Altmann Oliver Associates, LLC

PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

AOA
Environmental
Planning &
Landscape
Architecture

November 10, 2025

AOA-6955

Laura Sagen
lauras@sagengroup.com

SUBJECT: **Critical Areas Report for 16916 – 185th Ave. NE**
Parcel 072606-9054, King County, WA (ADDC22-0550)
Revised

Dear Laura:

We have updated this critical areas report and attached plan to address the comments presented in the September 19, 2025 Ecological Review RFI #3. The primary revisions are to demonstrate compliance with KCC 21A.24.045.D.47.

1.0 BACKGROUND AND EXISTING CRITICAL AREAS

The site is located along the west shore of Cottage Lake and is currently developed with your existing single-family residence and associated yard areas.

On November 1, 2022 I conducted an initial wetland reconnaissance throughout the western portion of the site utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).* The primary focus of the initial reconnaissance was to: 1) confirm that the wetland boundary previously delineated by others and subsequently surveyed had not changed, 2) rate the wetland per the current rating system, 3) assess buffer impacts associated with the new drainfield and ADU project, and 4) identify mitigation areas for buffer impacts.

On March 8, 2023 I conducted a second site review in the eastern portion of the site to review an unpermitted raised boardwalk along the shoreline of the lake. An additional site review was conducted on October 21, 2025.

One large wetland (Wetland A) is located along the western, southern, and eastern portions of the site. This wetland is associated with Cottage Lake and was determined to be a Depressional Hydrogeomorphic (HGM) class per WA Department of Ecology guidance. Since the wetland boundary as previously surveyed in the western portion of the site appears to be generally accurate, the

wetland was not re-delineated to enable use of the previous survey. The wetland and Ordinary High Water (OHW) of the lake in the eastern portion of the site was approximated.

Attachment A contains data sheets prepared for a representative location in both the wetland and upland. These data sheets document the vegetation, soils, and hydrology information that aided in the wetland boundary verification.

Using DOE guidance the rating unit for Wetland A was revised to break along an old road that crosses the wetland to the southwest of the site. The wetland currently meets the criteria for a Category II wetland with 8 Habitat Points (**Attachment B**) and requires a standard 225-foot buffer and 15-foot structure setback. This buffer encumbers the entire property. Cottage Lake is a Type S Aquatic Area that requires a 165-foot buffer that is located entirely within the more restrictive wetland buffer.

2.0 PROPOSED PROJECT

The proposed project consists of a small (235 s.f.) expansion to the existing garage/ALQ structure. The new structural footprint cannot impact more than 1,000 s.f. of buffer area over the footprint of the existing structure and this threshold is met. In addition, a new primary and reserve septic drainfield for the ALQ will impact 2,414 s.f. of buffer area for a total buffer impact of 2,649 s.f.

The area of buffer impact consists of a mix of yard areas and an upland Douglas fir (*Pseudotsuga menziesii*) forest with an understory of salal (*Gaultheria shallon*), Oregongrape (*Mahonia* sp.), red huckleberry (*Vaccinium parvifolium*), English holly (*Ilex aquilinum*), sword fern (*Polystichum munitum*), and trailing blackberry (*Rubus ursinus*).

Mitigation for the 2,649 s.f. of buffer impact will occur by enhancing 2,649 s.f. of degraded wetland and buffer in the southwest portion of the site. Mitigation will consist of removing an existing dilapidated greenhouse and invasive species and re-planting with a variety of native trees and shrubs to significantly increase the plant species and structural diversity within the planting area. If requested by the County a rail fence could be installed along the edge of the proposed planting area.

2.1 Raised Boardwalk

A 58’ by 4’ (232 s.f.) boardwalk has been constructed along the shoreline of Cottage Lake. KCC Shoreline Code 21A.25.140.E.1 allows private access from a single detached residence to the shoreline provided it meets certain criteria (below).

(1) *Not exceed three feet in width*;

Although the boardwalk is 4 feet in width it is my understanding that you have received a “reasonable accommodation policy” (RAP) to allow the boardwalk to remain at 4 feet wide since you are physically disabled with MS and require the use of a cane, walker and wheelchair. A 3-foot wide boardwalk does not allow for safe wheelchair access.


View of existing boardwalk to be permitted on October 21, 2025.

(2) *Avoid removal of significant trees and other woody vegetation to the maximum extent practical; and*

The boardwalk was constructed through an area of emergent and herbaceous vegetation with small patches of shrubs and saplings. No significant woody vegetation was removed during construction.

(3) *Avoid a location that is parallel to the shoreline to the maximum extent practical*. (Ord. 16985 § 36, 2010).

The boardwalk was constructed perpendicular and not parallel to the shoreline.

All boardwalks in wetlands must also meet the criteria of KC 21A.24.045.D.47

47. Not allowed in a wildlife habitat conservation area. Otherwise, allowed in the buffer or for crossing a category II, III or IV wetland or a type F, N or O aquatic area, if:

Wetland A is currently a Category II wetland and the boardwalk was not constructed below the Ordinary high Water of Cottage Lake.

a. the trail surface is made of pervious materials, except that public multipurpose trails may be made of impervious materials if they meet all the requirements in K.C.C. chapter 9.12. A trail that crosses a wetland or aquatic area shall be constructed as a raised boardwalk or bridge;

The trail within the wetland was constructed as a raised boardwalk.

b. to the maximum extent practical, buffers are expanded equal to the width of the trail corridor including disturbed areas;

Since the entire site is encumbered, there is no buffer replacement area available. Instead mitigation plantings will be provided.

c. there is not another feasible location with less adverse impact on the critical area and its buffer;

The boardwalk was constructed to avoid removing significant woody vegetation and was constructed in the narrowest portion of the wetland.

d. the trail is not located over habitat used for salmonid rearing or spawning or by a species listed as endangered or threatened by the state or federal government unless the department determines that there is no other feasible crossing site;

The trail was not constructed over habitat used for salmonid rearing or spawning or by a species listed as endangered or threatened by the state or federal government.

e. the trail width is minimized to the maximum extent practical;

The trail is 4 feet wide to allow for the use of a wheelchair.

View on October 21, 2025 of east terminus of boardwalk clearly located above and outside of ordinary high water of lake.

f. the construction occurs during approved periods for instream work; and

Construction was not conducted within any instream areas.

g. the trail corridor will not change or diminish the overall aquatic area flow peaks, duration or volume or the flood storage capacity.

The trail is elevated and will not change or diminish any overall aquatic area flow peaks, duration or volume or the flood storage capacity.

h. the trail may be located across a critical area buffer for access to a viewing platform or to a permitted dock or pier;

No viewing platforms or docks are currently proposed.

i. A private viewing platform may be allowed if it is:

Not applicable.

(1) located upland from the wetland edge or the ordinary high water mark of an aquatic area;

(2) located where it will not be detrimental to the functions of the wetland or aquatic area and will have the least adverse environmental impact on the critical area or its buffer;

(3) limited to fifty square feet in size;

(4) constructed of materials that are nontoxic; and

(5) on footings located outside of the wetland or aquatic area.

