



Soundview Consultants LLC

Environmental Assessment • Planning • Land Use Solutions

2907 Harborview Dr., Suite D, Gig Harbor, WA 98335

Phone: (253) 514-8952 Fax: (253) 514-8954

Technical Memorandum

To: Quatterra- Brad Machat

File Number: 2783.0001

From: Kramer Canup, Soundview Consultants LLC

Date: June 6, 2025

Re: Response to Comments: Arlington Garden Apartments-Binding Site Plan PLN # 1263 and Conditional Use Permit PLN # 1264 (The Apartment Project)

Dear Brad Machat,

Soundview Consultants LLC (SVC) had been assisting Quatterra (Applicant) with a wetland and fish and wildlife habitat assessment for the proposed mixed residential and commercial development of an 8.80-acre site located at 21117 59th Avenue Northeast in the City of Arlington, Washington. The subject property consists of one parcel situated in the Southeast ¼, of Section 10, Township 31 North, Range 5 East, W.M (Snohomish County Tax Parcel Number 31051000402700). This Technical Memorandum has been prepared in response to comments from Brett Wiese of Inslee Best and Scott Spooner of Wetlands and Wildlife Environmental Consulting who have been providing Mr. Reidar Thompson with critical area consulting support on Snohomish County Tax Parcel 31051000402600. The following outlines the comments from Scott Spooner with Wetlands and Wildlife Environmental (italicized) followed by SVC's responses.

- 1. Due to parcel number 31051000402700 being a privately-owned property, I have not been on that property to conduct on-site wetland and stream evaluations. Therefore, the comments below are derived from a combination of my previous evaluations on Snohomish County parcel number 31051000402600 and based on review of the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC for Quatterra.*

Acknowledged. On June 14, 2023, SVC assessed Snohomish County parcel 31051000402600, which is owned by Mr. Thompson. SVC's June 2023 assessment of parcel 31051000402600 consisted of assessing the subject parcel for potential mitigation opportunities such as wetland creation and or wetland enhancement. The wetland boundary was not flagged or formally delineated during the June 2023 assessment, as SVC was only assessing potential mitigation options for Tom Lane who is the owner of parcel 31051000402700. SVC did dig numerous test pits to assess the wetland boundary on parcel 31051000402600 and identified an upland area located on the central western area of the parcel. Additionally, SVC investigated Snohomish County parcel 31051000400700 for the City of Arlington in September of 2022 to

assess for potential wetland areas onsite and adjacent to the parcel. No wetlands were identified on parcel 31051000400700 and SVC established three data plots to document non-wetland conditions on parcel 31051000400700. During the onsite assessment of parcel 31051000400700 in September of 2022, SVC walked the roadway/driveway located at the eastern terminus of Wetland A to the west of parcel 31051000400700 in order to further assess the eastern Wetland A boundary and Stream Z location from an adjacent offsite perspective. The Wetland A boundary on the associated Existing Conditions map included in Appendix A of this Technical Memorandum has been updated to reflect SVC's assessments of Wetland A on parcel 31051000402600 and at the eastern terminus of Wetland A.

- 2. Please see the Critical Areas Overview Map (Map Sheet CA1.00) prepared by Wetlands & Wildlife, Inc. dated 2/23/25 which I have attached to this letter. Please also see the Wetland Rating Form previously prepared by Wetlands & Wildlife, Inc. which is attached to this letter. The attached Map Sheet CA1.00 and the attached Wetland Rating Form are intended for review by the appropriate City of Arlington staff in conjunction with the comments outlined in this letter.*

SVC responses to the Wetlands and Wildlife Environmental Consulting comments regarding the Wetland A rating form prepared by SVC are provided below.

- 3. Per professional ecological industry standards, stream buffers are typically required to be derived from the Ordinary High Water Mark (OHWM) of the stream, not from the centerline of the stream. The Existing Conditions Map (Sheet 1) prepared by Soundview Consultants, LLC dated 7/2/2024 derives the stream buffer from the centerline of the off-site stream, not from the OHWM.*

The Stream 1 Ordinary High Water Mark (OHWM) on Snohomish County Tax Parcel 31051000402600 owned by Mr. Thompson has never been formally delineated by SVC. During the June 2023 assessment of Mr. Thompson's parcel (31051000402600), SVC was only approved to assess for potential mitigation opportunities on the parcel and did not have permission to formally delineate or flag the Wetland A boundary or the Stream 1 OHWM. It is common practice for environmental consultants to not flag or delineate the OHWM of offsite streams due to lack of approved access and legal logistics related to hanging flags on offsite properties. Thus, environmental consultants must typically rely on online resources such as aerial images and Lidar Hillshade to determine the OHWM or centerline of offsite streams. Online resources such as aerial images and Lidar Hillshade provide a relatively accurate visual representation of the location of streams and their banks; however, it is difficult to identify the exact location of the OHWM of streams based solely on online resources. Thus, SVC will at times locate the centerline of offsite streams that have subjective indistinct OHWM based on aerial images and Lidar Hillshade.

To accommodate comment 3 provided by Wetlands and Wildlife Environmental, SVC has located the OHWM of the northern bank (right bank) of offsite Stream 1 based on aerial images and Lidar Hillshade. The 150-foot Stream 1 buffer now projects from the OHWM of the northern bank of offsite Stream 1 as shown on the updated Existing Conditions map provided in Appendix A of this Technical Memorandum.

- 4. Please see the attached Map Sheet CA1.00 for the approximate location of a ditch located near the eastern property line of tax parcel number 31051000402700. This ditch is discussed on Page 9 of the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC.*

It is my professional opinion that the City of Arlington should conduct detailed evaluations of that ditch to determine whether the ditch has an above-ground hydrological connection to the known fish-bearing stream (Type F-ESA stream) located on tax parcel number 31051000402600 (the Reidar Thompson property). If that ditch maintains an above-ground hydrologic connection to the Type F-ESA stream and is 2-3 feet wide as stated in the report prepared by Soundview Consultants, LLC, then the ditch should be regulated as a stream due to its connection to the Type F-ESA stream (even if the ditch is man-made). Washington Administrative Code (WAC) section 222-16-031 provides criteria for presumed fish-bearing waters. If the ditch is regulated as a stream per the City's Critical Areas Regulations, then a buffer would likely be required to extend from the Ordinary High Water Mark (OHWM) of that ditch as well. As previously noted, we don't have access to the ditch on parcel number 31051000402700 to make those determinations, but the appropriate City staff should closely evaluate the ditch to determine if the ditch meets the presumption criteria listed in WAC section 222-16-03.

The ditch located on the eastern edge of Snohomish County parcel 31051000402700 terminates to the north of the Wetland A boundary. There is an upland area located between the terminus of the ditch and Wetland A that precludes hydrology within the ditch from having an above ground surface water connection to Wetland A and Stream 1. The hydroperiod for the onsite portion of Wetland A is seasonally saturated based on an additional site visit completed during the wet season on January 15, 2025, by SVC. Precipitation data collected from the Bellingham International Airport station and from the Seattle Tacoma International Airport station indicate that climatic conditions during the January 2025 site visit were within normal range for the 2024 to 2025 water year starting from October 1. Thus, there is no surface water connection between the ditch on the eastern edge of parcel 31051000402700 and Stream 1. Additionally, review of historical aerials and historic USGS topographic maps dating back to 1911 of this parcel indicate no evidence of a relic stream channel, thus the ditch was likely excavated out of upland conditions to convey stormwater and does not meet stream criteria outlined in AMC 20.92.700 or criteria listed in WAC section 222-16-03.

5. *If the ditch mentioned in comment #4 above meets the City's code requirement to be regulated as a stream and therefore requires a protective buffer, the overriding Critical Area buffer would need to change accordingly.*

The ditch located on the eastern edge of parcel 31051000402700 terminates to the north of Wetland A, is separated from Wetland A by an upland area, and does not have an above ground surface water connection to Wetland A and Stream 1. Thus, the ditch does not meet stream criteria outlined in AMC 20.92.700 or criteria listed in WAC section 222-16-03 and therefore is not regulated as a stream.

