HEARING EXAMINER
MEETING AGENDA

Online via Zoom and In Person at
Tumwater City Hall, Sunset Room, 555
Israel Rd. SW, Tumwater, WA 98501

Wednesday, June 08, 2022
7:00 PM

The Tumwater Hearing Examiner is an appointed official of the City, and rules upon land use and zoning matters. Within 10 business days of the conclusion of the hearing, the Examiner shall render a decision, including findings and conclusions. Questions on the operation and procedures of the Hearing Examiner may be directed to the Community Development Department at 360-754-4180.

1. Call to Order
2. Public Hearing
    a. Kirsop Crossing Division 3 Preliminary Plat and Preliminary Planned Unit Development (TUM-21-1887 and TUM-21-1889)
3. Adjourn

Remote Meeting Information

The public hearing will be held both virtually via Zoom and in person at Tumwater City Hall.

Attend in Person

Tumwater City Hall, Sunset Room, 555 Israel Rd. SW, Tumwater, WA 98501.

Watch Online
Go to http://www.zoom.us/join, and enter the Webinar ID: **885 9076 5178** Passcode **799517**

Listen by Telephone
Call (253) 215-8782, listen for the prompts and enter the Webinar ID: **885 9076 5178** Passcode **799517**

The City of Tumwater Hearing Examiner will hear testimony from interested parties via computer audio or by telephone by registering in advance to provide comment.

Public Comment – Register in advance for this webinar:

https://us02web.zoom.us/webinar/register/WN_HYeJc4qHScuxg6leV_suDw

After registering, you will receive a confirmation email containing information about joining the webinar.

Written comments may be submitted to City of Tumwater, Community Development Department, 555 Israel Road SW, Tumwater, WA 98501, or by email at tmerriman@ci.tumwater.wa.us or by fax at (360) 754-4138, and must be received by 6:00 p.m. on June 8, 2022.

Post Meeting
Audio of the meeting will be recorded and later available by request, please email

CityClerk@ci.tumwater.wa.us

Accommodations

The City of Tumwater takes pride in ensuring that people with disabilities are able to take part in, and benefit from, the range of public programs, services, and activities offered by the City. To request an accommodation or alternate format of communication, please contact the City Clerk by calling (360) 252-5488 or email CityClerk@ci.tumwater.wa.us. For vision or hearing impaired services, please contact the Washington State Relay Services at 7-1-1 or 1-(800)-833-6384. To contact the City's ADA Coordinator directly, call (360) 754-4128 or email ADACoordinator@ci.tumwater.wa.us.

TO: City of Tumwater Hearing Examiner

FROM: Tami Merriman, Permit Manager

DATE: June 1, 2022

SUBJECT: Kirsop Crossing Division 3 Preliminary Plat and Preliminary Planned Unit Development (TUM-21-1887 and TUM-21-1889)

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1) Recommended Action:
Staff recommends the preliminary plat and preliminary planned unit development be approved, subject to conditions of approval outlined in this staff report.

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2) Background:
Applicant requests preliminary plat and planned unit development to subdivide 10.43 acres into 41 single-family lots, one storm drainage/open space tract, one tree/open space tract, one wetland/open space tract, one tract for future BLA, and two private road tracts.

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3) Alternatives:

- ❑ Approve Case No. TUM-21-1887 and TUM-21-1889
- ❑ Approve Case No. TUM-21-1887 and TUM-21-1889 with additional conditions
- ❑ Deny Case No. TUM-21-1887 and TUM-21-1889
- ❑ Remand Case No. TUM-21-1887 and TUM-21-1889 to staff for further analysis

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4) Attachments:

Exhibit 1 Staff Report
Exhibit 2 Plat Map
Exhibit 3 Vicinity Map
Exhibit 4 MDNS w/attachments
Exhibit 5 Public Hearing Notice
Exhibit 6 Applications & Narrative
Exhibit 7 Notice of Application
Exhibit 8 Zoning Map
Exhibit 9 Public Notice Certification
Exhibit 10 Notice of Application Comments
Exhibit 11 Concurrency Ruling
Exhibit 12 SEPA Comments
Exhibit 13 Forestry Plan
Exhibit 14 Critical Areas Report
Exhibit 15 Gopher Report

EXHIBIT 1

CITY OF TUMWATER
HEARING EXAMINER STAFF REPORT
Hearing Date: June 8, 2022

Project Name: Kirsop Crossing Division 3 Preliminary Plat & Planned Unit Development

Case Number: TUM-21-1887 and TUM-21-1889

Applicant: Evergreen Heights LLC
1868 State Avenue NE, Olympia, WA 98506

Representative: Hatton Godat Pantier, Jeff Pantier, PLS
3910 Martin Way East Suite B, Olympia, WA 98506

Type of Action Requested: The applicant is requesting preliminary plat and planned unit development approvals to subdivide 10.43 acres into 41 single-family lots, one storm drainage/open space tract, one tree/open space tract, one wetland/open space tract, one tract for future BLA, and two private road tracts (Exhibit 2).

Project Location: The property is located at 6139 Kirsop Road SW, Tumwater, WA 98512. Section 05, Township 17N, Range 2W. Parcel # 79900002400 (Exhibit 3).

SEPA Determination: Pursuant to the State Environmental Policy Act, the City of Tumwater Community Development Department, after review of a SEPA environmental checklist and other information, issued a Mitigated Determination of Non-significance on February 18, 2022 (Exhibit 4).

Public Notification: Public notification for the June 8, 2022 public hearing was mailed to property owners within 300 feet of the subject property and various agencies, posted on-site and published in *The Olympian* on Friday, May 25, 2022, in conformance with Tumwater Municipal Code (TMC) 14.06 (Exhibit 5).

Staff Recommendation: Approval, subject to conditions identified at the end of the staff report.

Staff Planner: Tami Merriman, Permit Manager
Phone: 360-754-4180
E-Mail: tmerriman@ci.tumwater.wa.us

I. BACKGROUND INFORMATION

Application and Review Process

The Preliminary Plat and Planned Unit Development application was submitted on December 9, 2021. The applications were deemed complete on December 30, 2021 (Exhibits 6 & 7).

Under TMC 2.58.090, review authority for Preliminary Plat and Planned Unit Development applications fall under the purview of the Hearing Examiner.

Existing Conditions

The site is relatively flat, and mostly pasture with some trees. There is a wetland in the northwest corner. The existing manufactured home and miscellaneous outbuildings located on the property will be demolished.

