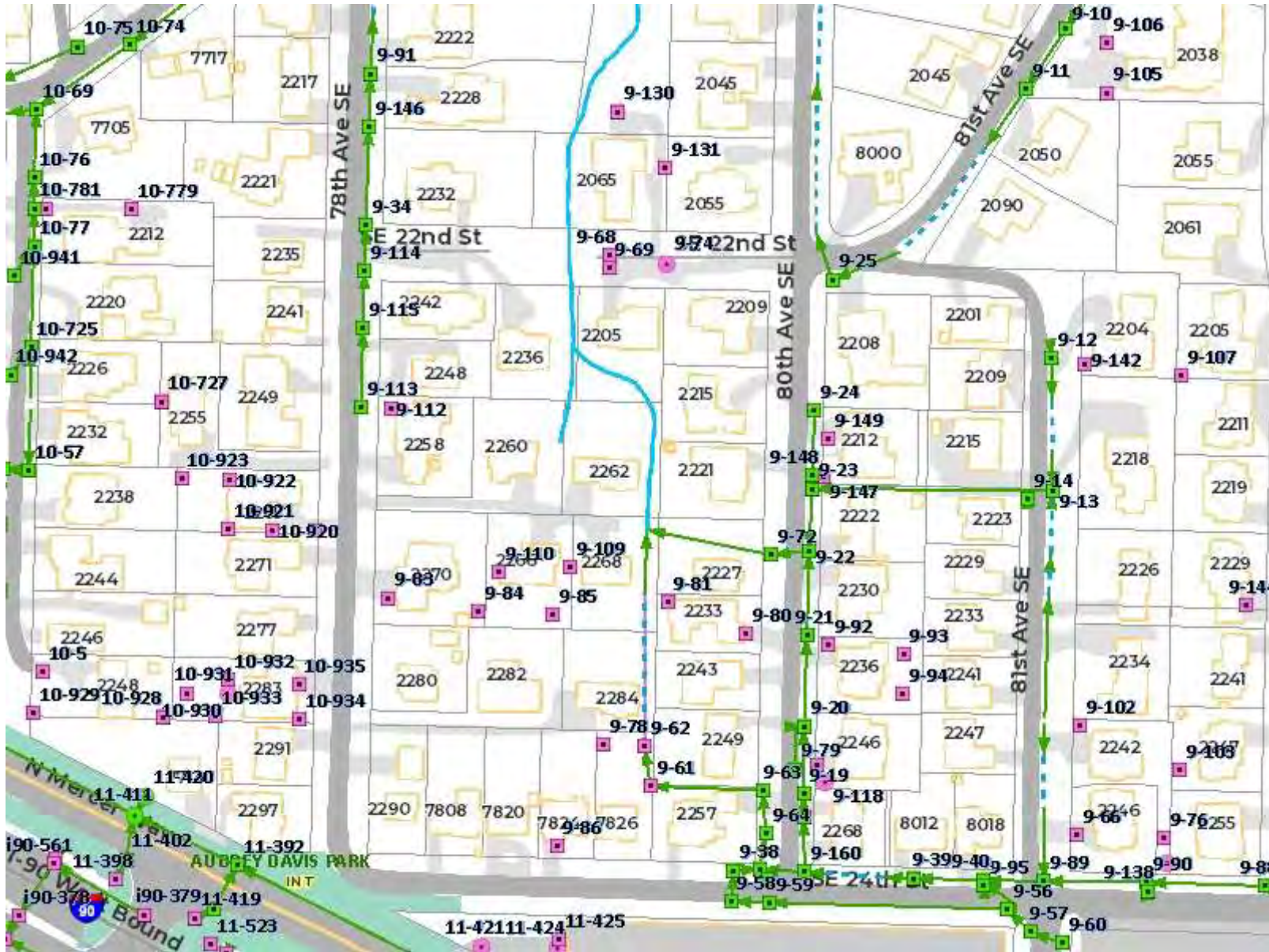
Saturation is caused by stormwater pipe.