Since the area beneath the boardwalk continues to be wetland, mitigation for the 232 s.f. of converting a scrub-shrub/emergent wetland to a shaded wetland is required at a 3:1 ratio. In addition 299 s.f. of wetland immediately adjacent to the boardwalk is required to be kept periodically mowed for maintenance. This area also consisted of a mix of scrub-shrub and emergent vegetation that if not maintained would encroach onto the boardwalk and make access difficult. Therefore required mitigation for the 531 s.f. of total impact at a 3:1 ratio equals 1,593 s.f. . Mitigation will occur through the enhancement of the existing yard wetland that is currently lawn. Enhancement will consist of removing the lawn and re-planting with native trees and shrubs.

2.2 Goal, Objectives, and Performance Standards for Mitigation Area
The primary goal of the mitigation plan is to increase the habitat function of the enhanced wetland and buffer. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the mitigation area.
Performance Standard: There will be 100% survival of all woody planted species throughout the mitigation areas at the end of the first year of planting. For Years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants. Areal coverage of plantings or native re-colonized woody species will be at least 10% at Year 1, 20% at Year 2, 50% at Year 3, and 80% at year 5.

Objective B: Limit the amount of invasive and exotic species within the mitigation area.
Performance Standard: After construction and following every monitoring event for a period of five years, exotic and invasive plant species will be maintained at levels below 10% total cover in all planted areas.

2.3 Construction Management
Prior to commencement of any work in the mitigation areas, the clearing limits will be staked and any existing vegetation to be saved will be clearly marked. A pre-construction meeting should be held at the site to review and discuss all aspects of the project with the landscape contractor and/or owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the mitigation plan are met. Any necessary significant modifications to the design that occur because of unforeseen site conditions will be jointly approved by King County and the consultant prior to their implementation.

2.4 Monitoring Methodology
The monitoring program will be conducted for a period of five years, with annual reports submitted to the County. Vegetation monitoring will include general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the mitigation area. Review of the photos over time will provide a visual representation of the success of the mitigation plan.

2.5 Maintenance Plan
Maintenance will be conducted on a routine, year-round basis. Additional maintenance needs will be identified and addressed following periodic maintenance reviews. Routine removal and control of non-native and other invasive plants within the designated mitigation area shall be performed. Undesirable and weedy exotic plant species shall be maintained at levels below 10% total cover within the mitigation areas during the monitoring period.

Routine maintenance of planted trees and shrubs shall be performed. Measures include resetting plants to proper grades and upright positions. Tall grasses and other competitive weeds shall be weeded at the base of plants to prevent engulfment.

2.6 Contingency Plan
All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the mitigation plan. Plant material shall meet the same specifications as originally installed material. Replanting will not occur until after the reason for failure has been identified (e.g., moisture regime, poor plant

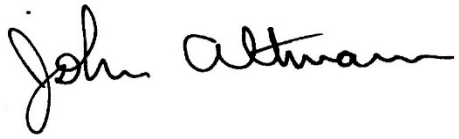
stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, King County, or the owner.

2.7 As-Built Plan
Following completion of construction activities, an as-built plan for the mitigation areas will be provided to King County. The plan will identify and describe any changes in relation to the original approved plan

If you have any questions regarding the proposed mitigation, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC



John Altmann
Ecologist

Attachments

King County iMap

Date: 11/10/2025 Notes:

N

King County

PLAN LEGEND

- PROPERTY LINE
- EDGE OF COTTAGE LAKE
- WETLAND BOUNDARY
- ~WETLAND BOUNDARY

225' WETLAND BUFFER ENCUMBERS ENTIRE SITE

- CLEARING LIMITS
- LAWN
- EXISTING TREES
- ORNAMENTAL PLANTING BED

BUFFER IMPACT LEGEND

NEW DECK IN BUFFER	184 SF
NEW ENTRY AREA	51 SF
PRIMARY DRAINFIELD	1,320 SF
RESERVE DRAINFIELD	1,094 SF
TOTAL NEW BUFFER IMPACT	2,649 SF

SHADED WETLAND IMPACT

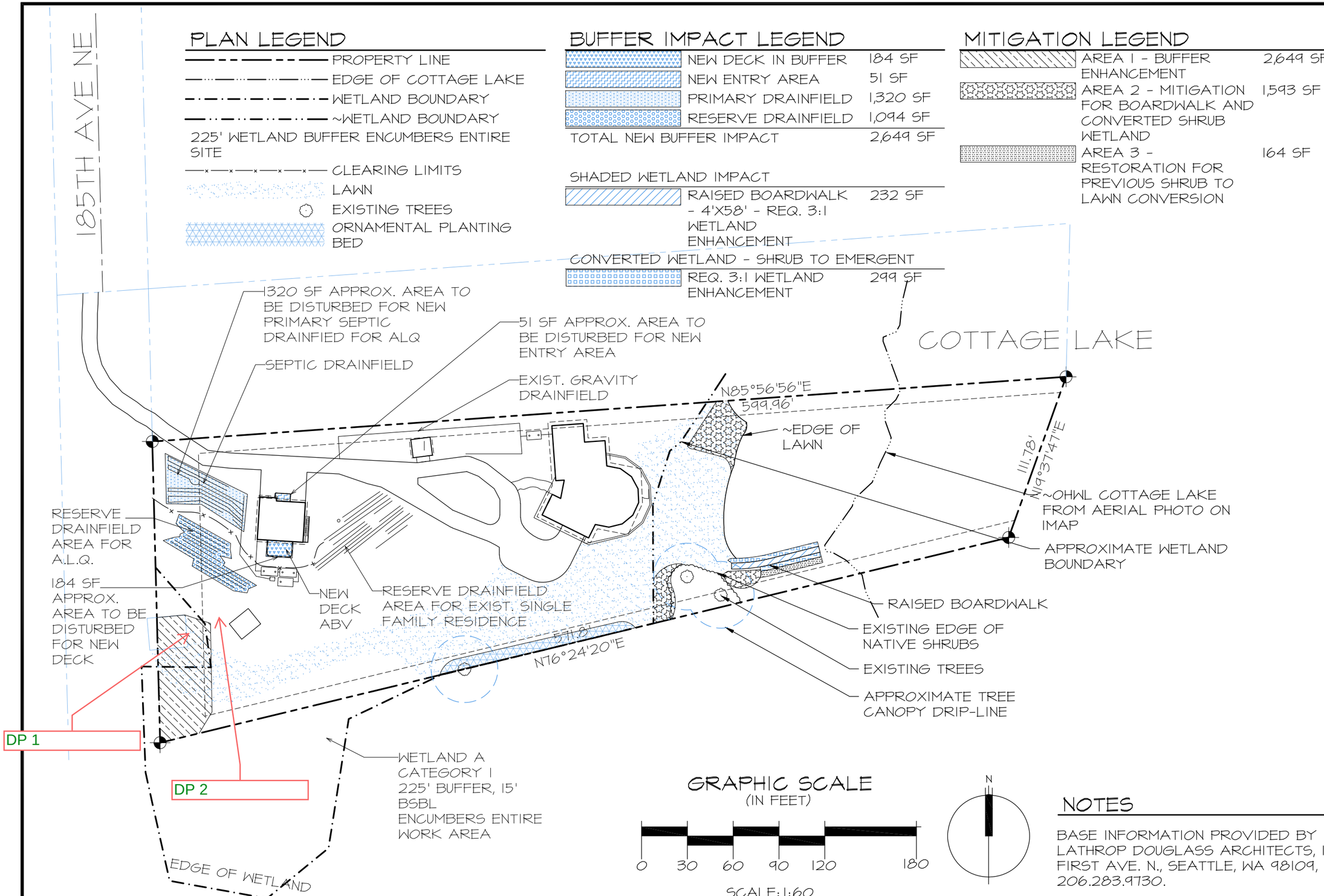
RAISED BOARDWALK - 4'X58' - REQ. 3:1 WETLAND ENHANCEMENT	232 SF

