

Altmann Oliver Associates, LLC

AOA



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

Environmental
Planning &
Landscape
Architecture

October 18, 2023

AOA-6570

Denis Karnafel
denis@parkplacewa.com

**SUBJECT: Critical Areas Study for Critical Areas Alteration Exception on
Parcels 375160-3419, -3417, and -3415, King County, WA
PREA21-0277**

Dear Denis:

On July 20, 2021 I conducted an initial wetland reconnaissance and delineation on the undeveloped subject property 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)*. An additional field investigation was conducted on January 27, 2022. The property consists of three undeveloped tax parcels that all consist of mixed upland forest that slope gently down from east to west.

1.0 EXISTING CRITICAL AREAS

Although no wetlands were identified on the site, one wetland (Wetland A) was identified and delineated off-site to the west. Wetland A is part of a large Depressional Hydrogeomorphic (HGM) class wetland system that includes Spider Lake further off-site to the southwest. Vegetation within Wetland A in the vicinity of the three subject parcels consisted of a forested plant community that was dominated by Oregon ash (*Fraxinus latifolia*), spirea (*Spiraea douglasii*), red-osier dogwood (*Cornus sericea*), and climbing nightshade (*Solanum dulcamara*).

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 delineation.

Wetland A is a Category II wetland with 7 Habitat Points (**Attachment B**). Category II wetlands with 7 Habitat Points require a standard 150-foot buffer plus 15-foot building setback within the urban area of King County. This buffer can typically be reduced to 110 feet if all the mitigation measures outlined in KCC 21A.24.325.C.6(2)b are implemented.

2.0 PROPOSED PROJECT

The proposed project consists of the development of a single-family residence on each of the three undeveloped parcels. Although the mitigation measures outlined in KCC 21A.24.325.C.6(2)b (below) will be implemented to reduce the buffer to 110 feet, there is still insufficient room outside the buffer to construct any of the residences and a Critical Areas Alteration Exception will be required for each lot.

Disturbance	Measures to minimize impacts	Proposed Project
Lights	Direct lights away from wetland.	All lights should be low wattage and directed down – not out into wetland. Timers and metal hoods should be used as appropriate. Directional lighting with narrow angles of illumination should be utilized.
Noise	Locate activity that generates noise away from wetland. If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source. For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional ten-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer.	No areas that will generate excessive noise are proposed in proximity to the wetland.
Toxic runoff	Route all new untreated runoff away from wetland while ensuring wetland is not dewatered. Establish covenants limiting use of pesticides within 150 feet of wetland. Apply integrated pest management.	No untreated water from pollution generating surfaces should be allowed to directly enter the wetland.
Stormwater runoff	Retrofit stormwater detention and treatment for roads and existing adjacent development. Prevent channelized flow from lawns that directly enters the buffer. Use low impact intensity development techniques identified in the King County Surface Water Design Manual.	It is my understanding that a detailed stormwater management plan has been designed per King County requirements.
Change in water regime	Infiltrate or treat, detain and disperse into buffer new runoff from impervious surfaces and new lawns.	Project should be designed to treat stormwater runoff while maintaining hydrologic support to the wetland as required by King County.
Pets and human disturbance	Use privacy fencing or plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion. Place wetland and its buffer in a separate tract or protect with a conservation easement.	A fence with signage will be installed along the buffer boundary to prevent pedestrian intrusion.
Dust	Use best management practices to control dust.	BMPS should be utilized to control dust.

3.0 WETLAND BUFFER IMPACTS

The proposed project consists of the development of each parcel with a single-family residence utilizing the Critical Areas Alteration Exception (CAAE) process. All three of the parcels are currently undeveloped and consist of mixed upland forest that was dominated by Douglas fir (*Pseudotsuga menziesii*), black cottonwood (*Populus trichocarpa*), vine maple (*Acer circinatum*), Indian plum (*Oemleria cerasiformis*), stinging nettle (*Urtica dioica*), and sword fern (*Polystichum munitum*). Although no direct critical area impacts would occur, buffer impacts are unavoidable.

Since the buffer on the site is gently sloped and undeveloped it does not currently provide a significant stormwater storage or filtration functional benefit to the off-site wetland. The primary function of the buffer appears to be as a wildlife habitat component of the overall open space associated with the wetland and surrounding undeveloped area. The buffer on the site also provides physical and visual screening to the wetland from the adjacent development.

PARCEL NUMBER	SITE ALTERATION AREA (S.F.)	BUFFER/BSBL IMPACT (S.F.)
375160-3419	4,159	2,729
375160-3417	4,159	2,695
375160-3415	4,159	2,265

4.0 WILDLIFE HABITAT ASSESSMENT

The Washington Department of Fish and Wildlife Priority Habitats and Species database (PHS) does not indicate the presence of any federal or state listed endangered, threatened, sensitive, or candidate species on or adjacent to the site, nor were any identified during the field investigations. In addition, no active breeding sites for species listed in KCC 21A.24.382.B through J were observed during the field investigations.

All existing significant trees located outside of the currently proposed clearing limits should be retained. Although I do not believe it necessary to create snags from any of the existing live healthy trees on the property, if any other trees on the site are deemed hazardous and must be removed for safety concerns, then it is my recommendation that a snag be created from that tree at the tallest appropriate point. Furthermore, any trees within the preserved portions of the site that naturally become snags should remain in place and not be removed unless they become a safety concern.

4.1 Wildlife Habitat Recommendations for Lighting

To minimize the project's potential to impact wildlife from light and glare the following measures should be implemented:

- Exterior lighting on the back of the residence should be on a timer that automatically shuts off within 15 minutes after use.

- Only low-wattage directional lighting with narrow angles of illumination for lighting should be utilized.
- Metal hoods should be added to all exterior lights to direct lighting down and not out from fixtures.

5.0 ALTERNATIVES ANALYSIS

The subject parcels are small (5,000 s.f. for -3415 and 4,800 s.f. for -3417 and -3419) and it is my understanding that you have designed the future moderately sized residences to minimize impacts and fit in with the surrounding neighborhood. It is also my understanding that a smaller structural footprint may not be economically feasible.

6.0 CRITICAL AREA ALTERATION EXCEPTION APPROVAL CRITERIA

Any approval of a CAAE must meet the criteria of KCC 21A.24.070.A.3:

- a. there is no feasible alternative to the development proposal with less adverse impact on the critical area;*

The proposed residences have been designed to avoid all direct impacts to critical areas and would be located close to 56th Ave. S. to minimize longer driveway impacts. The structures are moderately sized and it is my understanding they have been designed to match existing adjacent development.

- b. the alteration is the minimum necessary to accommodate the development proposal;*

The moderately sized residences would have very small yards and have been minimized to be below the maximum site alteration area threshold.

- c. the approval does not require the modification of a critical area development standard established by this chapter, except as set forth in subsection A.2.i. of this section;*

No critical area development standards will be modified by the proposal.

- d. the development proposal does not pose an unreasonable threat to the public health, safety or welfare on or off the development proposal site and is consistent with the general purposes of this chapter and the public interest;*

The proposed single-family residence is consistent with adjacent land uses and does not pose a threat to public health, safety, or welfare on or off the development site.

- e. for dwelling units, no more than five thousand square feet or ten percent of the site, whichever is greater, may be disturbed by structures, building setbacks or other land alteration, including grading, utility installations and*

landscaping, but not including the area used for a driveway or for an on-site sewage disposal system;

Since the parcels are 5,000 s.f. or less in size the maximum site alteration area is 5,000 s.f. per lot. The site alteration area for each lot is 4,159 s.f. and is below the threshold requirement.

f. to the maximum extent practical, access is located to have the least adverse impact on the critical area and critical area buffer;

Access to the residences will be directly from 56th Ave. S. and the residences will be close to the roadway to minimize the length of the driveway.

g. the critical area is not used as a salmonid spawning area;

The impacted critical area buffer is not used as a salmonid spawning area.