The site is surrounded by residential zoned property. The properties to the north and northeast are zoned Residential/Sensitive Resource. The parcel to the south is zoned Multi-family Medium Residential, and developed as Kirsop Crossing Div I. The parcels to the west are zoned Single Family Low Density. The area is developed with older residential uses. There is a large wetland complex to the northeast, as well as southeast of the site (Exhibits 2 & 8).

Project Description

The proposal is to subdivide 10.43 acres into 41 single-family lots, one storm drainage/open space tract, one tree/open space tract, one wetland/open space tract, one tract for future BLA, and two private road tracts.

Improvements will include grading for a public roads and lot pads, construction of approximately 540 lineal feet of frontage improvements on Kirsop Road SW and Kirsop Extension Road, and the intersection of Kirsop Road SW & Kirsop Extension Road SW.

Improvements include the extension of City water and sewer utilities to serve the project, storm water systems to treat and detain/retain storm water generated from new pollution generating impervious surfaces, street lighting and extension of private utilities (i.e. power, gas, cable and telephone)

The proposal includes the continuation of Lanai Street SW through the subdivision to Kirsop Road SW, as well as a private street connection to Patio Drive to the South (Exhibit 2).

Water and sewer will be provided by the City of Tumwater, electricity and natural gas by Puget Sound Energy, telephone and cable by Comcast and CenturyLink, and garbage collection by Pacific Disposal. All utilities on-site will be underground pursuant to Tumwater Municipal Code (TMC) 17.12.200.

II. REGULATORY FRAMEWORK

The proposal is subject to the following policies and regulations:

Comprehensive Plan

The site is located in Littlerock Neighborhood as designated by the City's Comprehensive Plan. The Littlerock Neighborhood Plan anticipates both residential and commercial growth. The plan includes reference to several subarea plans in regards to development, transportation, and open space and parks.

The land use designation for the 10.43 acre site is Single-Family Low Density Residential. The Single-Family Low Density Residential Zoning in the Littlerock Neighborhood Plan was created by existing development patterns and to help preserve existing neighborhoods, while also limiting high density development near sensitive land uses. The Single-Family Low Density Residential zone allows a density of 4 to 6 units per acre.

Staff Response and Recommended Finding:

The overall density of the project with 41 lots is 6 dwelling units per acre. The proposed densities meet the densities envisioned in the Comprehensive Plan.

The site is located outside of the Littlerock and Black Hills subarea Plans.

Staff finds that the preliminary plat is in compliance with the intent and densities allowed in the comprehensive plan.

Tumwater Parks and Recreation Plan

The Parks and Recreation element of the Tumwater Comprehensive Plan does not identify any neighborhood or community parks at this location. The developer must set aside the required amount of open space to meet the recreational needs of the future residents of the subdivision.

Staff Response and Recommended Finding:

The proposed open space area for the proposed subdivision is 3.30 acres. This amounts to 31.6 percent of the gross site area. The amount of open space provided for the project exceeds the minimum open space set aside requirement of the Land Division Ordinance.

Park impact fees are required for new residential development and paid at building permit issuance.

Staff finds that with the payment of park impact fees for each single-family residence proposed in the subdivision and setting aside more than the minimum amount of private open space with both passive and active recreation elements the project is consistent with the Comprehensive Parks Plan.

Tumwater Transportation Plan
The Tumwater Transportation Plan contemplates a modernized network of streets, sidewalks and bicycle routes. The Transportation Plan anticipates that such facilities will be provided through a combination of development-related improvements and City improvements funded by impact fees, grants, SEPA based mitigation fees, and general funds. The motorized Level of Service (LOS) standard for Kirsop Road is LOS-D.

Staff Response and Recommended Finding:
Staff finds that the proposed preliminary plat is consistent with the Tumwater Transportation Plan, if the internal roadways are constructed in accordance with the Tumwater Development Guide.

Thurston Regional Trail Plan
The City of Tumwater is a participating member of the Thurston Regional Planning Council (TRPC). TRPC adopted the Thurston Regional Trail Plan in December 2007.

The Regional Trails Plan defines a trail network blueprint and a set of guidelines and recommendations for all of Thurston County and its cities, towns and communities. The Goals and Policies section of the Plan serves to link local trail planning efforts within the broader context of planning the regional transportation network. The plan charts a systematic path creating interconnected corridors that improve access to community destinations.

Staff Response and Recommended Finding:
The project site is not affected by the regional trail network outlined in the Thurston Regional Trail Plan.

Staff finds that approval of the project will not affect implementation of the Thurston Regional Trail Plan.

Sustainable Development Plan for Thurston Region
The Plan indicates that the regional community has set a target to reduce vehicle miles traveled and to preserve sensitive areas, farmland, forest land, prairies and rural lands.

The Plan has a target goal stating that by 2035, 72 percent of all (new and existing) households in our cities, towns, and unincorporated growth areas will be within a half-mile (comparable to a 20-minute walk) of an urban center, corridor, or neighborhood center with access to goods and services to meet some of their daily needs.

The site is located more than a half-mile from an urban center, however is located in area designated for residential growth. The Plan also includes a goal of preserving environmentally sensitive lands, farmlands, forest lands, prairies, and rural lands and develop compact urban areas.

The project meets this this goal by providing compact development in the urban area, and protecting environmentally sensitive lands by developing at a lower density.

Staff finds the project is consistent with the Sustainable Development Plan for Thurston Region.

Hearing Examiner TMC 2.58
The Hearing Examiner has the authority to review Preliminary Plat requests.

Staff Response and Recommended Finding:
Preliminary Plats require a public hearing and decision by the Tumwater Hearing Examiner.

Tumwater Municipal Code TMC 14.06 – Public Notice Requirements
TMC Chapter 14.06 requires the City to provide public notification of certain application types by issuing a Notice of Application (TMC 14.06.010) and a Notice of Open Record Hearing. (TMC 14.06.070).

Staff Response and Recommended Finding:
The application was deemed complete on December 30, 2021. Public notice for the application indicating that the application was submitted and deemed complete was mailed to property owners within 300 feet of the subject property, affected agencies, posted on-site, and published in the Olympian on January 3, 2022 (Exhibits 7 & 9).

Public notice for the June 8, 2022 open record hearing was mailed to property owners within 300 feet of the subject property, affected agencies, posted on-site on; and published in The Olympian on May 27, 2022 (Exhibit 5).

COMMENTS FROM OTHER AGENCIES/CITIZENS:

Several comments were received from the Notice of Application (Exhibit 10).

Comment from the Squaxin Island Tribe requests a Cultural Resource Survey.

Staff comment: Cultural Resource Survey Completed.