CONVERTED WETLAND - SHRUB TO EMERGENT

REQ. 3:1 WETLAND ENHANCEMENT	299 SF

MITIGATION LEGEND

AREA 1 - BUFFER ENHANCEMENT	2,649 SF
AREA 2 - MITIGATION FOR BOARDWALK AND CONVERTED SHRUB WETLAND	1,593 SF
AREA 3 - RESTORATION FOR PREVIOUS SHRUB TO LAWN CONVERSION	164 SF



GRAPHIC SCALE
(IN FEET)

0 30 60 90 120 180

SCALE: 1:60

N

NOTES

BASE INFORMATION PROVIDED BY LATHROP DOUGLASS ARCHITECTS, 1719 FIRST AVE. N., SEATTLE, WA 98109, 206.283.9730.

FIGURE 1: BUFFER IMPACTS AND MITIGATION
SAGEN CARRIAGE HOUSE
16916 185TH AVE. NE, WOODINVILLE, WA 98072
KING COUNTY PARCEL: 0726069054

PROJECT 6955
DRAWN KV
SCALE AS NOTED
DATE 3-27-24
REVISED 11-07-25
1/4

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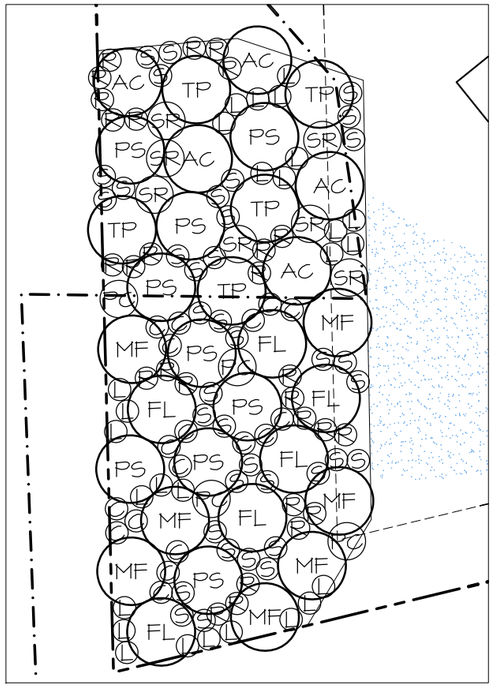


AREA 1 - PLANTING PLAN

SCALE - 1:20

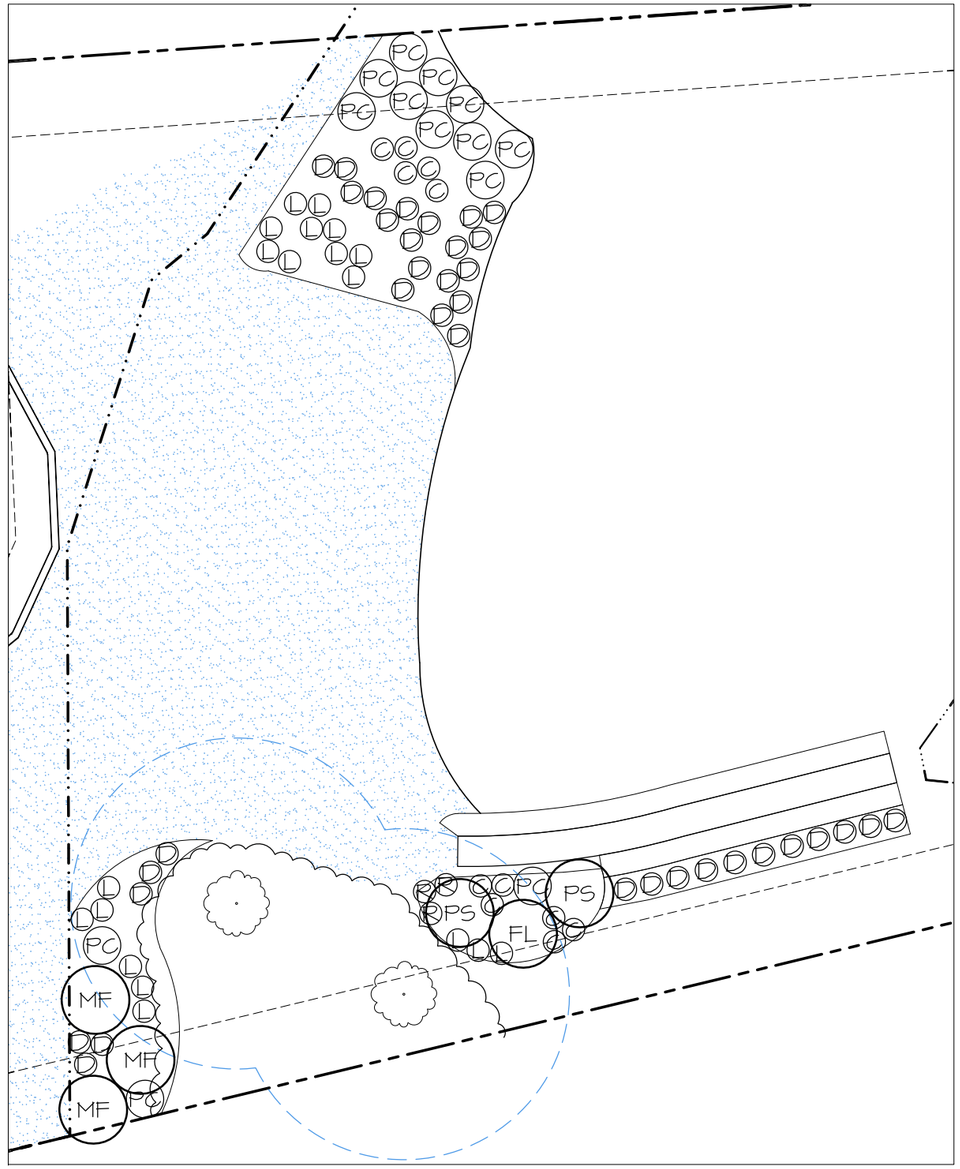
PLANT LIST

TREES

KEY	SCIENTIFIC NAME	COMMON NAME
AC	ACER CIRCINATUM	VINE MAPLE
FL	FRAXINUS LATIFOLIA	OREGON ASH
MF	MALUS FUSCA	WESTERN CRABABPPLE
PS	PICEA SITCHENSIS	SITKA SPRUCE
TP	THUJA PLICATA	WESTERN RED CEDAR

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME
C	CORNUS SERICEA	RED-OSIER DOGWOOD
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK
R	ROSA PISOCARPA	CLUSTERED ROSE
SR	SAMBUCUS RACEMOSA	RED ELDERBERRY
D	SPIRAEA DOUGLASII	DOUGLAS SPIREA
S	SYMPHORICARPOS ALBUS	SNOWBERRY



AREA 2&3 - PLANTING PLAN

SCALE - 1:20

GRAPHIC SCALE

(IN FEET)

0 10 20 30 40 20

SCALE: 1:20

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NOTES

BASE INFORMATION PROVIDED BY LATHROP DOUGLASS ARCHITECTS, 1719 FIRST AVE. N., SEATTLE, WA 98109, 206.283.9730.