6. *Code section 20.93.800(a) of the City of Arlington's Critical Areas Regulations states that "Wetlands shall be rated according to the Washington State Wetland Rating System for Western Washington, Ecology Publication #14-06-029 or as revised by ecology." The Wetland Rating Form attached to the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC is the 2015 version of the Wetland Rating Form, but the most current version of the Wetland Rating Form was produced by Ecology in 2023. Please see the correct / most current version of the Wetland Rating Form attached to this letter.*

The Wetland A rating form has been updated to the current Department of Ecology 2023 Wetland Rating Form, Publication 23-06-009.

7. *See the Wetland Rating Form completed by my company for your future shop project on your property (parcel number 31051000402600). I have attached the PDF version of that Wetland Rating Form to this letter. The wetland located on the northern portion of your property is the same wetland as the wetland identified and discussed in the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC for Quarterra.*

Acknowledged.

8. *In my professional opinion, the Wetland Rating Form prepared by Soundview Consultants, LLC and the resulting determinations regarding the wetland category and standard wetland buffer are not accurate. Based on our detailed evaluations and determinations, the subject wetland is actually a Category II wetland with 6 habitat points, not a Category III wetland with 4 habitat points as asserted in the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC for Quarterra. Using the current version of the Wetland Rating Form (Version 2 produced in 2023), the subject wetland scored a total of 20 points (7 points for Water Quality Functions, 7 points for Hydrologic Functions, and 6 points for Habitat Functions) and is therefore considered a Category II wetland.*

Acknowledge. An updated rating form has been prepared for Wetland A and is provided in Appendix B of this Technical Memorandum.

9. *There are several key differences (referenced and discussed further below) between the attached Wetland Rating Form previously prepared by my company for your project and the Wetland Rating Form prepared by Soundview Consultants, LLC which is attached to their Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024.*

Acknowledge. An updated rating form has been prepared for Wetland A and is provided in Appendix B of this Technical Memorandum.

10. *In my professional opinion, Question D6.1 on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC is not accurate. Due to the landscape context of the subject wetland (very close proximity to the Stillaguamish River and many mapped FEMA Flood Hazard Areas associated with the river), flooding occurs in a sub-basin immediately down-gradient of the unit. By providing the accurate score for that question, the score for Rating of Value in the Hydrologic Functions section on the Wetland Rating Form would increase from moderate (1 point given) to high (2 points).*

Wetland A outlets into Stream 1 which flows west into Portage Creek. Hydrology that outlets from Wetland A into Stream 1 flows for approximately 7.1 miles before outletting into South Slough/ Stillaguamish River and eventually the Puget Sound. Review of the FEMA Flood Hazard areas confirms the potential for flooding in the sub-basin immediately down gradient of the wetland as the FEMA Flood Hazard Area is located within the same 12 digit HUC (171100080303- Armstrong Creek Stillaguamish) as Wetland A. SVC agrees with this determination and therefore has increased the score for question D6.1 from moderate (1 point) to high (2 points).

11. *In my professional opinion, Question H1.1 on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC is also not accurate. The subject wetland includes emergent and scrub-shrub*

Cowardin vegetation classes. The rating form figure (Figure No. 1 of 5) that Soundview Consultants, LLC attached to their report differs from how they scored this question on the Wetland Rating Form. I don't think that the wetland rating unit contains a forested class across 15% of the wetland (as shown in the Wetland Rating Form Figures prepared by Soundview Consultants, LLC), but there is definitely a scrub-shrub class that exceeds the thresholds listed in questions H1.1. The number of points assigned on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC does not match their own figure which is Figure No. 1 of 5. That would increase the number points on that question from 0 to 1 (or from 0 to 2 points if they include a Forested vegetative class as depicted on their Figure No. 1 of 5). Either way, the point total for Question H1.1 is not accurate as 0 points as shown on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC.

SVC agrees that Wetland A is comprised of two Cowardian classes, emergent and scrub shrub. It is noted that a small forest patch was observed near the southeast portion of the wetland. However, upon desktop review and additional site visits to the subject property and adjacent accessible areas, it has been determined that the forested area is not located within the boundary of Wetland A, as the forested area is actually located on the hillslope to the south of the wetland and is therefore not accounted for as a Cowardian class. The Wetland A rating form and associated ratings figures map have been updated to reflect that Wetland A contains only scrub shrub and emergent Cowardian vegetation classes within Wetland A. One point has been allocated to Question H1.1. Updated Wetland Rating Maps are provided in Appendix C of this Technical Memorandum.

12. *In my professional opinion, Question H1.4 on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC is also not accurate. Based on my comment above regarding the wetland containing more than just an emergent Cowardin vegetation class, the wetland contains low habitat interspersion (at a minimum) due to the presence of emergent and scrub-shrub vegetation. If implementing Figure No. 1 of 5 prepared and submitted by Soundview Consultants, LLC, the level of habitat interspersion would at least be moderate, since the wetland would then have three different Cowardin vegetation classes. As you can see when comparing our Wetland Rating Form, we gave that question moderate habitat interspersion due to the presence of emergent and scrub-shrub vegetation classes PLUS an open-water component (per standards for completing the Wetland Rating Form). Either way, Question H1.4 should reflect that there is not just one Cowardin vegetated class, so the level of habitat interspersion should result in at least 1 point (if not 2 points as discussed above and as shown on our Wetland Rating Form).*

Wetland A has two Cowardian classifications consisting of emergent and scrub shrub vegetation, and four hydroperiods consisting of permanently flooded areas, seasonally flooded areas, saturated only, and a permanently flowing stream within the wetland. The rating form for Wetland A has been updated to account for the two Cowardian vegetation classes and the hydro periods remain the same. Question H1.4 has been updated to moderate (2 points).

13. *In my professional opinion, Question H1.5 on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC is also not accurate. As you can see on our Wetland Rating Form, the subject wetland contains nearly all of the special habitat features in Question H1.5. The wetland contains more than 25% invasive vegetation (primarily reed canarygrass), but receives 5 other points on Question H1.5. Therefore, Question H1.5 should receive 5 points, significantly more than what is shown on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC.*

SVC agrees that the wetland contains all features listed in H1.5 expect for less than 25-percent invasive cover due to the dominance of non-native invasive reed canarygrass throughout Wetland A. Question H1.5 within the rating form for Wetland A has been updated to include 5 points.

14. *Based on the comments above, Site Potential Section for Habitat Functions should be moderate (12 points), whereas the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC states it should be low (6 points).*

The rating form for Wetland A has been updated to reflect existing onsite conditions as described above. The Site Potential Section for Habitat Functions has been updated to moderate (12 points) compared to the previous rating form with a low score (6 points).

15. *In my professional opinion, Question H3.1 on the Wetland Rating Form prepared and submitted by Soundview Consultants, LLC is also not accurate. Due to the forested slopes located south of the wetland rating unit, it is my professional opinion that there are Priority Snags and Logs (as defined by the Washington Department of Fish and Wildlife as a Priority Habitat) located within 330 feet of the wetland rating unit. The Wetland Rating Form prepared by Soundview states that no Priority Snags and Logs are present within 330 feet of the wetland, so they gave the Value portion of the Habitat section a score of 1 point (Moderate). Question H3.1 should be accurately rated as 2 points (High) due to Priority Snags and Logs being present within 330 feet of the wetland, in addition to Riparian and Instream Priority Habitats.*

SVC has conducted multiple site visits to the subject property and has assessed the presence of WDFW Priority Habitats and Priority Snags and Logs located within 330 feet of Wetland A during the site visits. After conducting visual assessments from the subject property as well as walking the areas accessible within 330 feet of the subject property (roadways adjacent to west and east), no PHS Priority Snags or Logs were identified within 330 feet of Wetland A. One log that met the size requirements of a PHS Priority Log (>12-inches diameter at the largest end, and >20 feet long) was identified on the northwest area of the subject property parcel 31051000402700, however, the log is located approximately 480 feet to the north of the Wetland A boundary. As the log onsite is located greater than 330 feet from the Wetland A boundary, the onsite log does not meet the WDFW PHS Priority Log criteria due to the log being located approximately 480 feet to the north of the Wetland A boundary.