Comments from surrounding property owners have a similar theme with concern for increased traffic, safety due to vehicle speed, existing condition of Kirsop Road in the area of wetland flooding, as well as increased development in an area of existing farms and environmental areas.

Staff comment on similar concerns;

Transportation; the project was reviewed by our Transportation Manager who provided a concurrency ruling. Impacts from this development are mitigated by the applicant completing frontage improvements and off-site improvements including the intersection upgrade to Kirsop Road and Kirsop Extension Road. Trips are disbursed by 2 connections to the south, and a third at the intersection of Kirsop Road/Kirsop Extension Road.

The existing conditions of Kirsop Road and maintenance is the responsibility of the City.

Issues with vehicles speeding should be brought to the attention of the police department.

Construction vehicles are exempt from street weight limits for construction. The City requests that construction vehicles use 70th Ave. SW for main access during construction.

The wetland on site has been delineated, and all development is located well outside appropriate buffers. Water runoff from new impervious surfaces will be treated, detained and released onsite. A gopher report showed no evidence of gophers on this site. The Growth Management Act requires development within Cities to meet specific density requirements, which protect lands outside the city for agriculture and resource land, which also provides wildlife habitat. The surrounding area is zoned at a lower density, as well as critical areas, most of the surrounding land will remain undeveloped.

Comment from Bonnie Blessing expressing concern for street stabilization due to wetlands and large construction equipment.

Comment from Brian McCarroll opposing further development at 6139 Kirsop Road due to deteriorating streets, safety issues due to vehicle speed, water runoff, and wildlife.

Comment from JD Darbro expressing concern for increase in traffic and litter, impacts to wildlife and pollution, and lack of sidewalks in the area.

Comment from Katie Worthington expressing concern about trees.

Staff comment: The applicant provided a tree mitigate plan that retains 35 trees surrounding the wetland at the northwest corner of the site. An additional 270 trees will be planted within designated open spaces, and street trees.

Comments from Rick Guthrie include request to retain large trees onsite, concern that the onsite wetland will flood the new homes, a request for children's play area, and request confirmation that dove birds nest in the large trees.

Staff Comment: The tree mitigation plan did not provide a survey of trees by height, but plans to retain all trees in the wetland buffer. Street and lot layout will remove many large trees that surround the current home. Mitigation requires 270 new trees to be planted. The retention of trees surrounding the wetland should provide for keeping 35 mature trees and nesting areas for existing birds.

The applicant is providing a .28 acre open space with "tot lot" play area, with tables and benches.

The critical areas report submitted provides great detail regarding the wetland that touches the northwest corner of the site, with description of the entire wetland system around, as well as a stream within the wetland. The development falls well outside of riparian areas of the stream, and greater than the buffer required for the onsite wetland.

Transportation Concurrency TMC 15.48

In accordance with TMC 15.48, the City's Transportation Manager issued a transportation concurrency ruling for the project on February 8, 2022. The concurrency ruling indicates that the project meets concurrency with conditions. These include payment of transportation impact fee, construction of frontage improvements and adjacent street connections, mitigation fees for trips generated to the Tumwater Boulevard/I-5 Interchange, and reconstruction of the Kirsop Road/Kirsop Extension Road Intersection (Exhibit 11).

Staff Response and Recommended Finding:

Staff finds that, as conditioned, the project passes the City of Tumwater's concurrency test.

Tumwater Environment Code Title 16

Environmental Policy: The City of Tumwater Community Development Department reviewed a SEPA Environmental Checklist and other information submitted by the applicant and issued a Mitigated Determination of Non-significance (MDNS) on February 18, 2022 (Exhibit 4).

The MDNS was posted on-site, mailed to property owners within 300 feet of the subject property and agencies, and published in "The Olympian" newspaper on February 18, 2022 (Exhibit 9).

The MDNS includes traffic mitigation fees for trips generated to the Tumwater Boulevard/I-5 Interchange, and reconstruction of the Kirsop Road/Kirsop Extension Road Intersection.

Staff Response and Recommended Finding:

The City's SEPA threshold determination was issued on February 18, 2022. No appeals of the SEPA threshold determination were filed.

COMMENTS FROM OTHER AGENCIES/CITIZENS:

Several comments were received from the Mitigated Determination of Non-significance (Exhibit 12).

Comment from the Olympic Region Clean Air Authority requires asbestos survey for demolition of existing buildings.

Staff comment: Asbestos survey should be a condition of approval.

Comment from the Squaxin Island Tribe requests a Cultural Resource Survey.

Staff comment: Cultural Resource Survey Completed. An inadvertent discovery plan is required as part of Site Development/Grading.

Comment from The Washington State Department of Ecology was related to solid waste management, toxic cleanup and that the development is subject to coverage under a Construction Stormwater general permit.

Comment from Cheryl Threatt expressed concern for existing condition of Kirsop Road and heavy equipment traffic, and confirming extension of sewer line.

Staff comment: See Responses above for traffic. Provided sewer extension documents.

Tree Protection: A Forestry Tree Plan dated December 1, 2021 indicates 157 trees are located on site, of which 35 trees are proposed to be retained. This number is less than the "12 trees per acre" retention of 157 required by TMC 16.08.070. The applicant is unable to retain trees located outside of the wetland buffer and open space tract due to infrastructure requirements, and proposes to plant trees at a 3-to-1 ratio as provided in Chapter 16.08.070, resulting in 270 trees planted (Exhibit 13).

Staff Response and Recommended Finding:
TMC 16.08.070(R) requires that if tree retention cannot be achieved due to compliance with applicable zoning and development regulations, replacement trees shall be planted at a three-to-one ratio.

Staff finds that the planting of 270 additional trees meets the requirements of TMC 16.08.070(R).

Wetlands:
A Critical Areas Report dated August 11, 2020 was submitted for the project. The report investigated 2 wetlands, however, after review, only 1 impacts the property. Wetland "A" located at the northwest corner of the site is considered a category III wetland. Wetland "B" located to the east of the property is considered a Category IV. Wetland A requires a 150 foot buffer, and Wetland B a 50 foot buffer. Neither buffer is proposed to be reduced (Exhibit 14).

Staff Response and Recommended Finding:
Staff finds that the proposal is consistent with the wetland protection ordinance for the City of Tumwater. Wetland information and notations required by code must be identified on the final plat drawing and/or specified in the covenants, to assure that the land subject to wetland restrictions are guaranteed in perpetuity. In addition, wetland signage must be provided along the buffer boundary in accordance with TMC 16.28.

Fish and Wildlife Habitat Protection:
TMC Chapter 16.32 regulates fish and wildlife habitat and species.