FIGURE 2: PLANTING PLAN
SAGEN CARRIAGE HOUSE
16916 185TH AVE. NE, WOODINVILLE, WA 98072
KING COUNTY PARCEL: 0726069054

PROJECT	6955
DRAWN	KV
SCALE	AS NOTED
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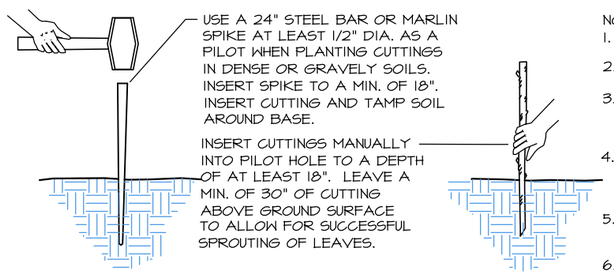
PLANT SCHEDULE

TREES

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	9' O.C.	5	2 GAL.	MULTI-TRUNK (3 MIN.)
FL	FRAXINUS LATIFOLIA	OREGON ASH	9' O.C.	7	2 GAL.	SINGLE TRUNK
MF	MALUS FUSCA	WESTERN CRABABPPLE	9' O.C.	10	2 GAL.	SINGLE TRUNK
PS	PICEA SITCHENSIS	SITKA SPRUCE	9' O.C.	11	2 GAL.	FULL & BUSHY
TP	THUJA PLICATA	WESTERN RED CEDAR	9' O.C.	5	2 GAL.	FULL & BUSHY

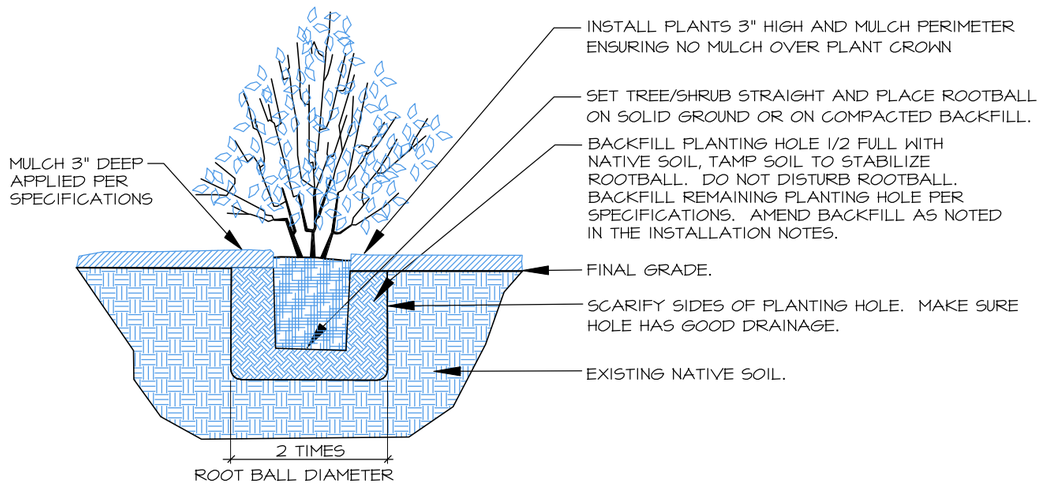
SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY	SIZE (MIN.)	NOTES
C	CORNUS SERICEA	RED-OSIER DOGWOOD	6' O.C.	29	1 GAL.	MULTI-CANE (3 MIN.)
L	LONICERA INVOLUCRATA	BLACK TWIN-BERRY	6' O.C.	46	1 GAL.	FULL & BUSHY
PC	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	6' O.C.	17	1 GAL.	MULTI-CANE (3 MIN.)
R	ROSA PISOCARPA	CLUSTERED ROSE	6' O.C.	31	1 GAL.	FULL & BUSHY
SR	SAMBUCUS RACEMOSA	RED ELDERBERRY	6' O.C.	7	1 GAL.	FULL & BUSHY
D	SPIRAEA DOUGLASII	DOUGLAS SPIREA	6' O.C.	36	1 GAL.	FULL & BUSHY
S	SYMPHORICARPOS ALBUS	SNOWBERRY	6' O.C.	38	1 GAL.	FULL & BUSHY



NOTES:
1. CUTTINGS SHALL BE SPECIES AS NOTED IN THE PLANT SCHEDULE.
2. CUTTINGS SHALL BE AT LEAST 1/2" DIA. AND 4' (min.) IN LENGTH.
3. CUTTINGS MUST BE ALIVE WITH SIDE BRANCHES CLEARLY REMOVED AND BARK INTACT. CUTTINGS SHALL BE PLANTED WITHIN 24 HOURS OF CUTTING.
4. THE BUTT ENDS SHOULD BE CLEANLY CUT AT AN ANGLE FOR EASY INSERTION INTO THE SOIL. THE TOP SHOULD BE CUT SQUARE OR BLUNT.
5. CUTTINGS MUST BE FRESH AND KEPT MOIST AFTER CUTTING. THEY SHOULD BE PRUNED AND INSTALLED THE SAME DAY.
6. DIP BOTTOM OF CUTTING IN A PLANT ROOTING HORMONE PRIOR TO INSERTION INTO THE SOIL.

1 CUTTING INSTALLATION (TYP.)
SCALE: NTS



2 CONTAINER TREE/SHRUB PLANTING DETAIL (TYP.)
SCALE: NTS

DRAWN KV
SCALE AS NOTED
DATE 3-27-24
REVISED 11-07-25
PROJECT 6955
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FIGURE 3: PLANTING SCHEDULE & DETAIL
SAGEN CARRIAGE HOUSE
16916 185TH AVE. NE, WOODINVILLE, WA 98072
KING COUNTY PARCEL: 0726069054