Although SVC has not directly observed any PHS Priority Snags or Logs meeting the PHS criteria within 330 feet of Wetland A, SVC and the Applicant are willing to allocate an additional point to Question H3.1 for PHS Priority Snags and Logs, as there is the possibility that either may be present within 330 feet of Wetland A. Question H3.1 within the Wetland A rating form has been updated from 1 point to 2 points due to the inclusion of potential PHS Priority Snags and Logs.

16. *When the comments and determinations listed above in this letter are taken into account for the Wetland Rating Form produced by Soundview Consultants, LLC, the subject wetland would be accurately considered a Category II wetland with a total Habitat Functions Score of 6. Again, there are several key differences (referenced and discussed above) between the attached Wetland Rating Form previously prepared by my company for your future proposed shop project and the Wetland Rating Form prepared by Soundview Consultants, LLC which is attached to their Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024.*

As noted above in response #15, SVC has not directly observed any PHS Priority Snags or Logs meeting the PHS criteria within 330 feet of Wetland A. SVC is willing to allocate an additional point to Question H3.1 for PHS Priority Snags and Logs, as there is the possibility that either may be present within 330 feet of Wetland A, although PHS Priority Snags or Logs have not been observed by SVC within 330 feet of Wetland A. Additionally, Wetlands and Wildlife Environmental does not specify the location of any PHS Snags or Logs within 330 feet of Wetland A. However, in the interest of addressing the concerns raised by the Thompsons, SVC has prepared an updated wetland rating form for Wetland A (Appendix B), which categorizes Wetland A as a Category II wetland (20 points) with a moderate habitat score of 6 points.

17. *Per the City of Arlington's code section 20.93.830, the standard buffer for a Category II wetland with 6 habitat points would be either 150 feet (when using the standard buffer in Table 20.93-6) or 110 feet (when using the standard buffer in Table 20.93-4). However, in order to utilize the standard 110-foot buffer in Table 20.93-4, the applicants would need to implement the applicable mitigation measures in Table 20.93-5 and provide a relatively undisturbed, vegetated corridor as outlined in City Code section 20.93.830(a)(1)(A). Per City Code section 20.93.830(a)(3), "If an applicant does not apply the mitigation measures in Table 20.93-5 or is unable to provide a protected corridor, then the buffers in Table 20.93-6 shall be used." For a Category II wetland with a Habitat Functions Score of 6, that scenario would result in the standard buffer for this wetland being 150 feet.*

The rating of Wetland A has been revised to a Category II wetland with a moderate habitat score of 6 points. Category II wetlands with a moderate habitat score are subject to a standard 110-foot buffer per AMC 20.93.830 Table 20.93-4, provided that minimization measures identified in AMC 20.93.830 Table 20.93-5 are implemented and a relatively undisturbed vegetated corridor is implemented per AMC 20.93.830.(a)(1).

18. *Either one of those buffer options (150 feet or 110 feet) are different than (and in fact larger than) the standard 60-foot buffer that is depicted and described in the Wetland and Fish and Wildlife Habitat Assessment Report dated July 2024 prepared by Soundview Consultants, LLC.*

See comments for 17.

19. *Please see the attached Map Sheet CA1.00 prepared by Wetlands & Wildlife, Inc. which depicts the information discussed in this letter.*

Acknowledged.

Once you've had a chance to review this information, please feel free to call me at 253-514-8952 to discuss our findings.

Sincerely,

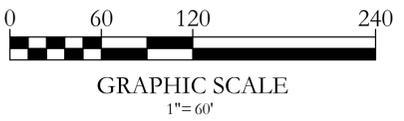
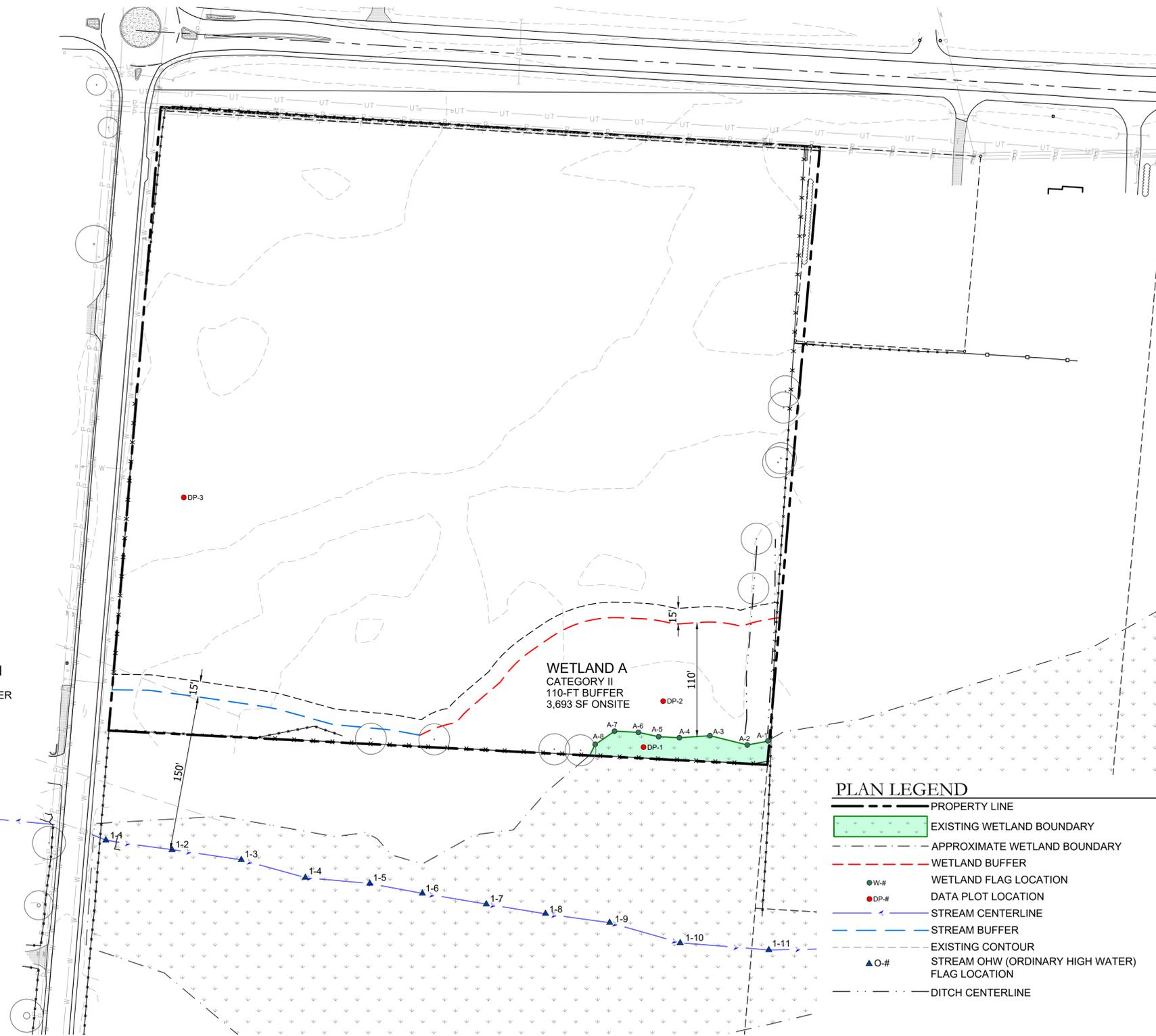


Kramer Canup
Senior Project Manager and Environmental Scientist

References

- Arlington Municipal Code (AMC). 2024. *Chapter 20.93 — Critical Area Ordinance*. Website: <https://www.arlingtonwa.gov/DocumentCenter/View/8106/Chapter-2093-Critical-Area-Ordinance>. Current through July 12, 2024.
- Hruby, T & Yahnke, A. 2023. *Washington State Wetland Rating System for Western Washington :2014 Update (Version 2)*. Washington State Department of Ecology Publication # 23-06-009.
- Inslee Best. 2025. *RE: Arlington Garden Apartments-Binding Site Plan PLN # 1263 and Conditional Use Permit PLN# 1264 (the “Apartment Project”)*. March 6, 2025.
- Soundview Consultants LLC. 2024. *Wetland and Fish and Wildlife Habitat Assessment Report- State Route 530*. July 2024.