Staff Response and Recommended Finding: *The geographic area of the subject property has soils preferred by the Mazama Pocket Gopher. The Gopher is listed as a protected species under both Washington State and Federal threatened and endangered species lists.*

A Mazama Pocket Gopher report dated October 30, 2020 concludes that no gopher mounds were observed on the subject property (Exhibit 15).

Cultural Resources:
The Squaxin Island Tribe requested a cultural resource survey as the WISAARD map by the Department of Archaeology & Historic Preservation shows the site as high risk of archeological resources.

Staff Response and Recommended Finding:

A Cultural Resource Assessment dated April 20, 2021 found no archaeological materials or historic properties in the project area, however recommends compliance with a standard inadvertent discovery plan. The Department of Archeology & Historic Preservation concurs (Exhibit 12).

Tumwater Subdivision Code Title 17

The preliminary plat process requires consideration by the Hearing Examiner of all relevant evidence in order to determine approval or disapproval of the preliminary plat. The preliminary plat must be submitted in conformance with TMC 17.12 and TMC 17.14. All required improvements must either be installed or an agreement accompanied by a bond or other approved surety shall be entered into between the City and the applicant before Final Plat approval can be granted.

Staff Response and Recommended Finding:

Staff finds that the preliminary plat has been submitted in accordance with the Chapter 17.12 to include compliance with general design standards such as; lot size, protect wetlands and natural drainage, streets designed in accordance with adopted development standards, utilities installed underground, and provisions for open space.

Tumwater Zoning Code Single-Family Low Density (SFL) residential zone district TMC 18.10.

Single-family detached dwelling units are allowed at a minimum density of 4 dwelling units per acre and a maximum of 6 dwelling units per acre. Minimum lot size is 3,200 sq. ft., and minimum lot width is 50 feet, except for alley load, which reduces the lot width to 40 feet. Lots adjacent to a wetland or wetland buffer shall be encouraged to be as large as possible. Maximum building height is 35 feet.

Front yard setbacks are 10 feet, side yard is 5 feet, and rear yard is 20 feet.

Minimum open space requirement is 10 percent of total land area.

Staff Response and Recommended Finding:

The intended use for each lot within the proposed subdivision is for one single-family detached dwelling unit. Density is 6 dwelling units per acre. The smallest lot-size is 4,000 square feet. Lot widths are minimum 50 feet, with 40 foot width for alley load lots. Lots adjacent to the wetland buffer are 50 feet or greater in width. Open space is greater than minimum required. The plat is consistent with the SFL zone district.

Aquifer Protection Overlay (AQP) zone district - TMC 18.39 – Restricted Land Uses

The AQP zone restricts hazardous uses to protect aquifer recharge areas.

Staff Response and Recommended Finding:
The intent of the aquifer protection (AQP) overlay zone district is to identify, classify and protect vulnerable and/or critical aquifer recharge areas within the city and urban growth area. Protection is to be accomplished by controlling the use and handling of hazardous substances. The proposed residential subdivision is not a restricted land use in the AQP overlay.

Planned Unit Development - TMC 18.36.

The intent of the Planned Unit Development (PUD) overlay is to encourage development by encouraging flexibility for more efficient use of land.

Staff Response and Recommended Finding: *An application for a Preliminary Planned Unit Development accompanied the Preliminary Plat application for this project and was submitted on December 9, 2021. The application was deemed complete on December 30, 2022. Under TMC 2.58.090, review authority for Planned Unit Development applications fall under the purview of the Hearing Examiner.*

The PUD application was submitted to seek relief from the minimum lot widths and to allow private streets in the SFL zone district. 9 of the 41 proposed lots are less than the prescriptive requirement of 50 feet wide, not adjacent to an alley. The plat also includes two private streets.

According to TMC 18.36.050, the Hearing Examiner's decision to approve or deny the development shall be based on at least, but not limited to, the following criteria:

A. Substantial conformance to the Tumwater comprehensive plan;
B. The proposal's harmony with the surrounding area or its potential future use; and
C. The adequacy of the size of the proposed overlay to accommodate the contemplated developments.

As discussed above, Staff finds that:

- *This proposal is in conformance with the Tumwater Comprehensive Plan.*
- *This proposal is consistent with surrounding residential development at urban densities.*
- *This proposal complies with the densities allowed in the SFL zone district.*

In accordance with TMC 18.36, a planned unit development shall be exempt from the minimum zoning ordinance requirements, as listed at TMC 18.36.080, except as provided for below:

A. Minimum Project Size: There is no minimum project size for a planned unit development.
B. Project Densities: Densities established by the underlying zone district shall prevail.

C. Setbacks: Project setbacks as required by the underlying zoning district shall prevail on all perimeter boundary lines.
D. Land Coverage: Maximum land coverage as established by the underlying zone district may be exceeded by no more than 25 percent.
E. Uses Allowed: The use of the development shall be limited to those allowed either as permitted, accessory, or conditional uses in the underlying zones.
F. Open Space/Park: The open space/park dedication requirements of the underlying zoning district shall prevail.

IV. STAFF ANALYSES:

As per Section 17.14.040 of the Tumwater Municipal Code, the Hearing Examiner is required to review the preliminary plat based on certain criteria and prepare findings of fact.
Staff analyses is as follows:

1. The preliminary plat, as conditioned, conforms to the subdivision regulations, comprehensive plan, zoning ordinance, wetland ordinance, fish and wildlife habitat protection ordinance, tree protection ordinance, and to planning standards, development standards, specifications and policies of the City of Tumwater.

2. Adequate provisions have been made for public health, safety, and general welfare for such open spaces, drainage ways, streets, sanitary wastes, parks and recreation, schools, sidewalks, and, that the public use and interest will be served by the subdivision of the property.

RECOMMENDATION

Pursuant to TMC 2.58.110, staff recommends approval of the Preliminary Plat and Planned Unit Development requests described herein with the following conditions:

1. Storm water from impervious surfaces associated with the project shall be managed in accordance with the City of Tumwater 2018 Storm Drainage Manual.

2. Erosion and sediment control measures that comply with the City of Tumwater 2018 Storm Drainage Manual shall be implemented during construction of the project to prevent sediment laden runoff from entering surface waters.

3. A Site Development/Grading Permit shall be obtained from the City for grading, street, sidewalk and utility construction, tree removal and construction of storm drainage facilities.

4. Should contaminated soils be encountered during construction, all of the following shall apply:

   a. Construction activity shall be immediately suspended;
   b. The contractor shall immediately notify the Washington State Department of Ecology;
   c. Contaminated materials shall be properly handled, characterized, and disposed of consistent with applicable regulations.