7.0 PROPOSED MITIGATION

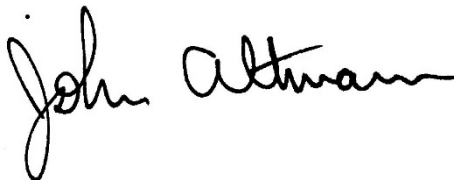
The existing wetland buffer on each of the parcels consists primarily of a native mixed forest with little on-site mitigation opportunity. Since there are no known mitigation banks that have a service area that includes the subject properties, it is anticipated that mitigation for the unavoidable buffer impacts associated with the new residences as part of the CAAE process will likely occur utilizing the King County Mitigation Reserves Program.

Once the site alteration area and buffer impact calculation has been approved, mitigation credits will be purchased.

If you have any questions regarding the critical areas study, please give me a call.

Sincerely,

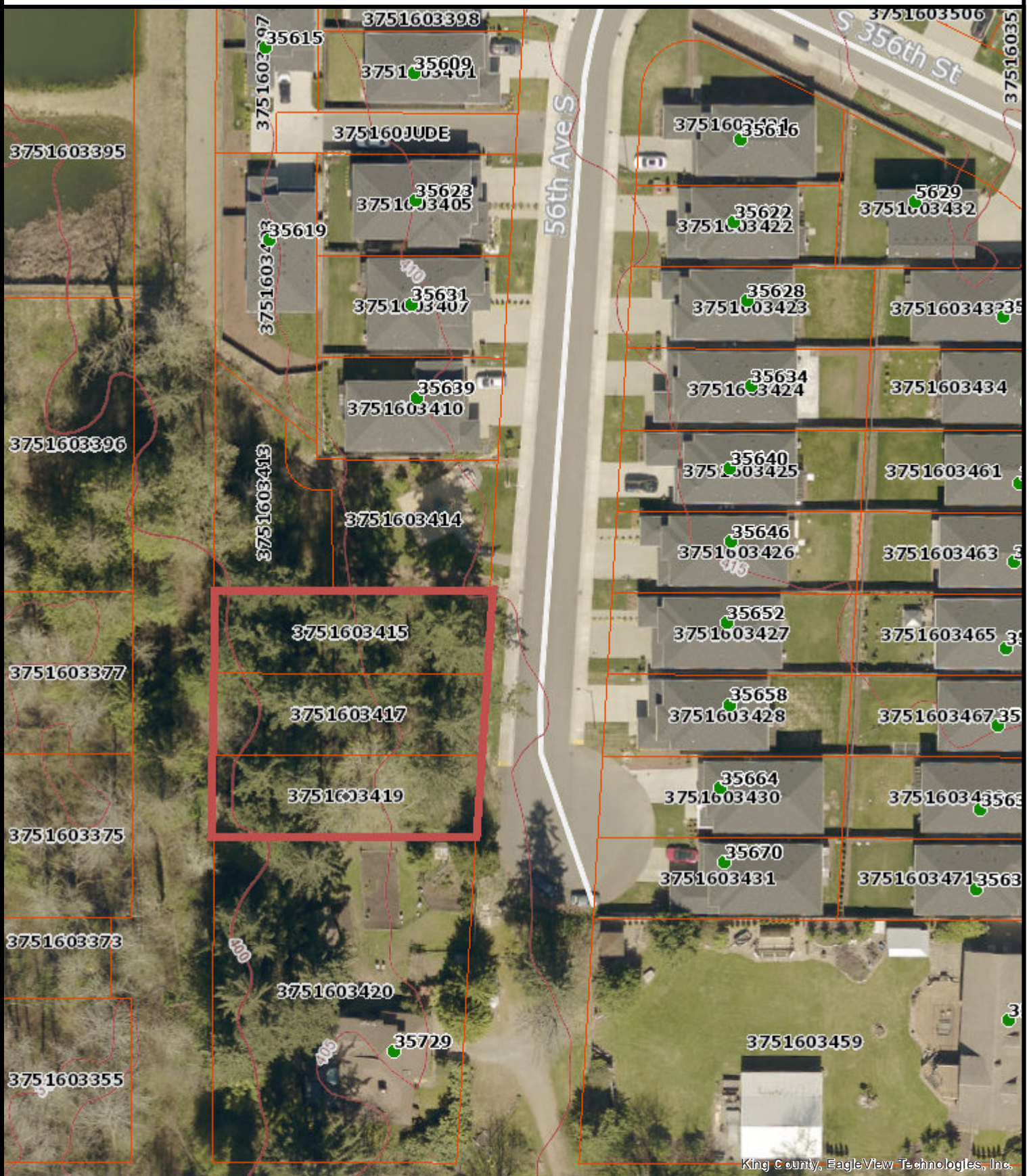
ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive, flowing style.

John Altmann
Ecologist

Attachments

King County iMap



King County, EagleView Technologies, Inc.

The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

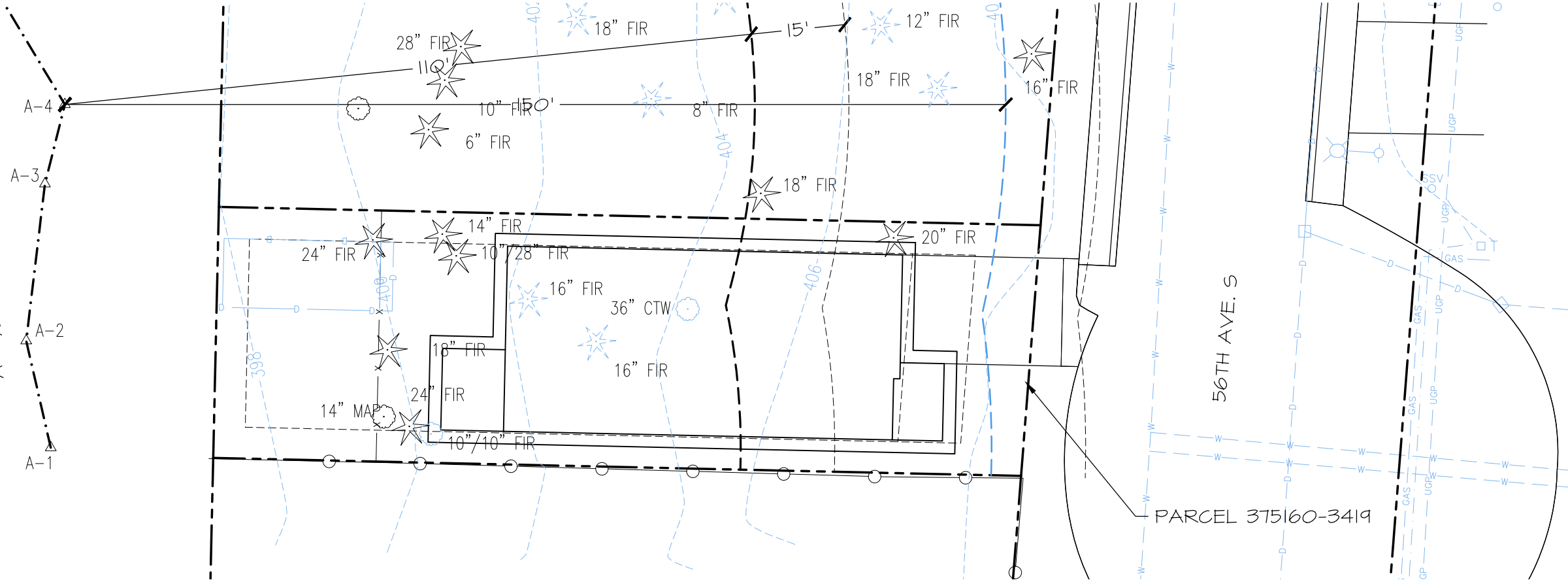


King County

Date: 10/18/2023

Notes:

OFFSITE WETLAND I/A
 CATEGORY II
 150' STANDARD BUFFER
 110' REDUCED BUFFER
 15' STRUCTURE SETBACK



PLAN LEGEND

- PROPERTY LINE
- · - · - · - · - · - OFFSITE WETLAND BOUNDARY
- 150' STANDARD WETLAND BUFFER
- 110' REDUCED WETLAND BUFFER
- 15' STRUCTURE SETBACK