# 2262 78<sup>TH</sup> AVE SE

KING COUNTY PARCEL No. 5315101697

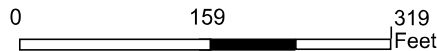
CRITICAL AREA STUDY

APPENDIX C: QUERIED DATABASE FIGURES



### Legend

- Storm Catch Basin**
  - CB, City Owned
  - CB, Private
  - CB, Unknown
  - Type 2, City Owned
  - Type 2, Private
  - Type 2, Unknown
- Storm Main**
  - Pipe
  - Open Watercourse
  - Piped Watercourse
  - - - Ditch
  - - - Culvert
  - - - Other
- Storm Discharge Point
- Address
- Building
- Property Line
- Docks
- Freeway
- Major Street
- Street
- Paved Driveway
- Paved Road
- Paved Parking Area
- Parks
- Lake Washington



1 inch =  
318.758239166667  
feet



Disclaimer: These maps were developed by the City of Mercer Island and are intended to be a general purpose digital reference tool. These maps are not an accepted legal instrument for describing, establishing, recording or maintaining descriptions for property concerns or boundaries. The City makes no representation or warranty with respect to the accuracy or currency of these data sets, especially in regard to labeling of surveyed dimensions, or agreement with official sources such as records of survey, or mapped locations of features.

### Notes

# Forest Practices Activity Map - Application # \_\_\_\_\_

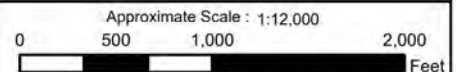


Office of the Chief Information Officer (OCIO), Department of Natural Resources (DNR), Forest Practices Division, Department of Natural Resources (DNR), Engineering Division

Map Symbols	Additional Information	Legal Description
<ul style="list-style-type: none"> <li> Harvest Boundary</li> <li> Road Construction</li> <li> Stream</li> <li> RMZ / WMZ Buffers</li> <li> Rock Pit</li> <li> Landing</li> <li> Waste Area</li> <li> Clumped WRTS/GRTS</li> <li> Existing Structure</li> </ul>		<p><b>S12 T24.0N R04.0E, S01 T24.0N R04.0E, S07 T24.0N R05.0E, S06 T24.0N R05.0E</b></p>



Extreme care was used during the compilation of this map to ensure its accuracy. However, due to changes in data and the need to rely on outside information, the Department of Natural Resources cannot accept responsibility for errors or omissions, and therefore, there are no warranties that accompany this material.