5. Should archeological artifacts be encountered during construction, all of the following shall apply:

   a. Construction activity shall be immediately suspended;
   b. The contractor shall immediately notify the City of Tumwater Community Development Department;
   c. The contractor shall immediately notify the Washington State Department of Archeology and Historic Preservation; and
   d. The contractor shall immediately notify potentially affected tribal nations including, but not limited, to the Squaxin Island Tribe, Chehalis Tribe and Nisqually Tribe.

6. Fill for the project shall be clean material, void of solid waste or organic debris.

7. Disposal of construction debris and overburden associated with construction and grading activity that is not suitable for fill is required to be disposed of at an approved location.

8. The applicant shall secure a National Pollutant Discharge Elimination System (NPDES) Construction Storm Water General Permit from the Washington State Department of Ecology.

9. Construction vehicles shall use 70th Ave. SW for main access during construction.

10. Road A as shown on the Preliminary Plat/PUD map shall be constructed to the same design standard as Kirsop Road, and dedicated for public right-of-way on the face of the final plat.

11. Street frontage improvements including curb and gutter, sidewalk, landscape strip, bike lane, street illumination and storm drainage facilities complying with the design requirements of the Tumwater Development Guide shall be constructed along the property frontage on Kirsop Road and Kirsop Extension Road. Adequate right-of-way shall be dedicated to contain the improvements.

12. Kirsop Road/Kirsop Extension Road intersection shall be designed as a 4-way stop, with the entire intersection reconstructed.

13. Full lane overlays are required after patching. Additional improvements might be required on the opposing frontage, such as widening, realigning the crown to centerline of right-of-way or feathering to meet City of Tumwater standards. All accesses will meet city standards.

14. The City's water and sewer utilities shall be extended to serve the needs of the subdivision. The utility extensions shall be in accordance with the Tumwater Development Guide requirements in place at the time the preliminary plat application was vested. All necessary right-of-way and/or easement will need to be dedicated.

15. A 12" water main is required in Kirsop Road. The system shall be designed for a maximum velocity of 8 feet per second.

16. The project must meet minimum fire flow requirement. If the required fire flow cannot be achieved, residential fire sprinklers shall be required in the dwelling units.

17. A separate permit and engineered design is required for any retaining walls on-site if the height of the wall is over 4 feet measured from the bottom of the footing or if the wall is supporting a surcharge.

18. A final geotechnical engineering report shall be submitted for the grading and site work. The report shall include conclusions and recommendations for grading procedures, soil design criteria for structures or embankments required to accomplish the proposed grading and recommendations and conclusions regarding the site geology.

    a. All grading and filling work shall be conducted in accordance with the approved geotechnical report. Compaction testing of the soils under the building foundations and utility trenches shall be verified by the geotechnical engineer of record and the Washington Association of Building Officials (WABO) registered special inspection agency and inspectors.

19. Fire hydrants shall be provided at all intersections and at approximately 600-foot spacing along the internal streets.

20. Demolition permits are required to be issued by the City prior to removal of

existing structures on the property. A separate permit is required for each structure.

21. A demolition permit is required to be issued by the Olympic Region Clean Air Agency for each structure proposed to be removed from the property. Olympic Region Clean Air Agency (ORCAA) regulations require an asbestos survey for all demolition projects. Prior to any demolition project, the following must be completed:
    a. A good faith asbestos survey must be conducted on the structure by a certified Asbestos Hazardous Emergency Response Act (AHERA) building inspector;
    b. If asbestos is found during the survey, an Asbestos Removal Notification must be completed and all asbestos-containing material must be properly removed prior to the demolition; and,
    c. If the structure is larger than 120 sq. ft., a Demolition Notification must be submitted regardless of the results of the asbestos survey.

22. All water wells on the site shall be abandoned in accordance with Washington State Department of Ecology requirements. A permit from the Department of Ecology shall be obtained for each well to be abandoned.

23. All septic systems on the property shall be abandoned in accordance with Thurston County Environmental Health requirements. A permit shall be obtained from Thurston County Environmental Health for each separate system that will be abandoned.

24. The project proponent shall be responsible for providing the City with all costs associated with the installation of water, sewer, street and storm drainage systems that are dedicated to the City of Tumwater.

25. All engineering designs and construction will need to be in accordance with the City of Tumwater's Development Guide and WSDOT standards.

26. All street construction, utility installation and storm drainage work requires engineered plans certified by a professional engineer licensed to practice in the State of Washington. The plans shall be submitted for review and approval by the City.

27. Any public or private utility relocation necessary to construct the project is the sole responsibility of the project proponent.

28. The applicant is required to submit a performance surety and surety agreement prior to release of the Site Development/Grading Permit to ensure successful

completion of the required public improvements. The amount of the surety shall be 150% of the proponent engineer's estimate of completing the required public improvements.

29. The applicant shall be responsible for the maintenance and timely repair of all public improvements for a period of 30 months following final certification by the City and shall submit a surety and surety agreement for maintenance equal in value to fifteen (15) percent of the total value of the required public improvements certified by the Public Works Director.

30. Maintenance of the on-site storm water system will be the responsibility of the project proponent, their successors or assigns. A storm water maintenance agreement will be recorded against the property prior to or concurrent with final plat approval.

31. Back flow prevention is required on all irrigation services in accordance with the AWWA Cross Connection Control Manual.

32. A landscape and irrigation plan must be submitted with Site Development and Grading Permit application for the proposed street planter strips, proposed open space tracts and the storm water facilities showing proposed plantings, tree types and heights, and other vegetation. Street trees are required to be installed along Kirsop Road and the proposed interior public streets in accordance with the Tumwater Development Guide and Comprehensive Street Tree Plan.

33. Lot size requirements, lot coverage and setbacks: Each residential lot shall have a building site no less than 3,200 square feet in area within which a suitable building can be built and served by utilities and vehicular access unless dedicated or restricted by covenant for open space, park, recreation or other public use.

34. The maximum lot-coverage for impervious surface shall be 60 percent of the total area of the lot.

35. Two off-street parking spaces are required for each lot. Driveways shall be a minimum of 18 feet in length.

36. Residences must provide pathway from building entry to sidewalk separate from the driveway, provide weather protection at entries and at least 8percent of front facade shall include transparent windows or doors.

37. Where lots abut an alley, the garage must take access from the alley.

38. Garages must be set back from the public street at least 5' further than the

enclosed portion of the house, and garage doors shall occupy no more than 50 percent of the ground-level façade facing the street.