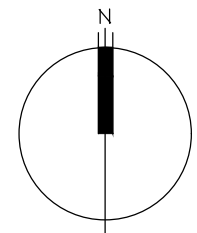
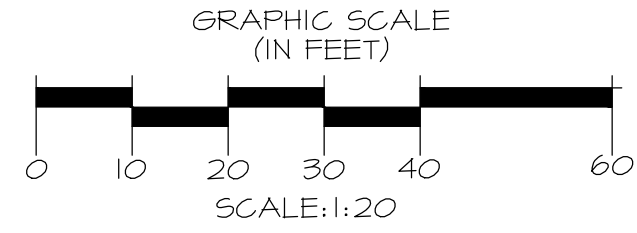
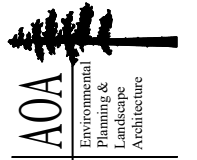


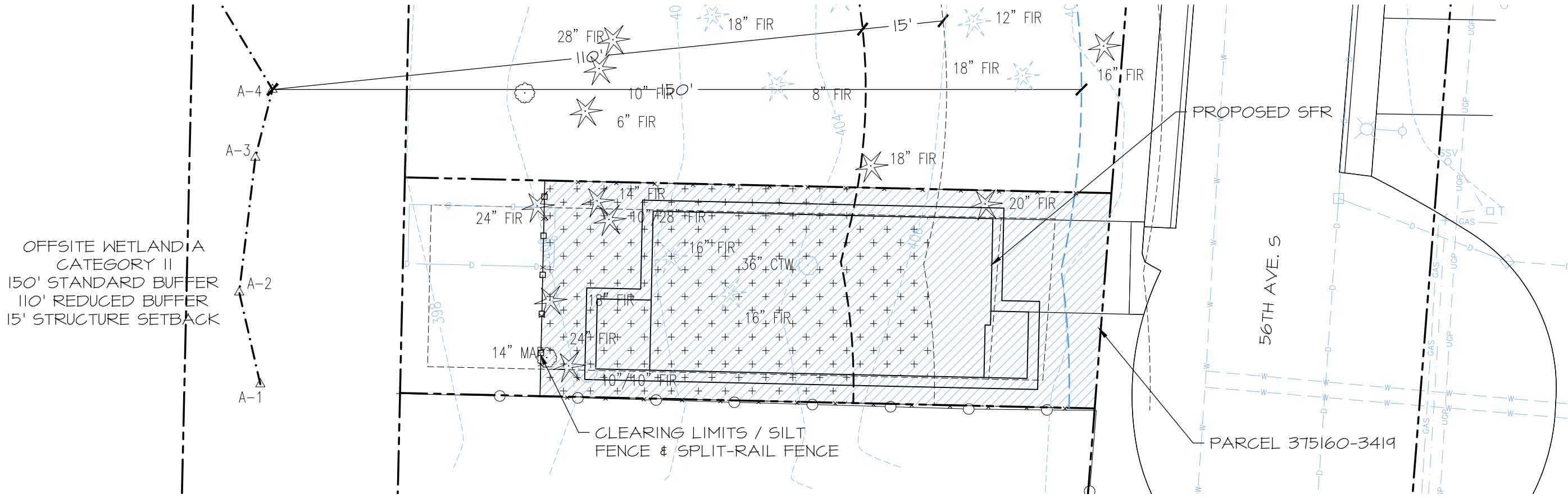
FIGURE 1: CRITICAL AREAS MAP
 KARNAFEL PROPERTY
 3XXXX 56TH AVE. S
 AUBURN, WASHINGTON
 PARCEL 375160-3419

PROJECT	6570
DRAWN	SO
SCALE	AS NOTED
DATE	5-31-23
REVISED	10-09-23

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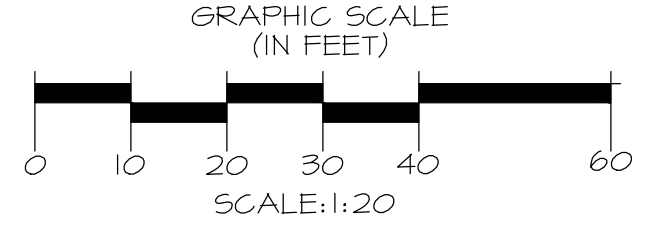


OFFSITE WETLAND A
 CATEGORY II
 150' STANDARD BUFFER
 110' REDUCED BUFFER
 15' STRUCTURE SETBACK

PLAN LEGEND

- PROPERTY LINE
- - - - - OFFSITE WETLAND BOUNDARY
- 150' STANDARD WETLAND BUFFER
- 110' REDUCED WETLAND BUFFER
- 15' STRUCTURE SETBACK
- x-x-x-x- CLEARING LIMITS / SILT FENCE
- CLEARING LIMITS / SILT FENCE & SPLIT-RAIL FENCE
- [Hatched Box] SITE ALTERATION AREA - 4,159 SF
- [Cross-hatched Box] BUFFER / BSBL IMPACT - 2,729 SF

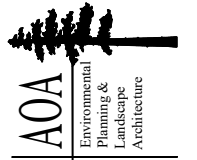
MITIGATION WILL BE PROVIDED OFFSITE THROUGH THE KING COUNTY MITIGATION RESERVES PROGRAM



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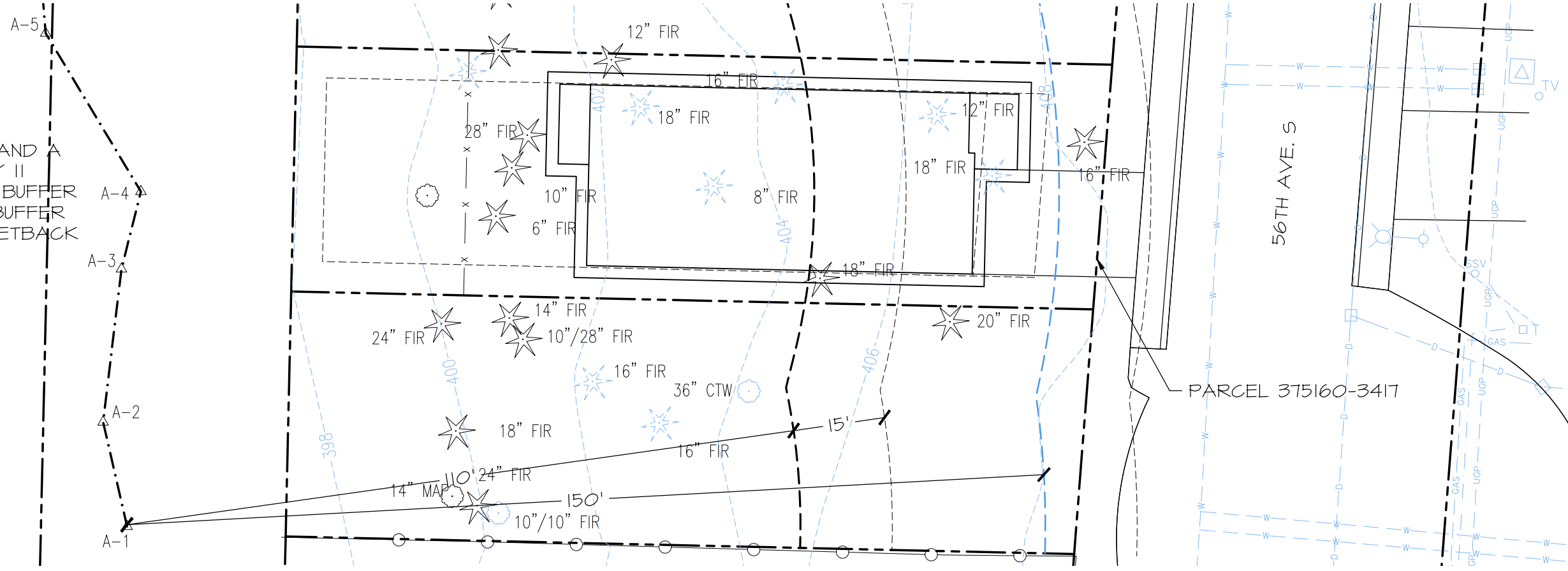
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FIGURE 2: SITE ALTERATION / BUFFER IMPACT
 KARNAFEL PROPERTY
 3XXXX 56TH AVE. S
 AUBURN, WASHINGTON
 PARCEL 375160-3419