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SPECIFICATIONS

1. PRIOR TO PLANTING, GREENHOUSE AND ALL NON-ORGANIC DEBRIS AND NON-NATIVE VEGETATION SHALL BE REMOVED AND SOD WILL BE STRIPPED AND EXPORTED OFF SITE.
2. IMPORTED DEJONG'S FERTIL-MULCH SHALL BE REPLACED IN THE MITIGATION AREAS, AS NECESSARY, TO ACHIEVE PRE-DEVELOPMENT GRADES. AFTER SOIL PLACEMENT, TILL SOILS TO A DEPTH OF 6 INCHES.
3. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH UNLESS IRRIGATION IS PROVIDED AT TIME OF PLANT INSTALLATION.
4. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PITS SHALL BE AMENDED WITH A HYDRATED SOIL POLYMER (INSTALLED AT RATES PER MANUFACTURER'S SPECIFICATION). PLANTS SHALL BE INSTALLED 2" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH WOOD CHIPS PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED. DO NOT PUT MULCH OVER PLANT CROWN.
5. ALL TREES SHALL BE 2-GALLON MIN. ALL SHRUBS SHALL BE 1-GALLON MIN.
6. NATIVE PLANT CUTTINGS SHALL BE GROWN AND COLLECTED IN THE MARITIME PACIFIC NORTHWEST. CUTTINGS SHALL BE OF ONE- TO TWO-YEAR-OLD WOOD, 1/2" DIA. MINIMUM. CUTTINGS SHALL BE A MINIMUM OF 4' IN LENGTH WITH 4 LATERAL BUDS EXPOSED ABOVE GROUND AFTER PLANTING. THE TOP OF EACH CUTTING SHALL BE A MINIMUM OF 1" ABOVE A LEAF BUD, THE BOTTOM CUT 2" BELOW A BUD A MINIMUM OF 18" DEEP. THE BASAL ENDS OF THE CUTTINGS SHALL BE CUT AT A 45 DEGREE ANGLE AND MARKED CLEARLY SO THAT THE ROOTING END IS PLANTED IN THE SOIL. CUTTINGS MUST BE KEPT COVERED AND MOIST DURING STORAGE AND TRANSPORT, AND NO CUTTINGS SHALL BE STORED MORE THAN THREE DAYS FROM DATE OF CUTTING. CUTTINGS SHALL ONLY BE USED IF PLANTING OCCURS BETWEEN DECEMBER 1ST AND APRIL 1ST. FOR PLANTING BETWEEN APRIL 1ST AND DECEMBER 1ST, ROOTED CUTTINGS OR SAPLINGS SHALL BE USED.
7. ALL PLANTS SHALL BE NURSERY GROWN (IN W. WA OR OR.) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
8. PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
9. ALL PLANTINGS SHALL BE HAND-WATERED OR IRRIGATED WITH AN ABOVE-GROUND, TEMPORARY IRRIGATION SYSTEM AT A RATE OF ½" OF FLOW 2-3 TIMES WEEKLY, FROM JUNE 15-OCT 15 THE FIRST YEAR AFTER PLANTING. THE SECOND YEAR, FLOW SHOULD BE REDUCED TO PROVIDE ½" OF FLOW 1-2 TIMES WEEKLY FROM JULY 1-SEPT 30. THE SYSTEM CAN BE REMOVED AT THE END OF THE 5-YEAR MONITORING PERIOD.
10. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, KING COUNTY WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
11. PERFORMANCE STANDARDS INCLUDE: 1) FOLLOWING EVERY MONITORING EVENT FOR A PERIOD OF AT LEAST FIVE YEARS, THE OVERALL MITIGATION AREA WILL CONTAIN AT LEAST 7 NATIVE PLANT SPECIES. FOLLOWING YEAR 1, THERE WILL BE 100% SURVIVAL RATE OF ALL PLANTED TREE AND SHRUB SPECIES OR EQUIVALENT REPLACEMENT OF A COMBINATION OF PLANTED AND RE-COLONIZED NATIVE SPECIES AND 85% FOLLOWING YEARS 2-5. 2) AFTER CONSTRUCTION AND FOLLOWING EVERY MONITORING EVENT FOR A PERIOD OF AT LEAST FIVE YEARS, EXOTIC AND INVASIVE PLANT SPECIES WILL BE MAINTAINED AT LEVELS BELOW 10% TOTAL COVER IN ALL PLANTED AREAS. THESE SPECIES INCLUDE, BUT ARE NOT LIMITED TO; HIMALAYAN AND EVERGREEN BLACKBERRY, REED CANARYGRASS, PURPLE LOOSESTRIFE, MORNING GLORY, JAPANESE KNOTWEED, ENGLISH IVY, THISTLE, PERIWINKLE, SCOT'S BROOM, POISON HEMLOCK, LAUREL, STINKY BOB AND CREEPING NIGHTSHADE. 3) NATIVE WOODY COVERAGE WILL BE 10% AT YEAR 1, 20% AT YEAR 2, 50% AT YEAR 3, 80% AT YEAR 5.
12. MONITORING WILL OCCUR ON A TWICE YEARLY BASIS WITH REPORTS SUBMITTED TO KING COUNTY AT THE ANNIVERSARY OF CONSTRUCTION APPROVAL. REPORT WILL INCLUDE A SUMMARY OF SUCCESS OF THE MITIGATION AREA IN RELATION TO THE APPROVED PERFORMANCE STANDARDS. REPORTS WILL ALSO INCLUDE PHOTOS TAKEN FROM VARIOUS POINTS AT CONSTRUCTION COMPLETION.
13. IF THERE IS A SIGNIFICANT PROBLEM WITH THE MITIGATION ACHIEVING IT'S PERFORMANCE STANDARDS, THE BOND HOLDER SHALL WORK WITH KING COUNTY TO DEVELOP A CONTINGENCY PLAN. CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO, REGRADING, ADDITIONAL PLANT INSTALLATION, EROSION CONTROL, MODIFICATIONS TO HYDROLOGY, AND PLAN SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION. SUCH CONTINGENCY PLAN SHALL BE SUBMITTED TO KING COUNTY BY DECEMBER 31 OF ANY YEAR WHEN DEFICIENCIES ARE DISCOVERED.
14. A PERFORMANCE BOND WILL BE POSTED, PRIOR TO PLAN APPROVAL - SEE KING COUNTY BOND WORKSHEET.
15. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.
16. UPON COMPLETION OF THE LAST MONITORING REPORT, IF PERFORMANCE STANDARDS ARE MET, AOA WILL PROVIDE A FINAL REPORT TO THE COUNTY REQUESTING BOND RELEASE. UPON FINAL APPROVAL BY THE COUNTY, THE BOND WILL BE RELEASED AND THE PROJECT WILL BE COMPLETE.

ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WEED CONTROL			1		1		1			1		
GENERAL MAINT.			1		1		1			1		
WATERING - YEAR 1						4	8	8	8	4		
WATERING - YEAR 2							4	4	4			

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

MAINTENANCE WILL INCLUDE:

1. REMOVAL OF NON-NATIVE PLANTS, BY HAND, AS LISTED ABOVE.
2. CONTINUED APPLICATION OF IRRIGATION, AS NOTED ABOVE.
3. REMOVAL OF PEST INFESTATIONS, LIKE TENT CATERPILLAR AND SPRUCE APHID, AS DETAILED BY AOA IN THE MONITORING REPORT.
4. REPLACEMENT OF PLANTS, AS DIRECTED BY AOA, IF MORTALITY EXCEEDS 20%.
5. THINNING OF RED ALDER AND MOWING OF TALL GRASSES, AS DIRECTED BY AOA TO ENSURE SURVIVAL OF PLANTED SPECIES.
6. ANY ADDITIONAL ITEMS IDENTIFIED BY AOA DURING THE FIVE-YEAR MONITORING PERIOD.