39. Impact fees for traffic, community parks, and schools will be assessed to each dwelling unit in the subdivision as building permits are issued. The impact fees will be in accordance with the most current fee resolution adopted by the City at the time of vesting of the building permit applications.

40. An integrated pest management plan approved by the Thurston County Environmental Health must be submitted prior to final plat approval.

41. All legal descriptions on documents submitted to the City must be accompanied with an appropriate drawing that the City can use to verify the legal description.

42. The Professional Land Surveyor responsible for the surveying of the project must obtain a permit from Department of Natural Resources before any existing survey monuments are disturbed.

43. The applicant must provide and maintain a current Plat Name Reservation Certificate approved by the Thurston County Auditor.

44. Property taxes must be paid in full for the current year, including any advance and delinquent taxes, before a Final Plat can be recorded.

45. In order to comply with the City's Tree Protection and Replacement Standards, a minimum of 270 replacement trees must be planted on the site. Replacement trees must be planted in proposed tree protection open spaces, prior to other placement on site. The size of the tree protection open space area(s) associated with the project is required to be a minimum of 5% of the buildable area of the site.

46. The following condition will be required to be noted on the Final Plat:
    a. All landscaped areas in public rights-of-way shall be maintained by the owner and his/her successor(s) and may be reduced or eliminated if deemed necessary for or detrimental to City road purposes.

47. A Homeowners Association is required. Prior to final plat approval, the project proponent shall supply the city with copies of the grantee organization's articles of incorporation and bylaws, and with evidence of a binding commitment to convey. The articles of incorporation shall provide that membership in the organization shall be appurtenant to ownership of land in the land division; that the corporation is empowered to assess such land for costs of construction and maintenance of the improvements and property owned by the corporation, and that such assessments shall be in lien upon the land.

Submitted on Behalf Of the Community Development Department by/ Staff Contact:

Tami Merriman, Permit Manager
Phone: 360-754-4180
E-mail: tmerriman@ci.tumwater.wa.us

Report Issue Date: May 31, 2022

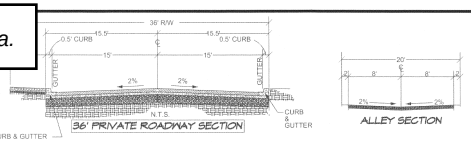
List of Exhibits:

Exhibit 1 Staff Report
Exhibit 2 Plat Map
Exhibit 3 Vicinity Map
Exhibit 4 MDNS w/attachments
Exhibit 5 Public Hearing Notice
Exhibit 6 Applications & Narrative
Exhibit 7 Notice of Application
Exhibit 8 Zoning Map
Exhibit 9 Public Notice Certification
Exhibit 10 Notice of Application Comments
Exhibit 11 Concurrency Ruling
Exhibit 12 SEPA Comments
Exhibit 13 Forestry Plan
Exhibit 14 Critical Areas Report
Exhibit 15 Gopher Report

Item 2a.

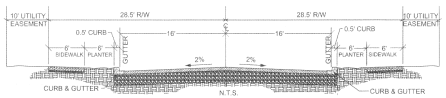
PRELIMINARY PLAT AND PLANNED UNIT DEVELOPMENT OF KIRSOP CROSSING DIVISION 3

A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.



36' PRIVATE ROADWAY SECTION

ALLEY SECTION

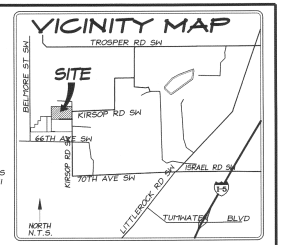


57' PUBLIC ROADWAY SECTION

TOPO LEGEND

- MONITOR WELL
- POWER POLE
- SERVICE POLE
- POLE ANCHOR
- SANITARY SEWER MANHOLE
- CATCH BASIN
- SIGN
- EDGE OF WETLAND DELINATED BY ENVIROVECTOR SEPTEMBER 11, 2020
- STANDARD WETLAND BUFFER BASED REPORT BY ENVIROVECTOR
- BARBED WIRE FENCE
- FENCE (CATTLE PANELS)
- WOOD RAIL FENCE W/ HOG WIRE
- OVERHEAD POWER TRANSMISSION LINES
- OVERHEAD UTILITIES (POWER, COMMUNICATIONS)
- WETLANDS (0.16 ACRES)
- CONCRETE
- ASPHALT
- GRAVEL
- BUILDING FOOTPRINT AT GROUND LEVEL

VICINITY MAP



DESCRIPTION

TRACT 24 OF THURSTON COUNTY FARMS, AS RECORDED IN VOLUME 8 OF PLATS, PAGE 41 IN THURSTON COUNTY, WASHINGTON.

SITE DATA/PROJECT INFOMATION

-APPLICANT-	ROB RICE EVERGREEN HEIGHTS, LLC 1868 STATE AVENUE NE OLYMPIA, WA 98506 360-754-7010 ROB@ROBRICEHOMES.COM
-REPRESENTATIVE-	JEFF PANTIER HATTON GODAT PANTIER, INC. 3910 MARTIN WAY E, SUITE B OLYMPIA, WA 98506 360-443-3591 JEFF@HATTONPANTIER.COM
-ASSESSOR PARCEL NO.'S	79900002400
-ZONING -	SFL 4-6
-TOTAL AREA	454,164 S.F. (10.43 ACRES)
-NO. OF LOTS	41
-PUBLIC ROADWAY LENGTH	1118 FT
-PUBLIC ROADWAY AREA	66,263 S.F. (1.52 ACRES)
-PRIVATE ROADWAY LENGTH	403 FT
-PRIVATE ROADWAY AREA	18,898 S.F. (0.43 ACRES)
-NET AREA	6.80 ACRES
-MINIMUM DENSITY SFL	4 x 6.80=27 UNITS
-MAXIMUM DENSITY SFL	6 x 6.80=41 UNITS
-PLANNED DENSITY	41/6.80=6.0 DU/AC
-OPEN SPACE	3.30 ACRES (31.6%)
-SMALLEST LOT AREA -	4,000 S.F.
-AVERAGE LOT AREA -	4,914 S.F.
-SEWER -	CITY OF TUMWATER
-WATER -	CITY OF TUMWATER
-ELECTRICITY -	PUGET SOUND ENERGY
-NATURAL GAS-	PUGET SOUND ENERGY
-COMMUNICATIONS -	COMCAST
-REFUSE	LEMAY
-SCHOOL DISTICT-	TUMWATER

NET AREA CALC

GROSS AREA-PUBLIC & PRIVATE ROAD)-(TRACT A & D)
10.43-(1.52+0.43)-(1.58+0.10)=6.80

TRACT USEAGE/AREAS

TRACT USEAGE	AREA (ACRES)
A WETLAND/OPEN SPACE	1.58
B STORM/OPEN SPACE	1.44
C OPEN SPACE/PARK	0.28
D RESERVED FOR FUTURE BLA	0.10
E PRIVATE STREET	0.10
F PRIVATE STREET	0.39

PLAT NOTES

1. ALL KNOWN WATER SUPPLIES WITHIN 200' OF THE PROJECT BOUNDARY ARE SHOWN HEREON.
2. TRACTS "A", "B", "C", "D", "E" AND "F" SHALL BE OWNED AND MAINTAINED BY THE OWNERS ASSOCIATION.
3. ALL EXISTING STRUCTURES, WELLS AND SEPTIC SYSTEMS TO BE DEMOLISHED/ABANDONED PRIOR TO DEVELOPMENT.