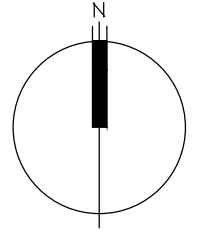
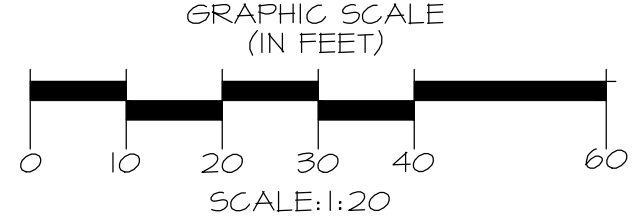
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OFFSITE WETLAND A
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 110' REDUCED BUFFER
 15' STRUCTURE SETBACK



PLAN LEGEND

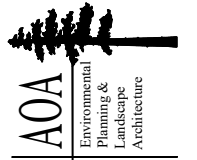
- PROPERTY LINE
- .-.-.-.- OFFSITE WETLAND BOUNDARY
- 150' STANDARD WETLAND BUFFER
- 110' REDUCED WETLAND BUFFER
- 15' STRUCTURE SETBACK



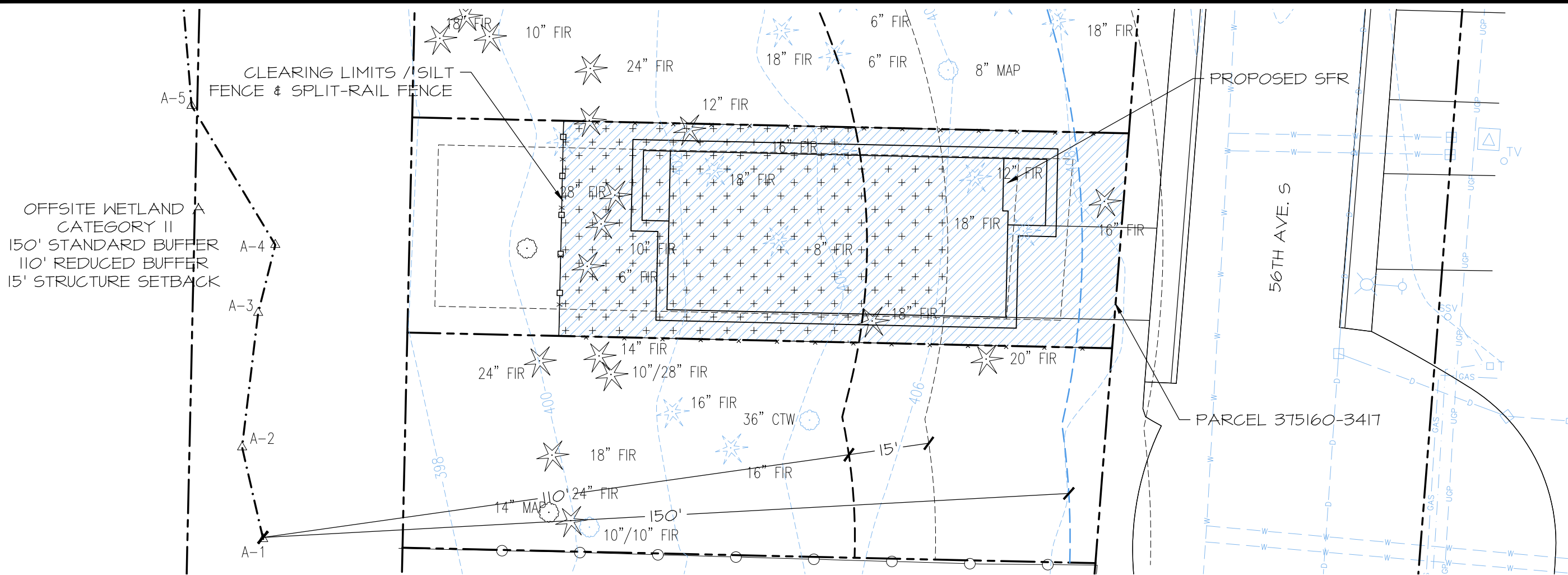
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FIGURE 1: CRITICAL AREAS MAP
 KARNAFEL PROPERTY
 3XXXX 56TH AVE. S
 AUBURN, WASHINGTON
 PARCEL 375160-3417



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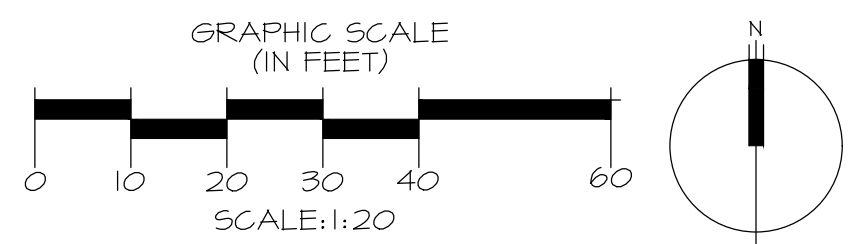


OFFSITE WETLAND A
 CATEGORY II
 150' STANDARD BUFFER
 110' REDUCED BUFFER
 15' STRUCTURE SETBACK

PLAN LEGEND

- PROPERTY LINE
- OFFSITE WETLAND BOUNDARY
- 150' STANDARD WETLAND BUFFER
- 110' REDUCED WETLAND BUFFER
- 15' STRUCTURE SETBACK
- x-x-x- CLEARING LIMITS / SILT FENCE
- CLEARING LIMITS / SILT FENCE & SPLIT-RAIL FENCE
- ▨ SITE ALTERATION AREA - 4,159 SF
- + + + + + BUFFER / BSBL IMPACT - 2,695 SF

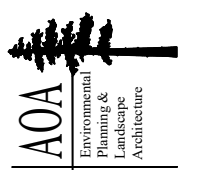
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FIGURE 2: SITE ALTERATION / BUFFER IMPACT
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 PARCEL 375160-3417