Appendix A – Updated Existing Conditions Exhibit



VICINITY MAP



SOURCE: ESRI (ACCESSED 10/31/2022)



LOCATION

THE SE 1/4 OF SECTION 10,
TOWNSHIP 31N, RANGE 5E, WM

APPLICANT/OWNER

NAME: QUARTERRA
ADDRESS: 1325 4TH AVENUE, SUITE 1300
SEATTLE, WA 98101
CONTACT: BRAD MACHAT
PHONE: (206)-708-2294
E-MAIL: BRAD.MACHAT@QUARTERRA.COM

ENVIRONMENTAL CONSULTANT

SOUNDVIEW CONSULTANTS LLC
2907 HARBORVIEW DRIVE
GIG HARBOR, WA 98355
(253) 514-8952

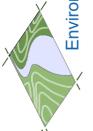
PLAN LEGEND

- PROPERTY LINE
- EXISTING WETLAND BOUNDARY
- APPROXIMATE WETLAND BOUNDARY
- WETLAND BUFFER
- WETLAND FLAG LOCATION
- DATA PLOT LOCATION
- STREAM CENTERLINE
- STREAM BUFFER
- EXISTING CONTOUR
- STREAM OHW (ORDINARY HIGH WATER) FLAG LOCATION
- DITCH CENTERLINE

SOURCE:



WEDEN ENGINEERING, LLC
Civil Engineering • Planning • Project Management
2636 Nubgaard Rd., Ferndale, WA 98248
(360) 350-1363 (360) 384-3615 FX
email: info@wedenengineering.com



Soundview Consultants LLC
Environmental Assessment • Planning • Land Use Solutions
P: 253.514.8952 F: 253.514.8954
2907 HARBORVIEW DRIVE
GIG HARBOR, WASHINGTON 98335
WWW.SOUNDVIEWCONSULTANTS.COM

STATE ROUTE 530
21117 59TH AVE NE,
ARLINGTON, WA 98223
SNOHOMISH COUNTY
PARCEL NUMBER(S):
31051000402700

DATE: 5/23/2025
JOB: 2783.0001
BY: GZ
SCALE: AS SHOWN
SHEET: 1

QUARTERRA 2025 05/23/2025 10:01 AM 530/Graphic & Maps/CAD/A - CURRENT SVC DRAWING/A - Current Base
DWG: 2783.0001 (2025-05) 1/23/2025
Printed May 23, 2025

Appendix B – Updated Wetland Rating Form

Wetland name or number A

RATING SUMMARY – Western Washington

Name of wetland (or ID #): A Date of site visit: 1/15/2025
 Rated by Kramer Canup Trained by Ecology? Yes No Date of training 06/2022
 HGM Class used for rating Depressional Wetland has multiple HGM classes? Y N

NOTE: Form is not complete without the figures requested (figures can be combined).
 Source of base aerial photo/map ESRI ArcGIS

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

1. Category of wetland based on FUNCTIONS

- Category I – Total score = 23 - 27
- Category II – Total score = 20 - 22
- Category III – Total score = 16 - 19
- Category IV – Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
<i>Circle the appropriate ratings</i>				
Site Potential	M	M	M	
Landscape Potential	M	M	L	
Value	H	H	H	TOTAL
Score Based on Ratings	7	7	6	20

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	I II
Wetland of High Conservation Value	I
Bog	I
Mature Forest	I
Old Growth Forest	I
Coastal Lagoon	I II
Interdunal	I II III IV
None of the above	N/A

Wetland name or number A

Maps and figures required to answer questions correctly for Western Washington

Depressional Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	D 1.3, H 1.1, H 1.4	
Hydroperiods	D 1.4, H 1.2	
Location of outlet (<i>can be added to map of hydroperiods</i>)	D 1.1, D 4.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	D 2.2, D 5.2	
Map of the contributing basin	D 4.3, D 5.3	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	

Riverine Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Ponded depressions	R 1.1	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (<i>can be added to another figure</i>)	R 4.1	
Map of the contributing basin	R 2.2, R 2.3, R 5.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	R 3.1	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	R 3.2, R 3.3	

Lake Fringe Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	L 1.1, L 4.1, H 1.1, H 1.4	
Plant cover of trees, shrubs, and herbaceous plants	L 1.2	
Boundary of area within 150 ft of the wetland (<i>can be added to another figure</i>)	L 2.2	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	L 3.1, L 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	L 3.3	

Slope Wetlands

Map of:	To answer questions:	Figure #
Cowardin plant classes	H 1.1, H 1.4	
Hydroperiods	H 1.2	
Plant cover of dense trees, shrubs, and herbaceous plants	S 1.3	
Plant cover of dense, rigid trees, shrubs, and herbaceous plants (<i>can be added to figure above</i>)	S 4.1	
Boundary of 150 ft buffer (<i>can be added to another figure</i>)	S 2.1, S 5.1	
1 km Polygon: Area that extends 1 km from entire wetland edge - including polygons for accessible habitat and undisturbed habitat	H 2.1, H 2.2, H 2.3	
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	S 3.1, S 3.2	
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	S 3.3	

Wetland name or number A

NO – go to 6

YES – The wetland class is **Riverine**

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

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

NO – go to 7

YES – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding? The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8

YES – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a Depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide).** Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within the wetland unit being scored.

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

HGM classes within the wetland unit being rated	HGM class to use in rating
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake Fringe	Lake Fringe
Depressional + Riverine along stream within boundary of depression	Depressional
Depressional + Lake Fringe	Depressional
Riverine + Lake Fringe	Riverine
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE

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

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. <u>Characteristics of surface water outflows from the wetland:</u> Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch.	points = 3 points = 2 points = 1 points = 1
1	
D 1.2. <u>The soil 2 in below the surface (or duff layer) is true clay or true organic (use NRCS definitions).</u> Yes = 4 No = 0	0
D 1.3. <u>Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes):</u> Wetland has persistent, ungrazed, plants > 95% of area Wetland has persistent, ungrazed, plants > ½ of area Wetland has persistent, ungrazed plants > 1/10 of area Wetland has persistent, ungrazed plants < 1/10 of area	points = 5 points = 3 points = 1 points = 0
3	
D 1.4. <u>Characteristics of seasonal ponding or inundation:</u> <i>This is the area that is ponded for at least 2 months. See description in manual.</i> Area seasonally ponded is > ½ total area of wetland Area seasonally ponded is > ¼ total area of wetland Area seasonally ponded is < ¼ total area of wetland	points = 4 points = 2 points = 0
2	
Total for D 1 Add the points in the boxes above	
6	

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
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

NOTES and FIELD OBSERVATIONS:

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:		0
Wetland is a depression or flat depression with no surface water leaving it (no outlet)	points = 4	
Wetland has an intermittently flowing stream/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. <u>Depth of storage during wet periods:</u> <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>		3
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. <u>Contribution of the wetland to storage in the watershed:</u> <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>		5
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	8

Rating of Site Potential If score is: 12-16 = H X 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 functions of the site?		
D 5.1. Does the wetland 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 X 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. <u>The unit is in a landscape that has flooding problems.</u> <i>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.</i>		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. <i>Explain why</i> _____	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	0
Total for D 6	Add the points in the boxes above	2

Rating of Value If score is: X 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 4 structures or more: points = 4
 - Emergent 3 structures: points = 2
 - Scrub-shrub (areas where shrubs have > 30% cover) 2 structures: points = 1
 - Forested (areas where trees have > 30% cover) 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

1

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 if the unit is < 2.5 ac, or ¼ ac if the unit is at least 2.5 ac to count (*see text for descriptions of hydroperiods*).