PROJECT 6955
DRAWN KV
SCALE AS NOTED
DATE 3-27-24
REVISED 11-07-25
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FIGURE 4: SPECIFICATIONS
SAGEN CARRIAGE HOUSE
16916 185TH AVE. NE, WOODINVILLE, WA 98072
KING COUNTY PARCEL: 0726069054

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AOA Environmental Planning & Landscape Architecture
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ATTACHMENT A
DATA SHEETS

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

Project Site: Parcel 072606-9054 City/County: /King Sampling Date: 11-1-22
Applicant/Owner: Sagan State: WA Sampling Point: DP#1
Investigator(s): John Altmann, Dain Altmann Section, Township, Range: S7,T26N,R6E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A Lat: 47.75036 Long: -122.09133 Datum:
Soil Map Unit Name: 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 ☒	No ☐	**Is the Sampled Area within a Wetland?**	**Yes ☒ No ☐**
Hydric Soil Present?	Yes ☒	No ☐		
Wetland Hydrology Present?	Yes ☒	No ☐		

Remarks: Located 10' into wetland.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Malus fusca*	20	yes	FACW
2.			
3.			
4.			
50% = 10, 20% = 4	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. *domestic apple.*	15	yes	NL (UPL)
2. *domestic fig*	15	yes	NL (UPL)
3. *Cornus sericea*	15	yes	FACW
4. *nootka rose*	15	yes	FAC
5.			
50% = 30, 20% = 12	60	= Total Cover	
Herb Stratum (Plot size: 10)			
1. *Equisetum telmateia*	60	yes	FACW
2. *Ranunculus repens*	10	no	FAC
3. *Lamiastrum galeobdolon*	5	no	NL (UPL)
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 37.5, 20% = 15	75	= Total Cover	
Woody Vine Stratum (Plot size: 10)			
1. *Rubus ursinus*	10	yes	FACU
2.			
50% = 5, 20% = 2	10	= Total Cover	

% Bare Ground in Herb Stratum

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	4	(A)
Total Number of Dominant Species Across All Strata:	7	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	57	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
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:

Project Site: Parcel 072606-9054

SOIL Sampling Point: DP#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
0-16	10YR3/1	100					GLC	gravelly clay

[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 Soils 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 Stresses 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):	15

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: Parcel 072606-9054 City/County: /King Sampling Date: 11-1-22
Applicant/Owner: Sagan State: WA Sampling Point: DP#2
Investigator(s): John Altmann, Dain Altmann Section, Township, Range: S7,T26N,R6E
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%):
Subregion (LRR): A Lat: 47.75036 Long: -122.09133 Datum:
Soil Map Unit Name: 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 ☐	No ☒	**Is the Sampled Area within a Wetland?**	**Yes** ☐	**No** ☒
Hydric Soil Present?	Yes ☐	No ☒			
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: Located 10' into upland from wetland boundary.

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pseudotsuga menziesii*	100	yes	FACU
2. *Acer circinatum*	20	no	FAC
3.			
4.			
50% = 60, 20% = 24	120	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10)			
1. *Thuja plicata*	30	yes	FAC
2. *Vaccinium parvifolium*	25	yes	FACU
3. *Ilex aquifolium*	2	no	FACU
4.			
5.			
50% = 28.5, 20% = 11.4	57	= Total Cover	
Herb Stratum (Plot size: 10)			
1. *Lamiastrum galeobdolon*	15	yes	NL (UPL)
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
50% = 7.5, 20% = 3	15	= Total Cover	
Woody Vine Stratum (Plot size: 10)			
1. *Rubus ursinus*	20	yes	FACU
2.			
50% = 10, 20% = 4	20	= 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x1 =	
FACW species		x2 =	
FAC species		x3 =	
FACU species		x4 =	
UPL species		x5 =	
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:

Project Site: Parcel 072606-9054

SOIL

Sampling Point: DP#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
0-15	10YR3/3	100					GSL	gravelly sandy 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 Soils Present? **Yes** ☐ **No** ☒

Remarks: No redoximorphic features

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 Stresses 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: dry

ATTACHMENT B
WETLAND RATING

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Parcel 072606-9054 Date of site visit: 11/1/2022

Rated by Altmann Trained by Ecology? ☑ Yes ☐ No Date of training 03/08 & 03/15

HGM Class used for rating Depressional & Flats 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 King County iMAP

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

1. Category of wetland based on FUNCTIONS

_____ **Category I** - Total score = 23 - 27
X **Category II** - Total score = 20 - 22
_____ **Category III** - Total score = 16 - 19
_____ **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	M	M	H	
Value	H	H	H	**Total**
Score Based on Ratings	7	7	8	**22**

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
Estuarine	
Wetland of High Conservation Value	
Bog	
Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	**X**

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

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 is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*).	Yes = 4 No = 0	4
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0		3
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0		2
Total for D 1	Add the points in the boxes above	**11**

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 unit receive stormwater discharges?	Yes = 1 No = 0	0
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	1
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? Source	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	**2**

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, lake, or marine water 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 an aquatic resource is on the 303(d) list?	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 basin in which the unit 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*

Wetland name or number A

DEPRESSIONAL AND FLATS WETLANDS

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

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:		2
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
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 if dry, the deepest part.*		5
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
☐ The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*		3
☐ The area of the basin is less than 10 times the area of the unit	points = 5	
The area of the basin is 10 to 100 times the area of the unit	points = 3	
The area of the basin is more than 100 times the area of the unit	points = 0	
☐ Entire wetland is in the Flats class	points = 5	
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 hydrologic function of the site?		
D 5.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess 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 (residential at >1 residence/ac, urban, commercial, agriculture, etc.)?	Yes = 1 No = 0	1
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 unit is in a landscape that has flooding problems. *Choose the description that best matches conditions around the wetland unit being rated. Do not add points. Choose the highest score if more than one condition is met.*		2
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):		
● Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
☐ ● Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
☐ Flooding from groundwater is an issue in the sub-basin.	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. Explain why	points = 0	
☐ There are no problems with flooding downstream of the wetland.	points = 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	
Total for D 6	Add the points in the boxes above	**2**

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

Wetland name or number A

These questions apply to wetlands of all HGM classes.

HABITAT FUNCTIONS - Indicators that site functions to provide important habitat

H 1.0. Does the site have the potential to provide habitat?

H 1.1. Structure of plant community: *Indicators are Cowardin classes and strata within the Forested class.* Check the Cowardin plant classes in the wetland. *Up to 10 patches may be combined for each class to meet the threshold of ¼ ac or more than 10% of the unit if it is smaller than 2.5 ac. Add the number of structures checked.*

- ☐ Aquatic bed
- ☑ Emergent
- ☑ Scrub-shrub (areas where shrubs have > 30% cover)
- ☑ Forested (areas where trees have > 30% cover)

4 structures or more: points = 4
3 structures: points = 2
2 structures: points - 1
1 structure: points = 0

If the unit has a Forested class, check if:

- ☐ The Forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the Forested polygon

2

H 1.2. Hydroperiods

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*).