SURVEYORS NOTES

1. TITLE INFORMATION NOTED/DEPICTED HEREON IS BASED ON COMMITMENT FOR TITLE INSURANCE ISSUED BY CHICAGO TITLE INSURANCE COMPANY DATED SEPTEMBER 17, 2019 UNDER COMMITMENT NO. 190032406 (SECOND REPORT).
2. THE LAND DESCRIBED HEREON HAS BEEN ASSIGNED PROPERTY TAX ACCOUNT NO. 79900002400 BY THURSTON COUNTY.
3. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO EASEMENT GRANTED TO PUGET SOUND POWER AND LIGHT COMPANY RECORDED UNDER AUDITOR'S FILE NO. 8201130013.
4. THE LAND DESCRIBED HEREON IS INCLUDED IN THE AREA OF ANNEXATION INTO THE CITY OF TUMWATER PURSUANT TO ORDINANCE NO. 02008-001 RECORDED UNDER AUDITOR'S FILE NO. 3983782.

LEGEND

- FOUND BRASS DISK IN CONCRETE STAMPED "JSP 28073"
- FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- SET 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- VEGETATION PRESERVATION AREA (1.58 ACRES)
- (1) EASEMENT GRANTED TO PUGET SOUND POWER & LIGHT COMPANY RECORDED UNDER AUDITOR'S FILE NO. 8201130013 (SEE SURVEY NOTE #3.)
- (2) EASEMENT FOR POWER TRANSMISSION LINES GRANTED TO THE UNITED STATES OF AMERICA PER A.F. NO. 836007
- (3) PLANNED 10' WIDE UTILITY EASEMENT
- (4) PLANNED 11' WIDE RIGHT OF WAY DEDICATION
- (5) PLANNED 25' WIDE EASEMENT FOR INGRESS, EGRESS AND UTILITIES
- (6) RIGHT OF WAY PER 55-20-0117-TW RECORDED UNDER AUDITOR'S FILE NO. 4639030

BASIS OF BEARINGS: GRID BEARINGS AS RECORDED UNDER AUDITOR'S FILE NO. 4639030

SCALE: 1"=40 FEET (0, 20, 40, 80)

BLA-0420
A.F. NO.
8609250009

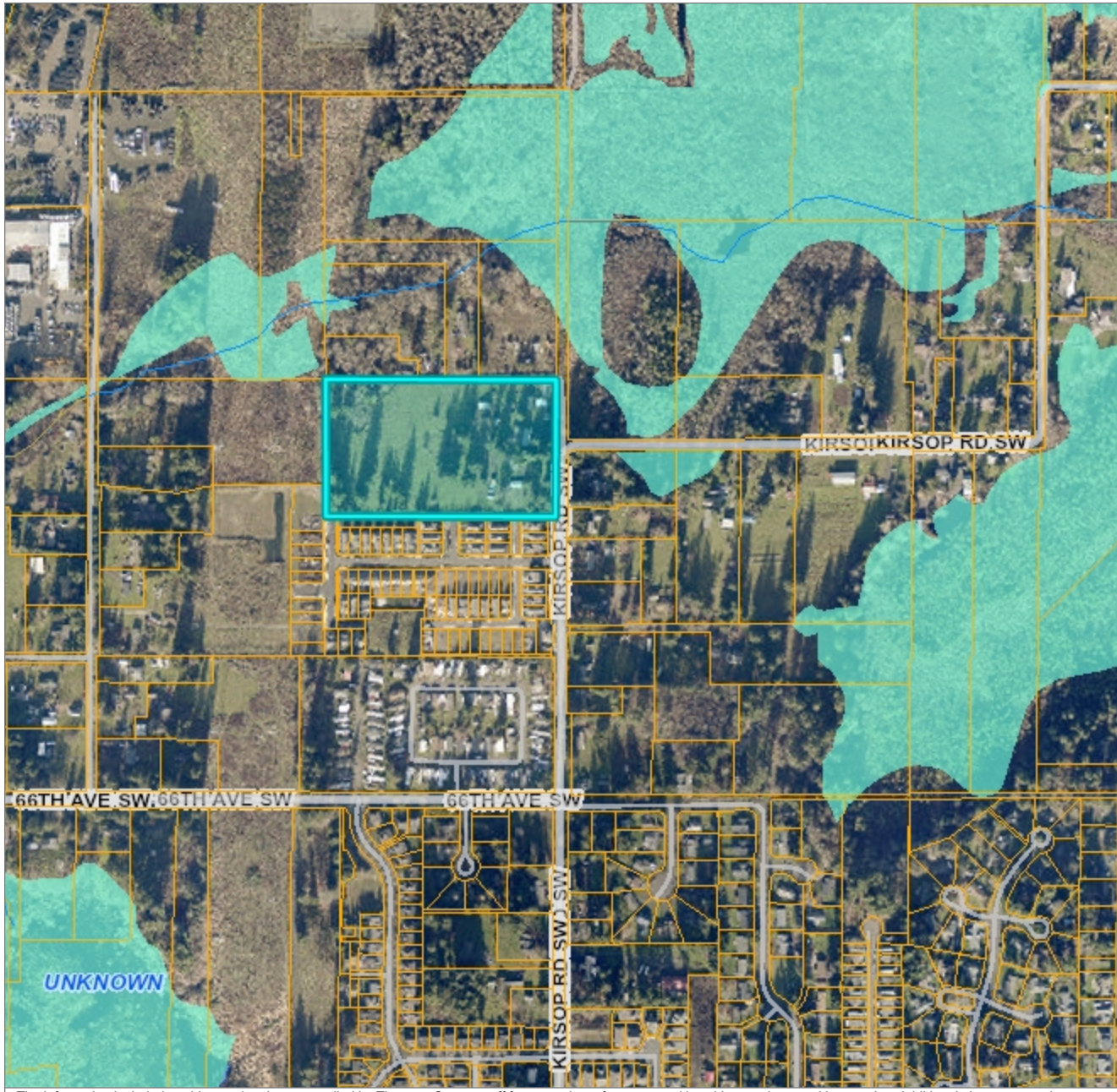
VERTICAL DATUM
NGVD 29
CITY OF TUMWATER
BENCH MARK #1406
RAILROAD SPIKE IN
POWER POLE AT NW CORNER
AND 66TH AVE.
OF INTERSECTION OF KIRSOP RD.
ELEVATION = 178.83