- Permanently flooded or inundated 4 or more types present: points = 3
- Seasonally flooded or inundated 3 types present: points = 2
- Occasionally flooded or inundated 2 types present: points = 1
- Saturated only 1 type present: points = 0
- Permanently flowing stream or river in, or adjacent to, the wetland
- Intermittently or seasonally flowing stream in, or adjacent to, the wetland **2 points**
- Lake Fringe wetland** **2 points**
- Freshwater tidal wetland**

3

H 1.3. Richness of plant species

Count the number of plant species in the wetland that cover at least 10 ft².

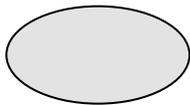
Different patches of the same species can be combined to meet the size threshold and you do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

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

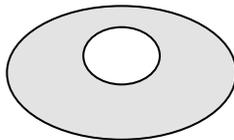
1

H 1.4. Interspersion of habitats

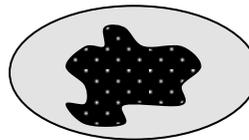
Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always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



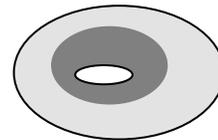
None = 0 points



Low = 1 point

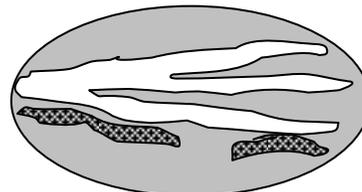
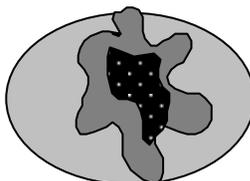
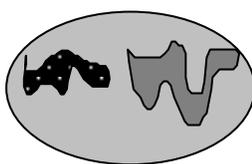


Moderate = 2 points



2

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



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> <p><input checked="" type="checkbox"/> Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (dbh > 4 in) within the wetland</p> <p><input checked="" type="checkbox"/> Undercut banks are present for at least 6.6 ft (2 m) and/or overhanging plants extend at least 3.3 ft (1 m) over open water or a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m)</p> <p><input checked="" 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>)</p> <p><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>)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in every stratum of plants (<i>see H 1.1 for list of strata and H 1.5 in the manual for the list of aggressive plant species</i>)</p>	5
<p>Total for H 1 Add the points in the boxes above</p>	12

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 functions of the site?	
<p>H 2.1. Accessible habitat (include <i>only habitat that directly abuts wetland unit</i>).</p> <p>Calculate: <input type="text" value="0.0"/> % relatively undisturbed habitat + [(% moderate and low intensity land uses) <input type="text" value="3.08"/> /2] = <u>1.54</u> %</p> <p>If total accessible habitat is:</p> <p>> 1/3 (33.3%) of 1 km Polygon points = 3</p> <p>20-33% of 1 km Polygon points = 2</p> <p>10-19% of 1 km Polygon points = 1</p> <p>< 10% of 1 km Polygon points = 0</p>	0
<p>H 2.2. Total habitat in 1 km Polygon around the wetland.</p> <p>Calculate: <input type="text" value="16.26"/> % relatively undisturbed habitat + [(% moderate and low intensity land uses) <input type="text" value="9.94"/> /2] = <u>21.23</u> %</p> <p>Total habitat > 50% of Polygon points = 3</p> <p>Total habitat 0-50% and in 1-3 patches points = 2</p> <p>Total habitat 10-50% and > 3 patches points = 1</p> <p>Total habitat < 10% of 1 km Polygon points = 0</p>	2
<p>H 2.3. Land use intensity in 1 km Polygon: If</p> <p>> 50% of 1 km Polygon is high intensity land use points = (- 2)</p> <p>≤ 50% of 1 km Polygon is high intensity points = 0</p>	-2
<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> <p><input checked="" type="checkbox"/> It has 3 or more Priority Habitats within 100 m (see next page)</p> <p><input type="checkbox"/> It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists)</p> <p><input type="checkbox"/> It is mapped as a location for an individual WDFW priority species</p> <p><input type="checkbox"/> It is a Wetland of High Conservation Value as determined by the Department of Natural Resources</p> <p><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> <p>Site has 1 or 2 priority habitats (listed on next page) within 100 m points = 1</p> <p>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*

Wetland name or number A

WDFW Priority Habitats

See complete descriptions of Priority Habitats listed by WDFW, and the counties in which they can be found, in: Washington Department of Fish and Wildlife. 2008 (current year, as revised). Priority Habitat and Species List.¹³³ This list was updated for consistency with guidance from WDFW.

This question is independent of the land use between the wetland unit and the Priority Habitat. All vegetated wetlands are by definition a Priority Habitat but are not included in this list because they are addressed by this rating system.

Count how many of the following Priority Habitats are within 330 ft (100 m) of the wetland unit:

- **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. This habitat automatically counts if mapped on the online map within 100m of the wetland. If not mapped, a determination can be made in the field.
- **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.
- **Fresh Deepwater:** Lands permanently flooded with freshwater, including environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live. Substrate does not support emergent vegetation. Do not select if Instream habitat is also present, or if the entire deepwater feature is included in the wetland unit being rated (such as a pond with a vegetated fringe).
- **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock.
- ✗ **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. Do not select if Fresh Deepwater habitat is also present.
- **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore.
- **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) diameter at breast height (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.

NOTES and FIELD OBSERVATIONS:

¹³³ <http://wdfw.wa.gov/publications/00165/wdfw00165.pdf>

Wetland name or number A

- **Oregon White Oak:** Woodland stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important. For single oaks or oak stands <0.4 ha in urban areas, WDFW's Management Recommendations for Oregon White Oak¹³⁴ provides more detail for determining if they are Priority Habitats
- ✗ **Riparian:** The area adjacent to freshwater aquatic systems with flowing or standing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ✗ **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.
- **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.
- **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie.

NOTES and FIELD OBSERVATIONS:

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type	Category
<i>Check off any criteria that apply to the wetland. Circle the category when the appropriate criteria are met.</i>	
<p>SC 1.0. Estuarine wetlands</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <p><input type="checkbox"/> The dominant water regime is tidal, <input type="checkbox"/> Vegetated, and <input type="checkbox"/> With a salinity greater than 0.5 ppt</p> <p style="text-align: right;"><input type="checkbox"/> Yes – Go to SC 1.1 <input checked="" type="checkbox"/> No = Not an estuarine wetland</p>	
<p>SC 1.1. Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No - Go to SC 1.2</p>	
<p>SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions?</p> <p><input type="checkbox"/> The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 10% cover of non-native plant species. If non-native species are <i>Spartina</i>, see chapter 4.8 in the manual.</p> <p><input type="checkbox"/> At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or unmowed grassland.</p> <p><input type="checkbox"/> The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input type="checkbox"/> No = Category II</p>	
<p>SC 2.0. Wetlands of High Conservation Value (WHCV)</p> <p>SC 2.1. Does the wetland overlap with any known or historical rare plant or rare & high-quality ecosystem polygons on the WNHP Data Explorer?¹³⁵</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No - Go to SC 2.2</p> <p>SC 2.2. Does the wetland have a rare plant species, rare ecosystem (e.g., plant community), or high-quality common ecosystem that may qualify the site as a WHCV? Contact WNHP for resources to help determine the presence of these elements</p> <p><input type="checkbox"/> Yes = Submit data to WA Natural Heritage Program for determination,¹³⁶ Go to SC 2.3 <input checked="" type="checkbox"/> No = Not a WHCV</p> <p>SC 2.3. Did WNHP review the site within 30 days and determine that it has a rare plant or ecosystem that meets their criteria?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I <input checked="" type="checkbox"/> No = Not a WHCV</p>	
<p>SC 3.0. Bogs</p> <p>Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? <i>Use the key below. If you answer YES, you will still need to rate the wetland based on its functions.</i></p> <p>SC 3.1. Does an area within the wetland unit have organic soil horizons, either peats or mucks, that compose 16 in or more of the first 32 in of the soil profile?</p> <p style="text-align: right;"><input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No – Go to SC 3.2</p> <p>SC 3.2. Does an area within the wetland unit have organic soils, either peats or mucks, that are less than 16 in deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond?</p> <p style="text-align: right;"><input type="checkbox"/> Yes – Go to SC 3.3 <input checked="" type="checkbox"/> No = Is not a bog</p> <p>SC 3.3. Does an area with peats or mucks have more than 70% cover of mosses at ground level, AND at least a 30% cover of plant species listed in Table 4?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I bog <input type="checkbox"/> No – Go to SC 3.4</p> <p>NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16 in deep. If the pH is less than 5.0 and the plant species in Table 4 are present, the wetland is a bog.</p> <p>SC 3.4. Is an area with peats or mucks forested (> 30% cover) with Sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Engelmann spruce, or western white pine, AND any of the species (or combination of species) listed in Table 4 provide more than 30% of the cover under the canopy?</p> <p style="text-align: right;"><input type="checkbox"/> Yes = Category I bog <input type="checkbox"/> No = Is not a bog</p>	