- ☐ Permanently flooded or inundated
- ☐ Seasonally flooded or inundated
- ☑ Occasionally flooded or inundated
- ☑ Saturated only

4 or more types present: points = 3
3 types present: points = 2
2 types present: points = 1
1 types present: points = 0

- ☑ Permanently flowing stream or river in, or adjacent to, the wetland
- ☐ Seasonally flowing stream in, or adjacent to, the wetland
- ☐ **Lake Fringe wetland** **2 points**
- ☐ **Freshwater tidal wetland** **2 points**

2

H 1.3. Richness of plant species

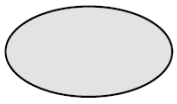
Count the number of plant species in the wetland that cover at least 10 ft^2.
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle***

If you counted:
- > 19 species — points = 2
- 5 - 19 species — points = 1
- < 5 species — points = 0

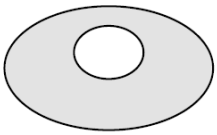
1

H 1.4. Interspersion of habitats

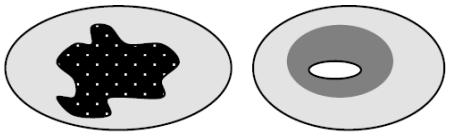
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.*



None = 0 points

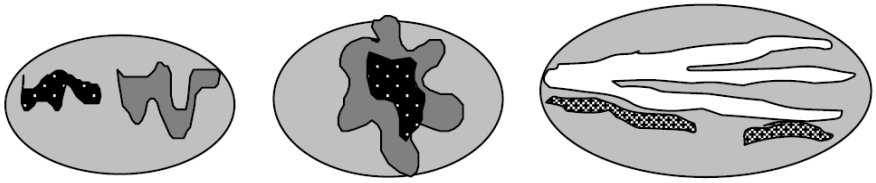


Low = 1 point



Moderate = 2 points

All three diagrams in this row are **HIGH** = 3 points



2

Wetland name or number A

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☑ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☑ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by amphibians*) ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	4
Total for H 1 — Add the points in the boxes above	**11**

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 the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 17.4 % undisturbed habitat + (8.9 % moderate & low intensity land uses / 2) = 21.85% If total accessible habitat is: > 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 the wetland. *Calculate:* 25.3 % undisturbed habitat + (26 % moderate & low intensity land uses / 2) = 38.3% 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	2
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use — points = (-2) ≤ 50% of 1km Polygon is high intensity — points = 0	0
Total for H 2 — Add the points in the boxes above	**4**

Rating of Landscape Potential If Score is: ☑ **4 - 6 = 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 next page) ☑ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority 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 (listed on next page) with in 100m — points = 1 Site does not meet any of the criteria above — points = 0	2

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

WDFW Priority Habitats

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*).
- ☐ **Herbaceous Balds**: Variable size patches of grass and forbs on shallow soils over bedrock.
- ☐ **Old-growth/Mature forests**: Old-growth west of Cascade crest – Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) > 32 in (81 cm) dbh or > 200 years of age. 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 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.
- ☐ **Westside Prairies**: Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161 – see web link above*).
- ☑ **Instream**: The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources.
- ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report – see web link on previous page*).
- ☐ **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.

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

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King County
Parcel 072606-9054