Date: 6/17/2024 Time: 10:55 AM



June 17, 2024

### Wetlands

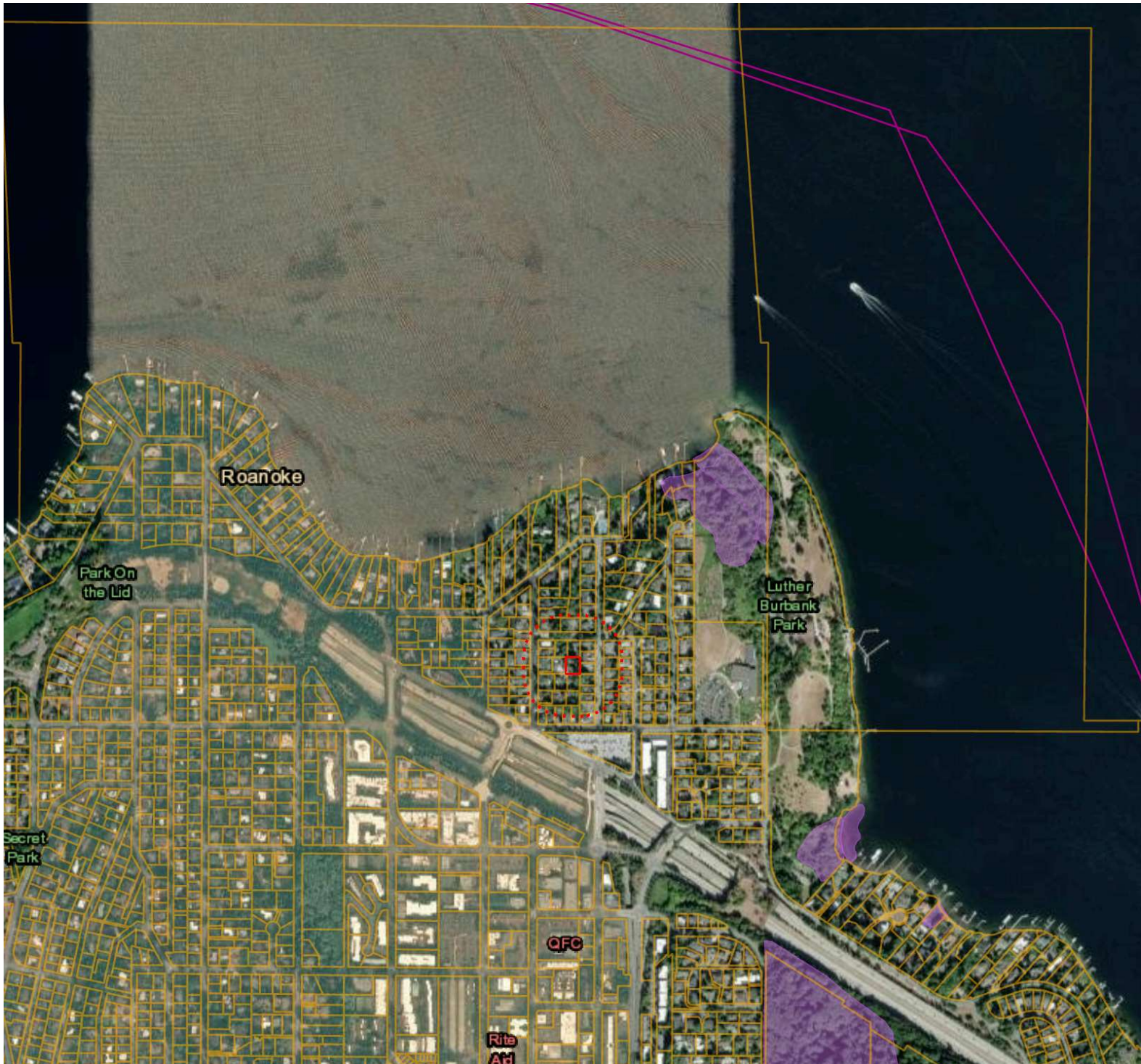
- |   |                                |   |                                   |   |          |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake     |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other    |
|   |                                |  | Freshwater Pond                   |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



## Priority Habitats and Species on the Web

---





**Buffer radius: 300 Feet**

**Report Date: 06/17/2024, Parcel ID: [5315101697](#)**

**The Priority Habitats and Species (PHS) datasets do not contain information for your project area. This does not mean that species and habitats do not occur in your project area. PHS data, points, lines and polygons are mapped only when occurrences of these species or habitats have been observed in the field. Unfortunately, we have not been able to comprehensively survey all sections in the state and therefore, it is important to note that priority species and habitats may occur in areas not currently known to the Department.**

DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

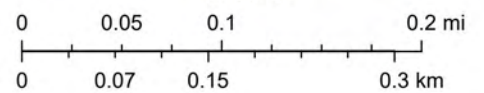
# Letter ANSI A Portrait



June 17, 2024

1:9,028

- Unknown
- ▲ Barrier, Unknown Percent Passable
- ▲ Total Fish Passage Blockage
- Not a barrier



Restoration Division of the DFW Habitat Program, USGS/NHD, Dale Gombert (WDFW), WDFW, County of King, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

Soil Map—King County Area, Washington



Map Scale: 1:455 if printed on A portrait (8.5" x 11") sheet.





































0 5 10 20 30 Meters

0 20 40 80 120 Feet

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



## MAP LEGEND

-  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: King County Area, Washington  
 Survey Area Data: Version 19, Aug 29, 2023

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

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

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.