¹³⁵ <https://www.dnr.wa.gov/NHPdata>

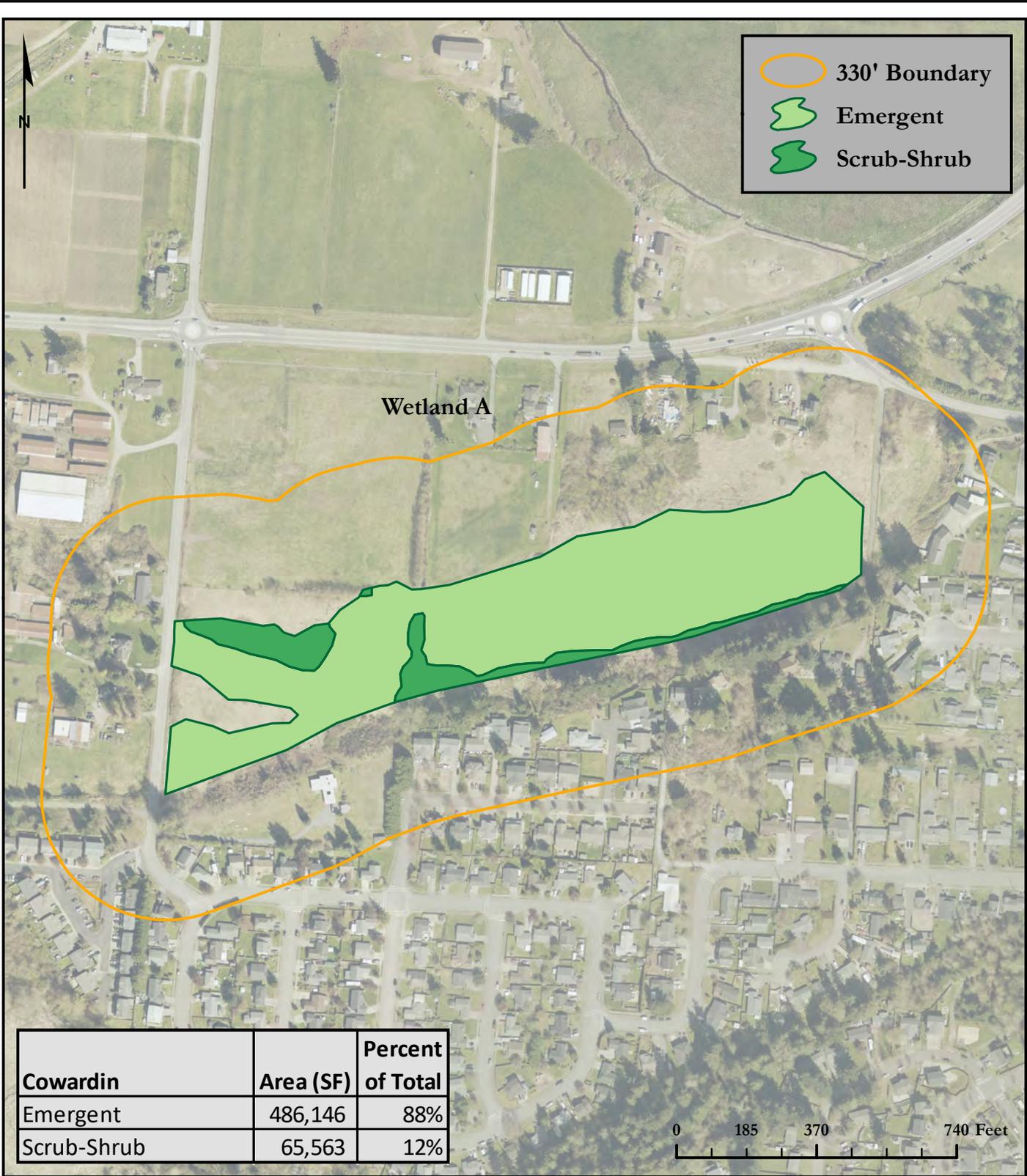
¹³⁶ https://www.dnr.wa.gov/Publications/amp_nh_sighting_form.pdf

Wetland name or number A

This page left blank intentionally

Appendix C – Updated Wetland Rating Figures

COWARDIN MAP



330' Boundary
 Emergent
 Scrub-Shrub

Cowardin	Area (SF)	Percent of Total
Emergent	486,146	88%
Scrub-Shrub	65,563	12%

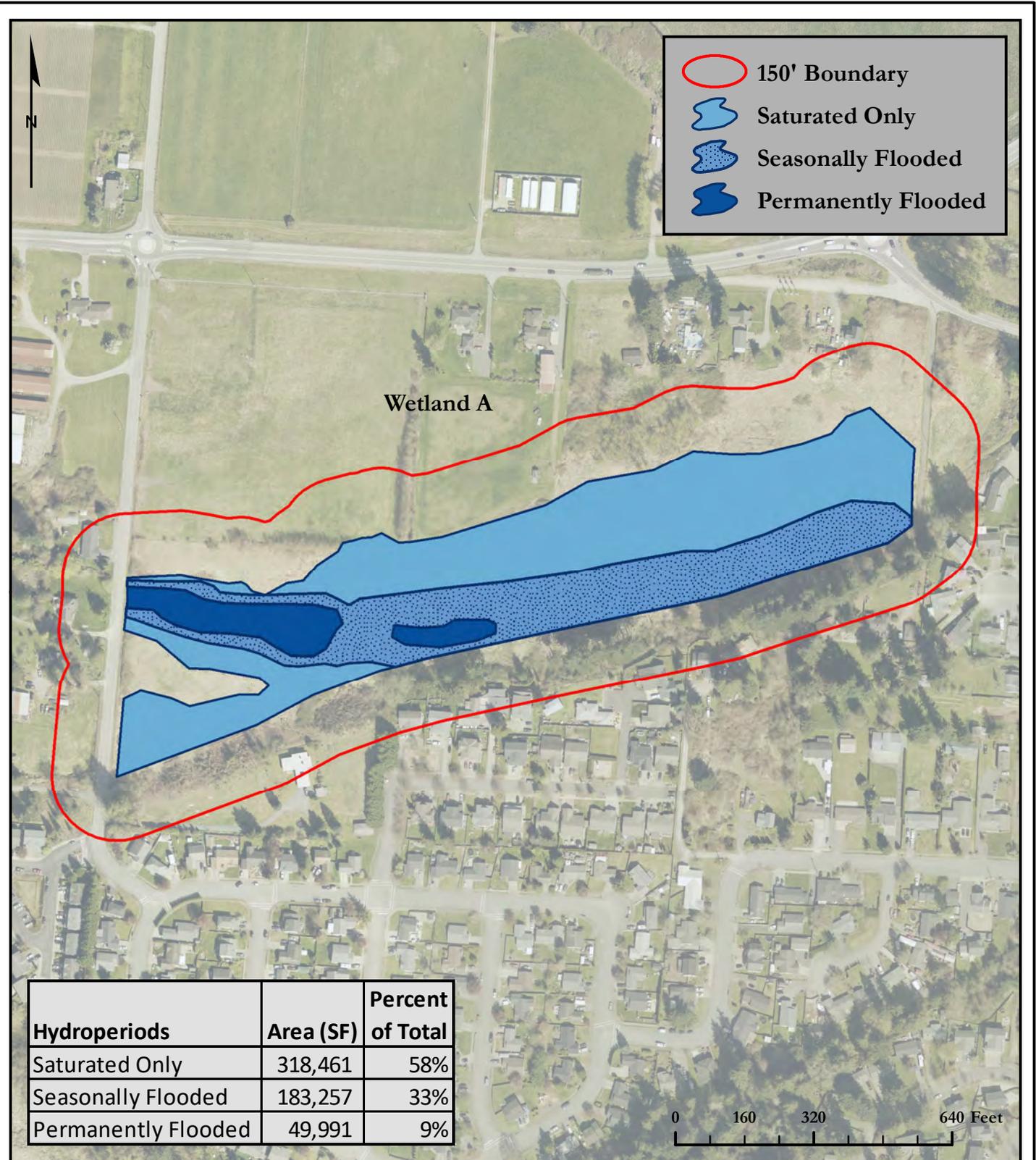



Soundview Consultants LLC
 Environmental Assessment • Planning • Land Use Solutions
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
 Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