AOA - 6955

Figure A

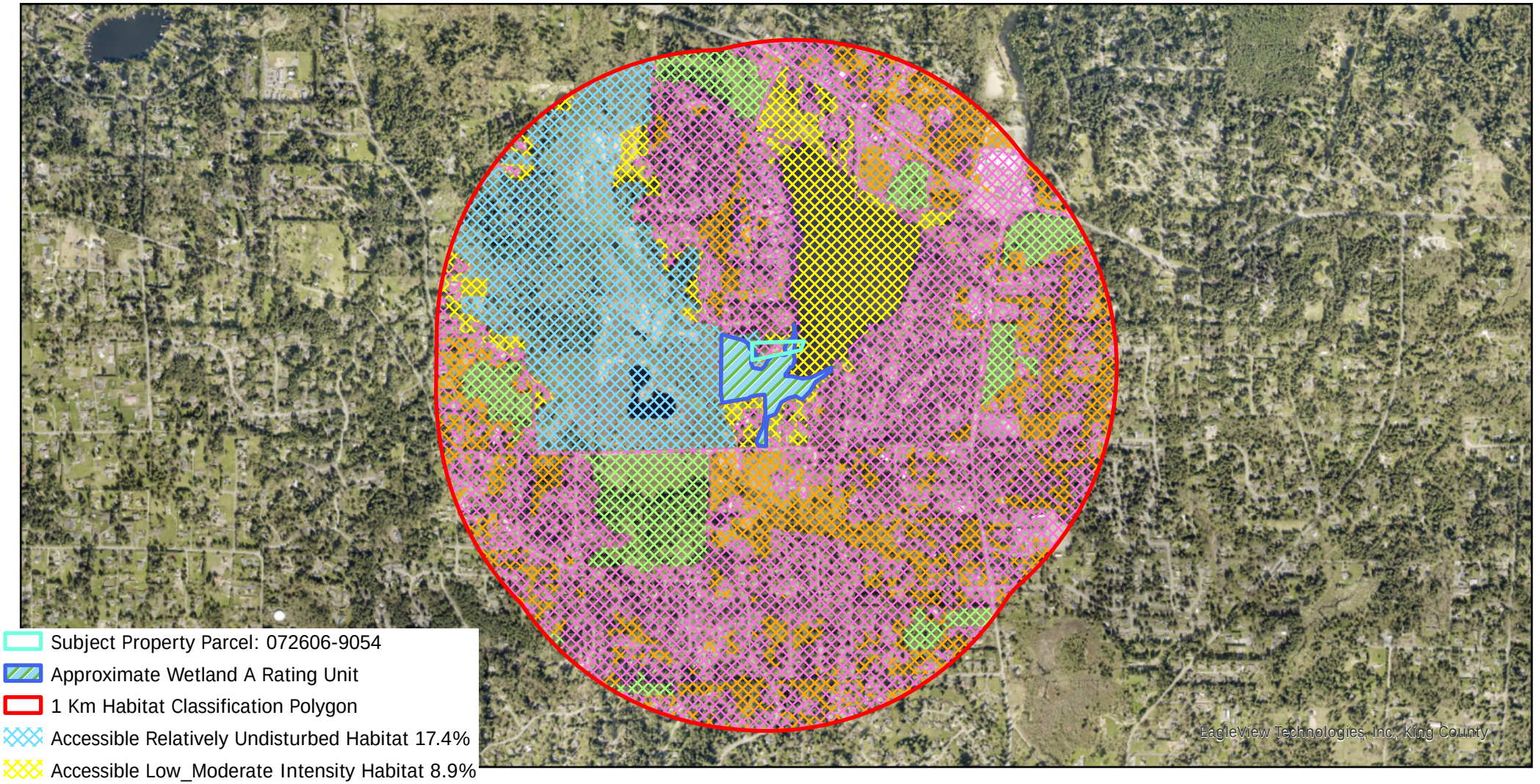

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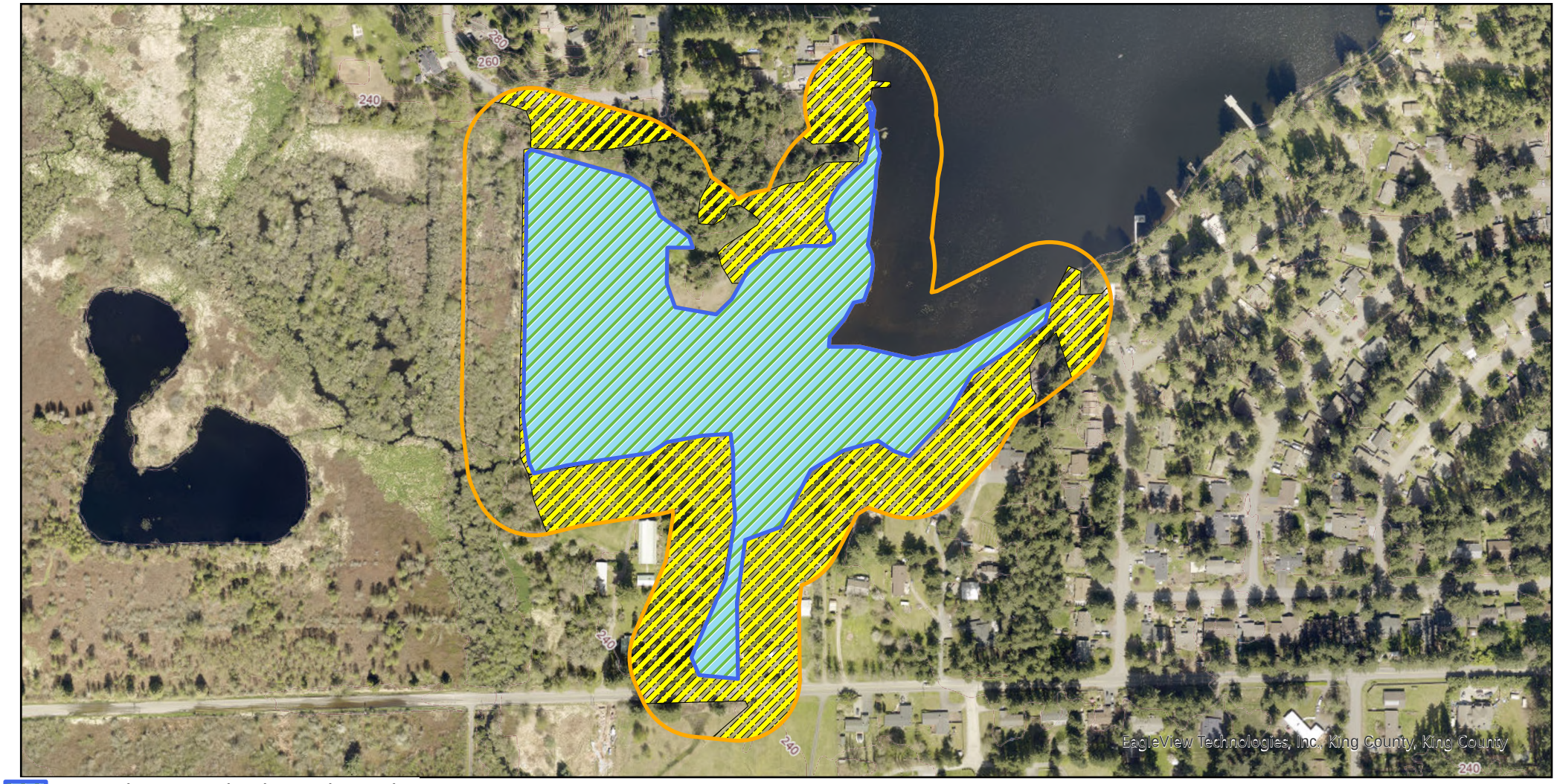
Figure B



Approximate Wetland A Rating Unit
150' Pollution Assessment Polygon
Pollution Generating Surfaces 53.9%

0 165 330 660 990 1,320
US Feet

November 21, 2022

Figure C

Assessed Water/Sediment

Water
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

Sediment
- Category 5 - 303d
- Category 4C
- Category 4B
- Category 4A
- Category 2
- Category 1

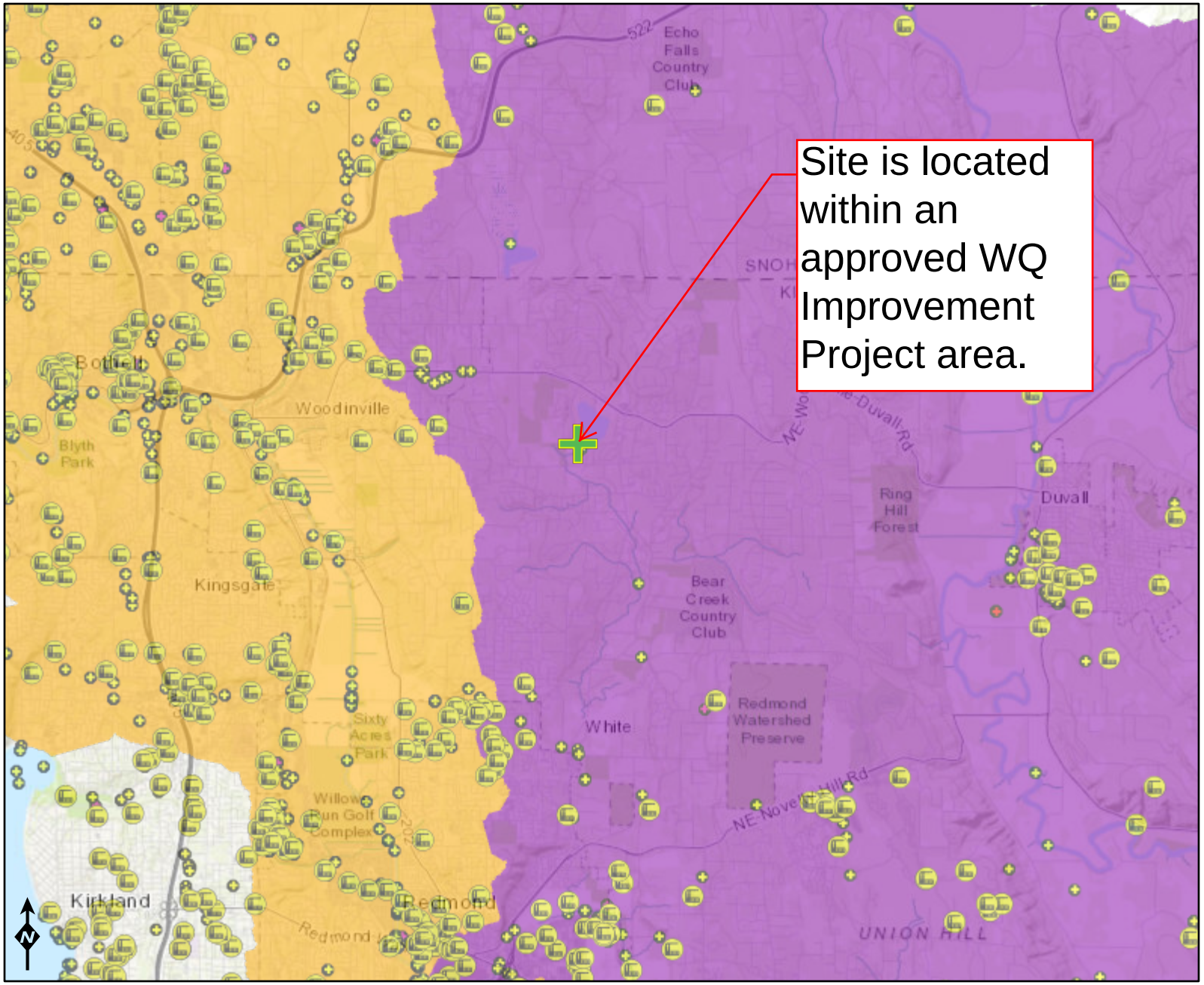
Miles
0 0.05 0.1 0.2

Esri, NASA, NGA, USGS, FEMA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

DEPARTMENT OF ECOLOGY
State of Washington

November 21, 2022

Figure D



King County, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

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State of Washington