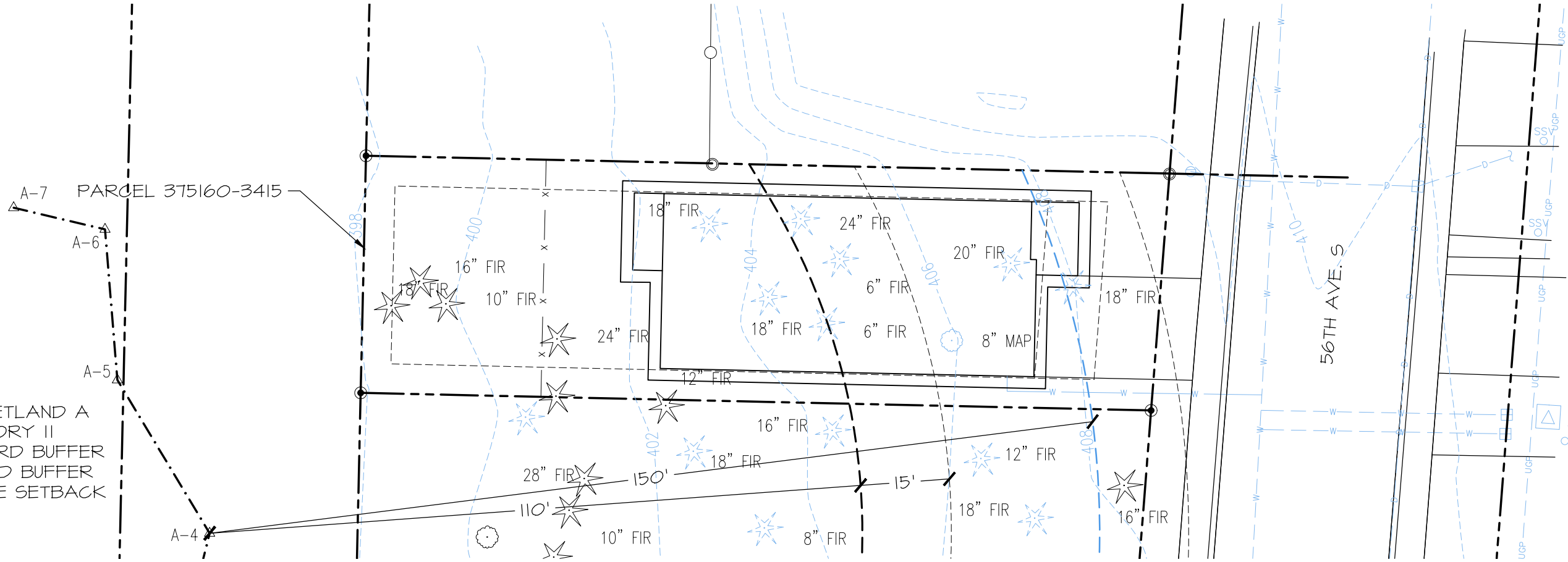


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PARCEL 375160-3415

OFFSITE WETLAND A
CATEGORY II
150' STANDARD BUFFER
110' REDUCED BUFFER
15' STRUCTURE SETBACK



PLAN LEGEND

- PROPERTY LINE
- STREAM ORDINARY HIGH WATER
- 75' STANDARD STREAM BUFFER
- 60' REDUCED STREAM BUFFER
- 15' STRUCTURE SETBACK

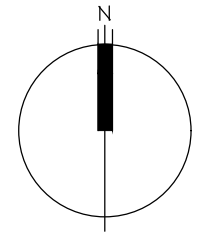
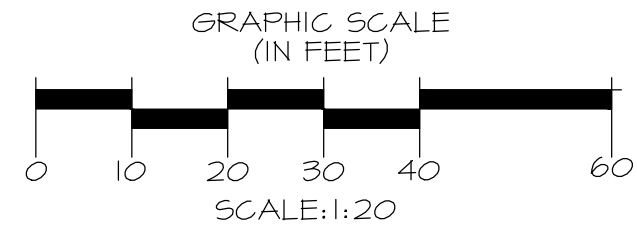


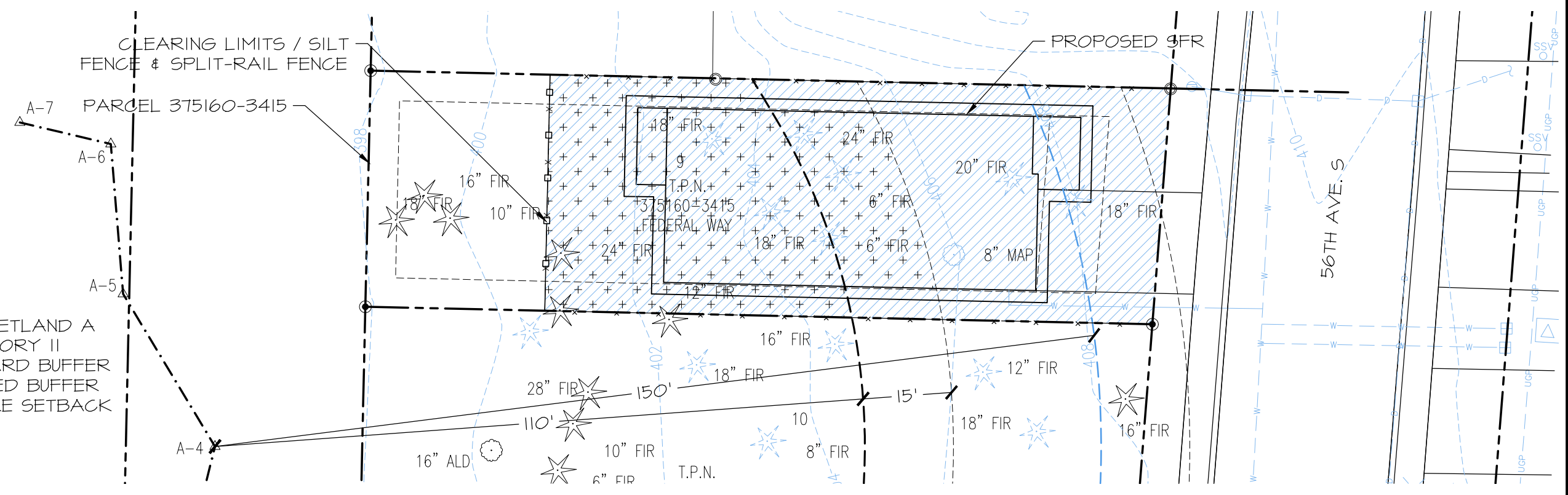
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REVISIONS		REVISIONS	

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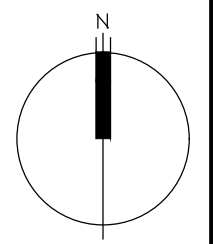
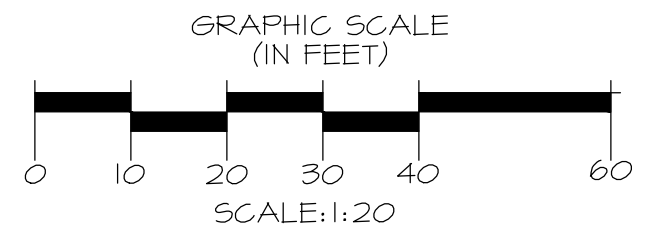


OFFSITE WETLAND A
CATEGORY II
150' STANDARD BUFFER
110' REDUCED BUFFER
15' STRUCTURE SETBACK

PLAN LEGEND

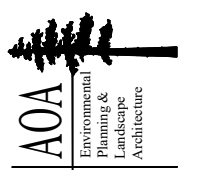
- PROPERTY LINE
- STREAM ORDINARY HIGH WATER
- 75' STANDARD STREAM BUFFER
- 60' REDUCED STREAM BUFFER
- 15' STRUCTURE SETBACK
- x-x-x-x- CLEARING LIMITS / SILT FENCE
- CLEARING LIMITS / SILT FENCE & SPLIT-RAIL FENCE
- [Hatched Box] SITE ALTERATION AREA - 4,159 SF
- [Cross-hatched Box] BUFFER / BSBL IMPACT - 2,265 SF

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ATTACHMENT A

DATA SHEETS

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

Project Site: Parcel 375160-3419 City/County: King County/ Sampling Date: 7-20-21
 Applicant/Owner: Karnafel State: WA Sampling Point: DP#1
 Investigator(s): John Altmann, Jason Panzera Section, Township, Range: S26, T21N, R4E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): A Lat: 47.2813 Long: -122.26475 Datum: _____
 Soil Map Unit Name: AqB NWI classification: PEM1F, PEM1/SSC, PSSC, PUBH
 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 <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Remarks: Located 10' off of A-4 into Wetland					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. <u>Fraxinus latifolia</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Total % Cover of:</td> <td style="text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	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 = _____	
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 = _____																				
<u>Sapling/Shrub Stratum (Plot size: 10')</u>																				
1. <u>Cornus sericea</u>	<u>100</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover																		
<u>Herb Stratum (Plot size: 10')</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<u>Woody Vine Stratum (Plot size: 10')</u>																				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____																				

Remarks: Ivy and Himalayan blackberry on log thus excluded

SOIL

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 ¹	Loc ²		
0-20	10 YR 2/1	100	_____	_____	_____	_____	Organic	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

³Indicators 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): Surface

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 375160-3419 City/County: King County/ Sampling Date: 7-20-21
 Applicant/Owner: Karnafel State: WA Sampling Point: DP#2
 Investigator(s): John Altmann, Jason Panzera Section, Township, Range: S26, T21N, R4E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): A Lat: 47.2813 Long: -122.26475 Datum: _____
 Soil Map Unit Name: AqB NWI classification: PEM1F, PEM1/SSC, PSSC, PUBH
 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 type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Remarks: Located 10' off of A-4 into Upland					