STATE ROUTE 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 4/11/2025
 JOB: 2783.0001
 BY: DS
 SCALE: 1" = 370'
 FIGURE NO. 1 of 5

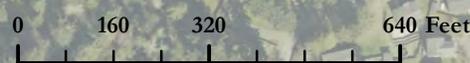
HYDROPERIOD MAP



-  150' Boundary
-  Saturated Only
-  Seasonally Flooded
-  Permanently Flooded

Wetland A

Hydroperiods	Area (SF)	Percent of Total
Saturated Only	318,461	58%
Seasonally Flooded	183,257	33%
Permanently Flooded	49,991	9%

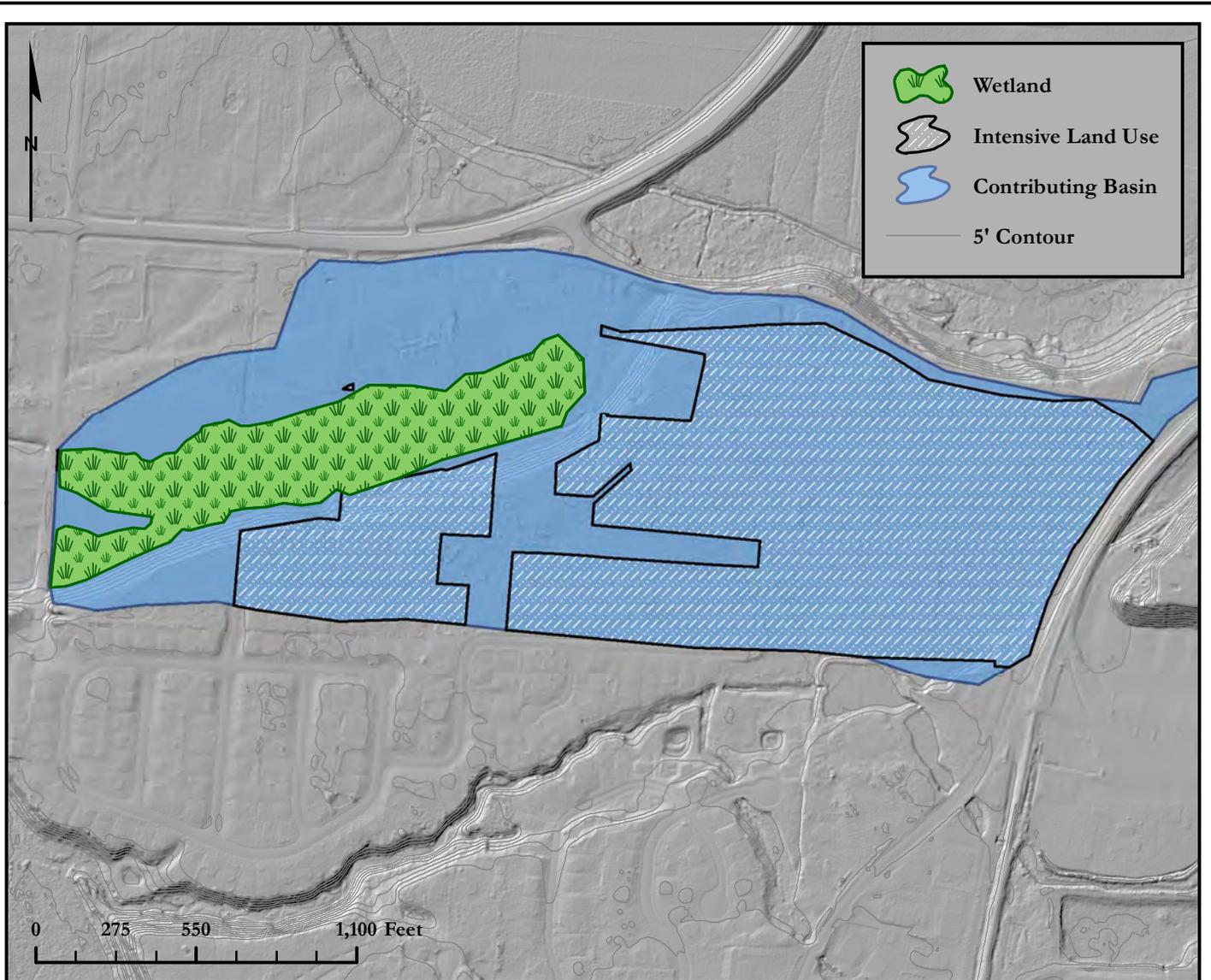



Soundview Consultants LLC
 Environmental Assessment • Planning • Land Use Solutions
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
 Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

LANE HIGHWAY 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 4/11/2025
JOB: 2329.0001
BY: DS
SCALE: 1" = 320'
FIGURE NO. 2 of 5

CONTRIBUTING BASIN MAP



D.4		
D.4.3		
	Area of Contributing Basin (SF)	3,895,571
	Area of Wetland A (SF)	551,709
	Percent of Wetland A within Contributing Basin	14.162%
D.5.0		
D.5.3		
	Area of Contributing Basin	3,895,571
	Area of Intensive Human Land Uses	2,278,537
	Percent of Intensive Human Land Use within Contributing Basin	58%