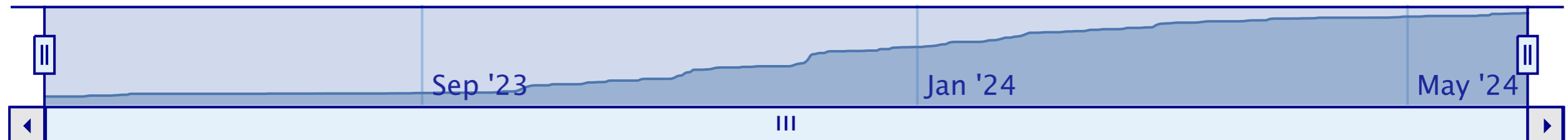
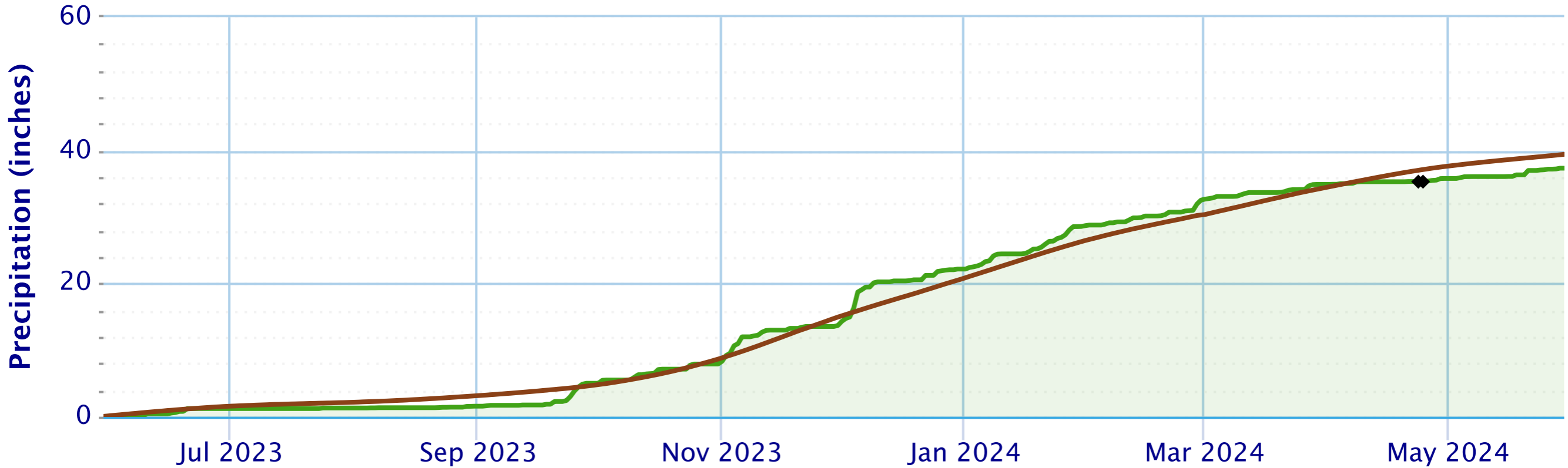
## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
KpB	Kitsap silt loam, 2 to 8 percent slopes	0.8	100.0%
<b>Totals for Area of Interest</b>		<b>0.8</b>	<b>100.0%</b>

# Accumulated Precipitation – SEATTLE TACOMA AIRPORT, WA

Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

Zoom 1m 3m 6m YTD 1y **All**      From 2023-05-30 To 2024-05-30



# **2262 78<sup>TH</sup> AVE SE**

---

**KING COUNTY PARCEL No. 5315101697**

**CRITICAL AREA STUDY**

**APPENDIX D: SITE PHOTOS**

**Photo 1.** Looking south at the stormwater ditch.



**Photo 2.** Looking north towards the onsite stormwater ditch.



**Photo 3.** Looking north towards stream S1.



**Photo 4.** Looking north towards stream S1.



**Photo 5.** Looking at western end of piped drainage.



**Photo 6.** Looking at eastern end of piped drainage.