VEGETATION – Use scientific names of plants

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u><i>Thuja plicata</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)
2. <u><i>Acer circinatum</i></u>	<u>50</u>	<u>yes</u>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
50% = <u>50</u> , 20% = <u>20</u>	<u>100</u>	= Total Cover		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 = _____
<u>Sapling/Shrub Stratum (Plot size: 10')</u>				
1. <u><i>Corylus cornuta</i></u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
2. <u><i>Oemleria cerasiformis</i></u>	<u>15</u>	<u>yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
50% = <u>15</u> , 20% = <u>6</u>	<u>30</u>	= Total Cover		
<u>Herb Stratum (Plot size: 10')</u>				
1. <u><i>Polystichum munitum</i></u>	<u>40</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 – Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0' <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
50% = <u>20</u> , 20% = <u>8</u>	<u>40</u>	= Total Cover		
<u>Woody Vine Stratum (Plot size: 10')</u>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
50% = _____, 20% = _____	_____	= Total Cover		
% Bare Ground in Herb Stratum _____				

Remarks:

SOIL

Sampling Point: DP#2

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 ¹	Loc ²		
0-15	10 YR 3/3	100	_____	_____	_____	_____	silt loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: 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 Soils³:

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

³Indicators 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 redoxomorphic 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

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Parcel 375160-3419 Date of site visit: 7/20/2021

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

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

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>List appropriate rating (H, M, L)</i>				
Site Potential	M	M	H	
Landscape Potential	H	H	L	
Value	H	M	H	Total
Score Based on Ratings	8	7	7	22

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

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	2
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet.	points = 2	
<input type="checkbox"/> Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 1	
<input type="checkbox"/> Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 1	
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	3
Wetland has persistent, ungrazed, plants > 1/2 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	
D 1.4. Characteristics of seasonal ponding or inundation:		
<i>This is the area that is ponded for at least 2 months. See description in manual.</i>		2
Area seasonally ponded is > 1/2 total area of wetland	points = 4	
Area seasonally ponded is > 1/4 total area of wetland	points = 2	
Area seasonally ponded is < 1/4 total area of wetland	points = 0	
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	1
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	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?		0
Source	Yes = 1 No = 0	
Total for D 2	Add the points in the boxes above	3

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0
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	3

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

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:		
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	2
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: <i>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.</i>		
Marks of ponding are 3 ft or more above the surface or bottom of outlet	points = 7	3
Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet	points = 5	
<input type="checkbox"/> Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
<input type="checkbox"/> 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: <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i>		
<input type="checkbox"/> The area of the basin is less than 10 times the area of the unit	points = 5	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	
<input type="checkbox"/> Entire wetland is in the Flats class	points = 5	
Total for D 4	Add the points in the boxes above	10

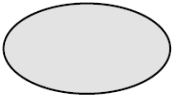
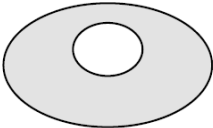
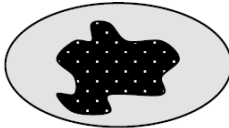
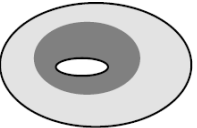
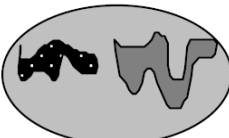

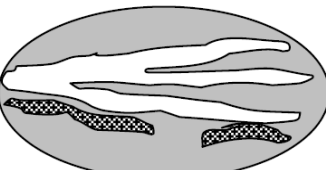
Rating of Site Potential If score is: 12 - 16 = H 6 - 11 = M 0 - 5 = L Record the rating on the first page

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	1
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	3

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.		
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):		1
<input type="checkbox"/> • Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	
<input type="checkbox"/> • Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
<input type="checkbox"/> Flooding from groundwater is an issue in the sub-basin.	points = 1	
<input type="checkbox"/> 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	
<input type="checkbox"/> 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	0
Total for D 6	Add the points in the boxes above	1

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

These questions apply to wetlands of all HGM classes.								
HABITAT FUNCTIONS - Indicators that site functions to provide important habitat								
H 1.0. Does the site have the potential to provide habitat?								
<p>H 1.1. Structure of plant community: <i>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.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Aquatic bed 4 structures or more: points = 4 <input type="checkbox"/> Emergent 3 structures: points = 2 <input checked="" type="checkbox"/> Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1 <input checked="" type="checkbox"/> Forested (areas where trees have > 30% cover) 1 structure: points = 0 <p><i>If the unit has a Forested class, check if:</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 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 	4							
<p>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 (<i>see text for descriptions of hydroperiods</i>).</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Permanently flooded or inundated 4 or more types present: points = 3 <input checked="" type="checkbox"/> Seasonally flooded or inundated 3 types present: points = 2 <input type="checkbox"/> Occasionally flooded or inundated 2 types present: points = 1 <input checked="" type="checkbox"/> Saturated only 1 types present: points = 0 <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake Fringe wetland 2 points <input type="checkbox"/> Freshwater tidal wetland 2 points 	3							
<p>H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft². <i>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</i></p> <p>If you counted:</p> <table style="width: 100%; border: none;"> <tr> <td style="padding-right: 20px;">> 19 species</td> <td style="text-align: right;">points = 2</td> </tr> <tr> <td>5 - 19 species</td> <td style="text-align: right;">points = 1</td> </tr> <tr> <td>< 5 species</td> <td style="text-align: right;">points = 0</td> </tr> </table>	> 19 species	points = 2	5 - 19 species	points = 1	< 5 species	points = 0	2	
> 19 species	points = 2							
5 - 19 species	points = 1							
< 5 species	points = 0							
<p>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. <i>If you have four or more plant classes or three classes and open water, the rating is always high.</i></p> <div style="display: flex; justify-content: space-around; align-items: flex-end; margin-bottom: 20px;"> <div style="text-align: center;">  <p>None = 0 points</p> </div> <div style="text-align: center;">  <p>Low = 1 point</p> </div> <div style="text-align: center;">  <p>Moderate = 2 points</p> </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 20%;"> <p>All three diagrams in this row are HIGH = 3 points</p> </div> <div style="width: 60%;">    </div> </div>	3							

Wetland name or number A

<p>H 1.5. Special habitat features: Check the habitat features that are present in the wetland. <i>The number of checks is the number of points.</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) <input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland <input type="checkbox"/> 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) <input type="checkbox"/> 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 (<i>cut shrubs or trees that have not yet weathered where wood is exposed</i>) <input checked="" type="checkbox"/> At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (<i>structures for egg-laying by amphibians</i>) <input checked="" type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (see H 1.1 for list of strata) 		4
<p>Total for H 1 Add the points in the boxes above</p>		16

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?		
<p>H 2.1 Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>). Calculate: 1.4 % undisturbed habitat + (<u> </u> 1.5 % moderate & low intensity land uses / 2) = 2.15%</p>		
<p>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</p>	0	
<p>H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. Calculate: 22.3 % undisturbed habitat + (<u> </u> 9.1 % moderate & low intensity land uses / 2) = 26.85%</p>		
<p>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</p>	2	
<p>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 1 km Polygon is high intensity points = 0</p>		
<p>Total for H 2 Add the points in the boxes above</p>		0

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?		
<p>H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? <i>Choose only the highest score that applies to the wetland being rated.</i></p>		
<p>Site meets ANY of the following criteria: points = 2</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> It has 3 or more priority habitats within 100 m (see next page) <input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) <input type="checkbox"/> It is mapped as a location for an individual WDFW priority species <input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources <input type="checkbox"/> 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 <p>Site has 1 or 2 priority habitats (listed on next page) within 100m points = 1 Site does not meet any of the criteria above points = 0</p>	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.*