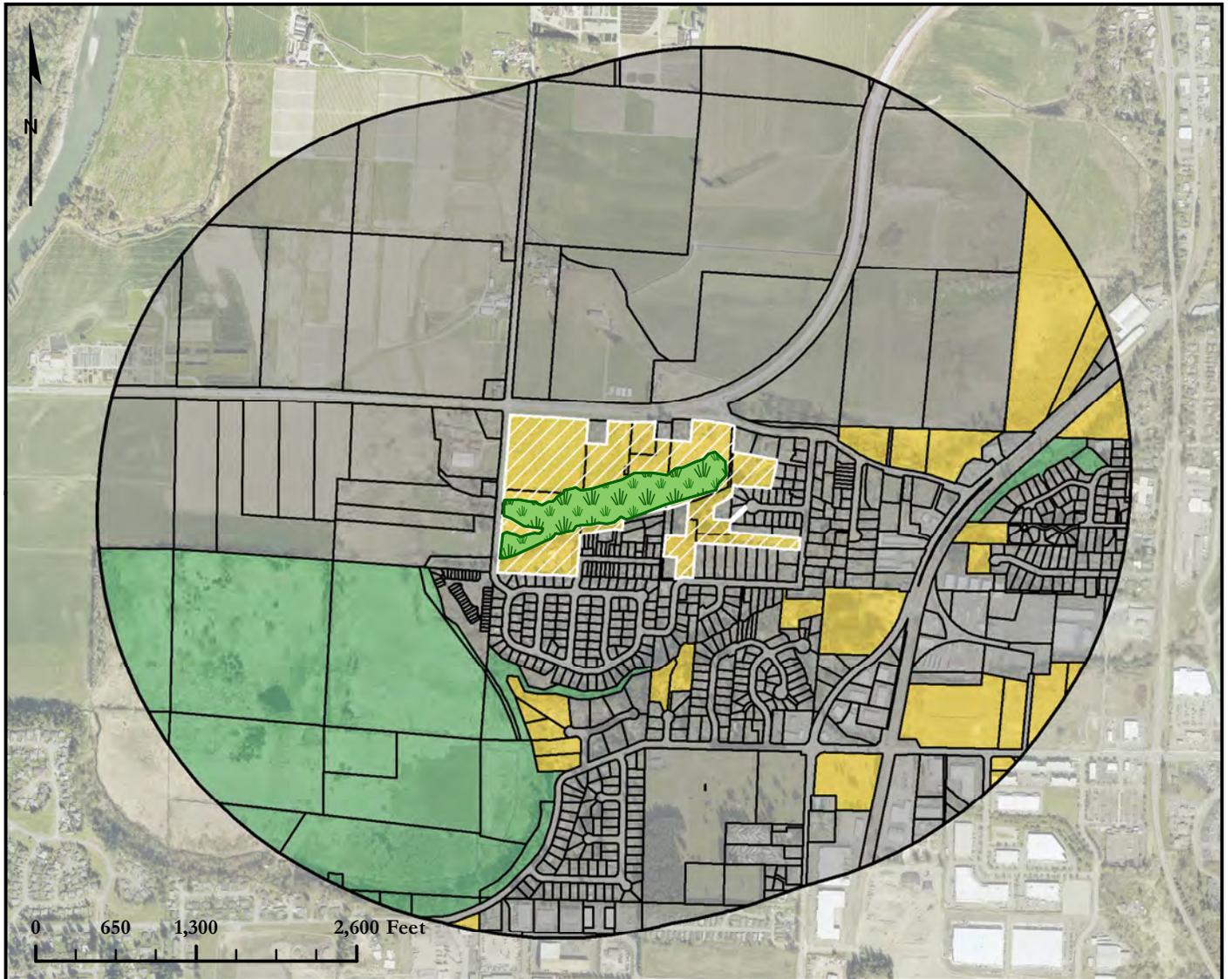


Soundview Consultants LLC
 Environmental Assessment • Planning • Land Use Solutions
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
 Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

STATE ROUTE 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 4/11/2025
JOB: 2783.0001
BY: DS
SCALE: 1" = 560'
FIGURE NO. 3 of 5

HABITAT MAP



H.2.0 Wetland A		
H.2.1		
	Abutting Undisturbed Habitat	0.00%
	Abutting Moderate & Low Intensity Land Uses	3.08%
	Accessible Habitat	1.54%
H.2.2		
	Undisturbed Habitat	16.26%
	Moderate & Low Intensity Land Uses	9.94%
	Undisturbed Habitat in 1 KM Polygon	21.23%
H.2.3		
	High Intensity Land Use in 1 KM Polygon	73.80%

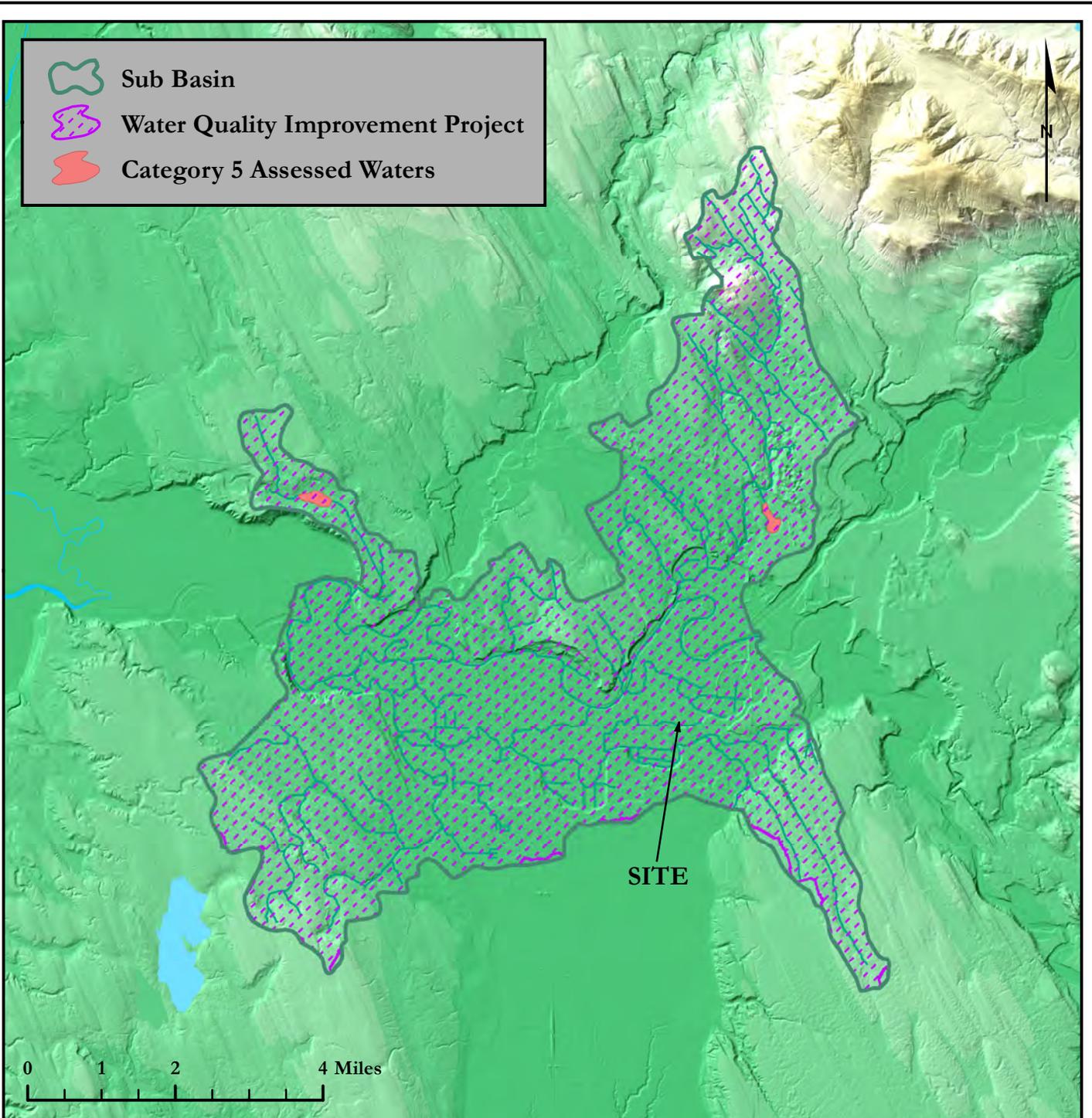
-  1 KM Polygon
-  Wetland
-  Accessible Habitat
-  Moderate & Low Intensity
-  Relatively Undisturbed
-  High Intensity



Soundview Consultants LLC
 Environmental Assessment • Planning • Land Use Solutions
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
 Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

STATE ROUTE 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 4/11/2025
JOB: 2783.0001
BY: DS
SCALE: 1" = 1,350'
FIGURE NO. 4 of 5



Name	Pollutants	TMDL ID	WRIA	Year Approved
Stillaguamish River Watershed Temperature TMDL	Temperature	73	5	2006
Stillaguamish River Watershed Multiparameter TMDL	Bacteria, Dissolved Oxygen, pH, Mercury, Arsenic	75	5	2006



Soundview Consultants LLC
 Environmental Assessment • Planning • Land Use Solutions
 2907 Harborview Dr., Suite D, Gig Harbor, WA 98335
 Phone: (253) 514-8952 Fax: (253) 514-8954
www.soundviewconsultants.com

STATE ROUTE 530
 21117 59TH AVE NE
 ARLINGTON, WA 98223
 SNOHOMISH COUNTY PARCEL NUMBER:
 31051000402700

DATE: 4/11/2025
 JOB: 2783.0001
 BY: DS
 SCALE: 1" = 2 mi
 FIGURE NO. 5 of 5