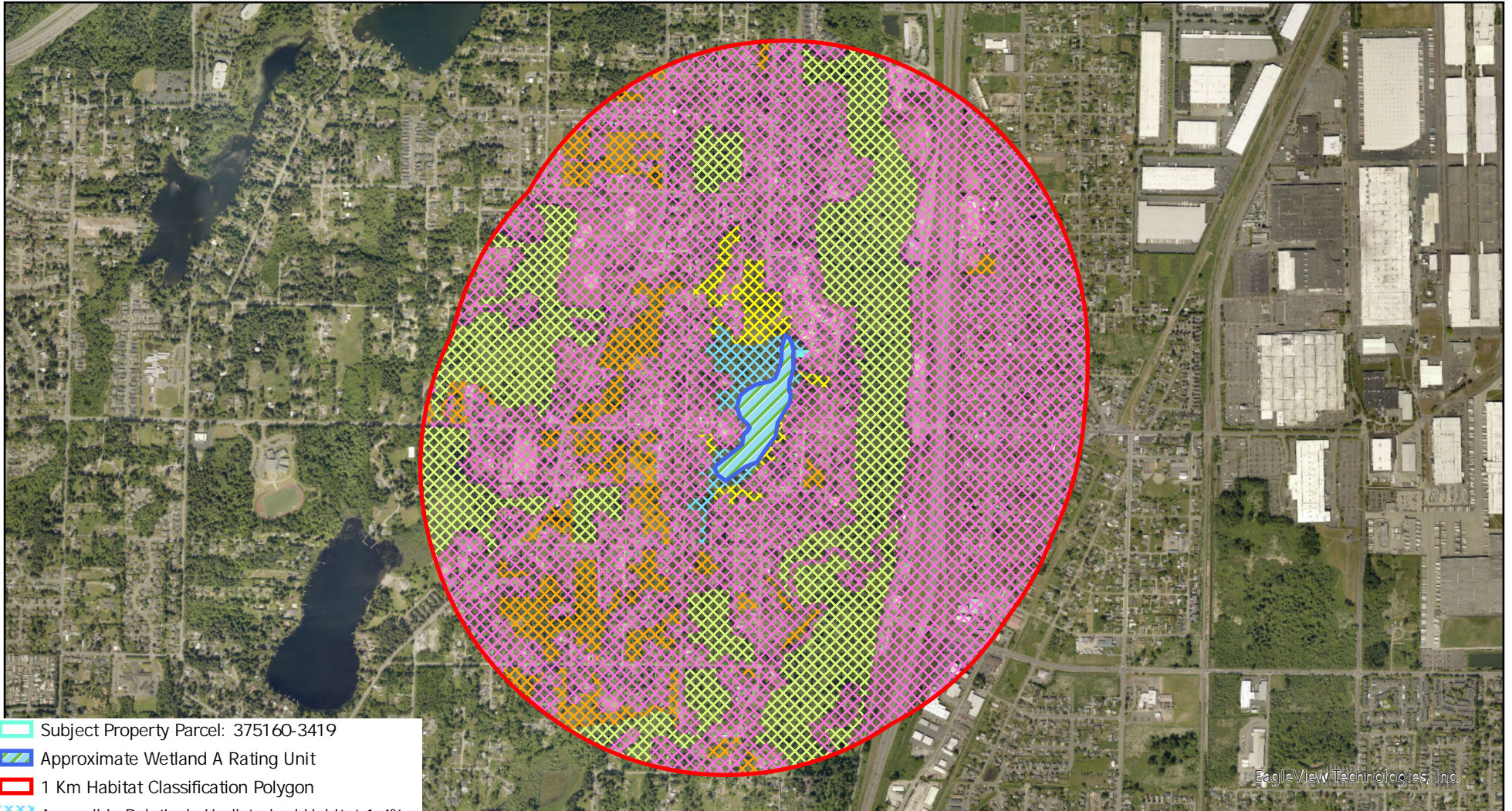
- Aspen Stands:** Pure or mixed stands of aspen greater than 1 ac (0.4 ha).
- Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report*).
- Herbaceous Balds:** Variable size patches of grass 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.

King County
Parcel 375160-3419

Figure A

AOA - 6570

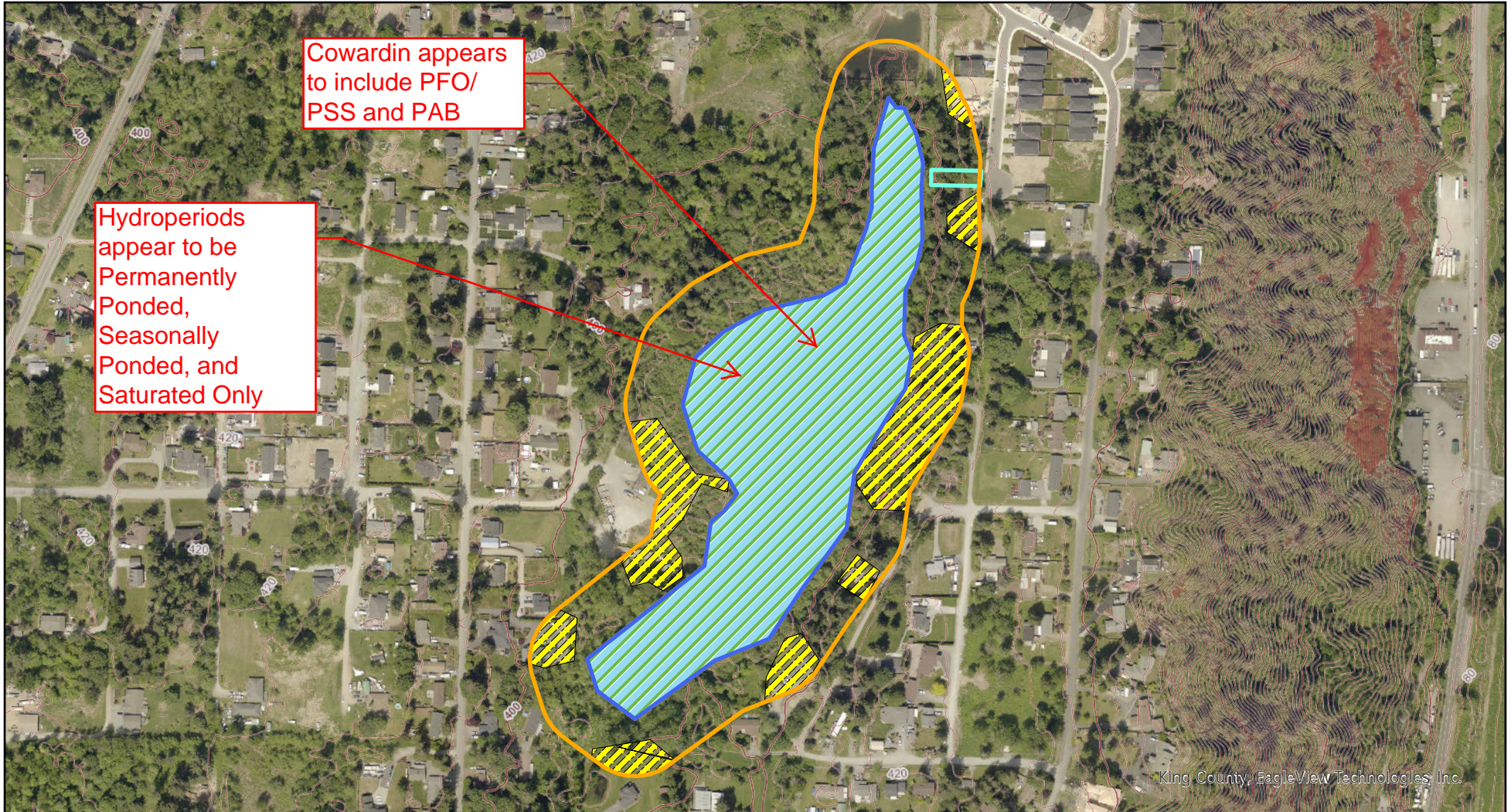






- Subject Property Parcel: 375160-3419
- Approximate Wetland A Rating Unit
- 1 Km Habitat Classification Polygon
- Accessible Relatively Undisturbed Habitat 1.4%
- Accessible Low_Moderate Intensity Habitat 1.5%
- Relatively Undisturbed Habitat 20.9%
- Low_Moderate Intensity Habitat 7.6%
- High Intensity Habitat 68.6%

0 500 1,000 2,000 3,000 4,000
US Feet



Figure B



-  Subject Property Parcel: 375160-3419
-  Approximate Wetland A Rating Unit
-  150' Pollution Generating Surfaces
-  Pollution Generating Surfaces 27.1%

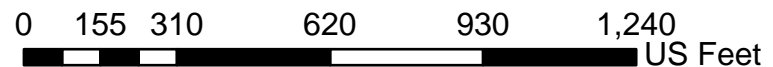
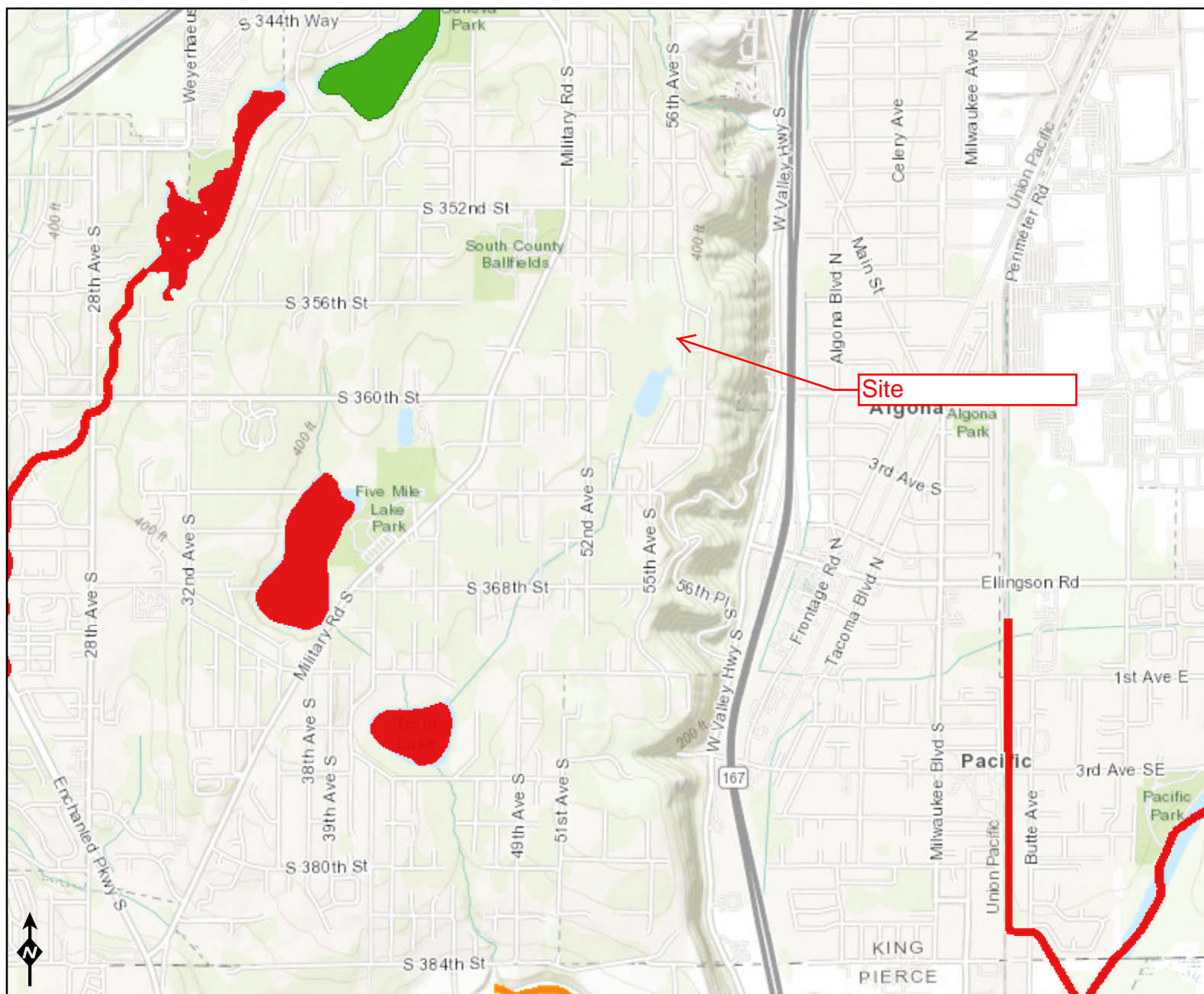




Figure C









Assessed Water/Sediment

Water

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

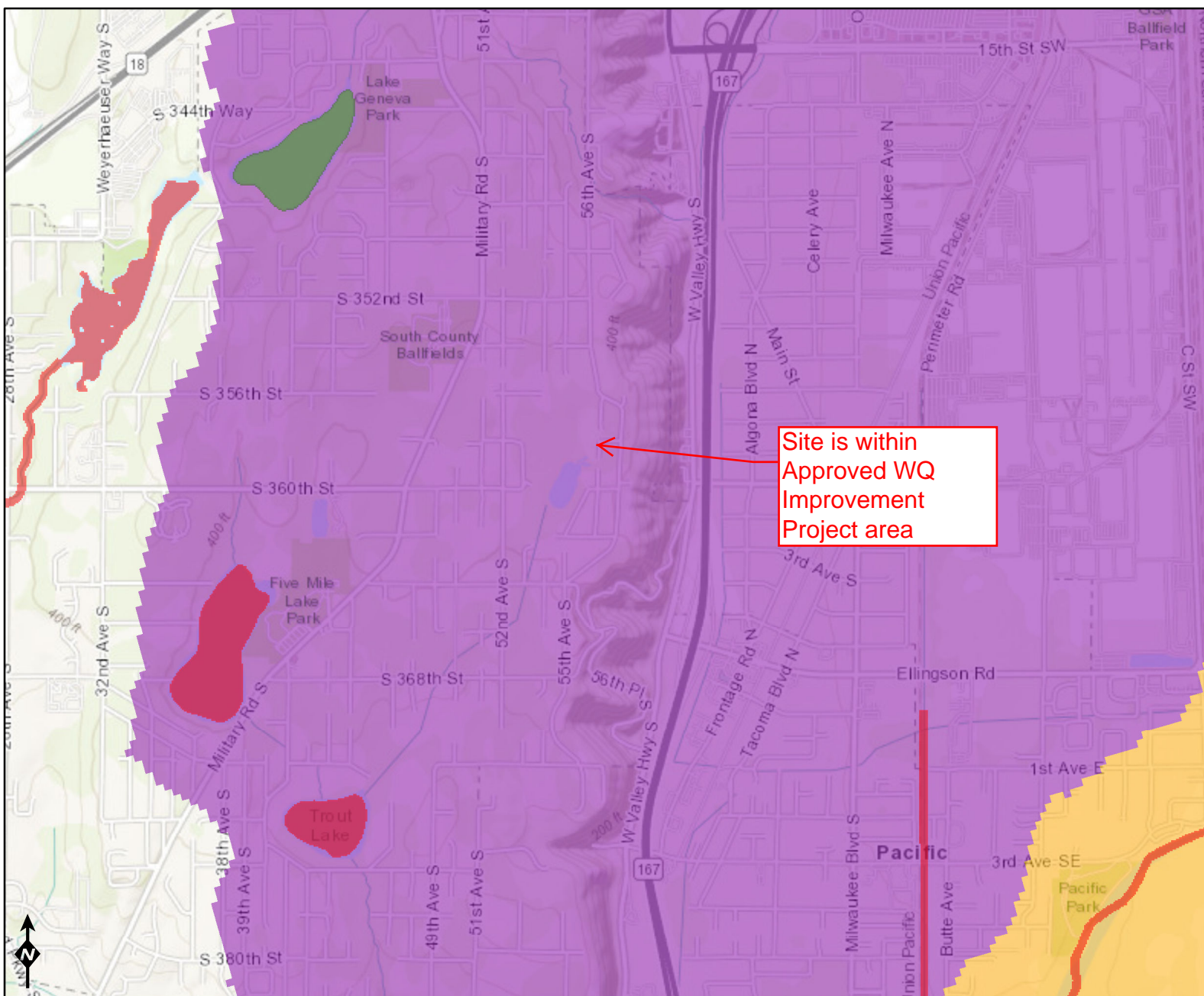
Sediment

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

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and



Figure D



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

WQ Improvement Projects

- Approved
- In Development

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and