JEFF S. PANTIER — STATE OF WASHINGTON — 19073 — REGISTERED PROFESSIONAL LAND SURVEYOR

NOV. 29, 2021

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

19-073



KIRSOP CROSSING 3

Legend

- Parcels
- Streams
- Wetlands
- Waterbodies
- Parcel Boundaries
- Roads - Major
  - Major Roads
  - Ramp
  - I 5; US 101
- Roads (Large Scale)
- Railroads
- County Border

Scale 1: 10,738

0 500 1000

Feet

Map Created Using GeoData Public Website

Published: 5/31/2022

Note: 79900002400

THURSTON COUNTY
WASHINGTON
SINCE 1852

Thurston County GeoData Center

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-5855
Fax: 360-754-4138

MITIGATED DETERMINATION OF NON-SIGNIFICANCE
TUM-21-1888
Kirsop Crossing Division 3

Description of Proposal: Construction of a 41 lot residential subdivision.

Applicant: Evergreen Heights, LLC, Rob Rice, 1868 State Ave. NE, Olympia, WA 98506

Representative: Hatton Godat Pantier, Attn: Chris Carlson, 3910 Martin Way East, Suite B, Olympia, WA 98506.

Location of Proposal: 6139 Kirsop Road SW, Tumwater, WA 98512. Section 05, Township 17N, Range 2W. Parcel # 79900002400.

Lead agency: City of Tumwater, Community Development Department.
The lead agency for this proposal has determined that, as conditioned, does not have a probable significant adverse impact on the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead-agency. This information is available to the public on request.

This MDNS assumes that the applicant will comply with all City ordinances and development standards governing the type of development proposed, including but not limited to, street standards, storm water standards, high groundwater hazard areas ordinance standards, water and sewer utility standards, critical areas ordinance standards, tree protection standards, zoning ordinance standards, land division ordinance standards, building and fire code standards, and level of service standards relating to traffic. These ordinances and standards provide mitigation for adverse environmental impacts of the proposed development.

Findings:
The project creates a new intersection at Kirsop Road and Kirsop Extension Road. Intersection construction requires off site road improvements to align the new intersection.

The Tumwater Boulevard/I-5 northbound ramps intersection currently operates at LOS F during both peak periods for the northbound left-turn movement. The project is projected to add several trips to this intersection. The City has recently developed a SEPA improvement project for the Tumwater Boulevard/I-5 interchange that include intersection improvements at the northbound I-5 ramps intersection, with a

peak hour per trip impact fee of $4,219 for each trip entering the interchange area.

Mitigation Measures:

1. The project shall construct a new intersection at Kirsop Road and Kirsop Extension Road to assure safe traffic movements. Design shall be determined prior to and through site development and grading plan review.
2. Prior to issuance of the Building Permit:
   a. Construct a roundabout at the northbound Interstate 5 On/Off Ramp and Tumwater Boulevard intersection; or
   b. Voluntarily pay a mitigation fee of $4,219 for the single AM peak trip generated by this project under RCW 82.02.020 to be used as described herein:
   Tumwater Boulevard/I-5 Interchange: The City's planned transportation improvements at the Tumwater Boulevard/I-5 interchange include converting the interchange to a roundabout diamond interchange by replacing the southbound on/off ramp signal and northbound stop controlled intersections with roundabouts.

This MDNS is issued under WAC 197-11-350; the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted no later than March 4, 2022, by 5:00 p.m.

Date: February 18, 2022

Responsible Official:

Michael Matlock, AICP
Community Development Director

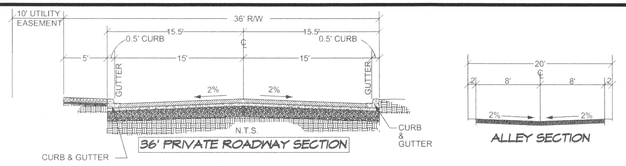
Contact person: Alex Baruch
555 Israel Road SW
Tumwater, WA 98501
abaruch@ci.tumwater.wa.us

Appeals of this MDNS must be made to the City of Tumwater Community Development Department, no later than March 10, 2022, by 5:00 p.m. All appeals shall be in writing, be signed by the appellant, be accompanied by a filing fee of $175, and set forth the specific basis for such appeal, error alleged and relief requested.

Item 2a.

PRELIMINARY PLAT AND PLANNED UNIT DEVELOPMENT OF KIRSOP CROSSING DIVISION 3

A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.



TOPO LEGEND

- MONITOR WELL
- POWER POLE
- SERVICE POLE
- POLE ANCHOR
- SANITARY SEWER MANHOLE
- CATCH BASIN
- SIGN
- EDGE OF WETLAND DELINATED BY ENVIROVECTOR SEPTEMBER 11, 2020
- STANDARD WETLAND BUFFER BASED REPORT BY ENVIROVECTOR
- BARBED WIRE FENCE
- FENCE (CATTLE PANELS)
- WOOD RAIL FENCE W/ HOG WIRE
- OVERHEAD POWER TRANSMISSION LINES
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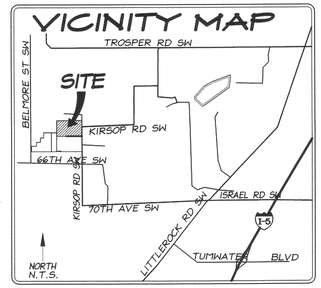
- BUILDING FOOTPRINT AT GROUND LEVEL

VICINITY MAP



DESCRIPTION

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SITE DATA/PROJECT INFOMATION

-APPLICANT-	ROB RICE EVERGREEN HEIGHTS, LLC 1868 STATE AVENUE NE OLYMPIA, WA 98506 360-754-7010 ROB@ROBRICEHOMES.COM
-REPRESENTATIVE-	JEFF PANTIER HATTON GODAT PANTIER, INC. 3910 MARTIN WAY E, SUITE B OLYMPIA, WA 98506 360-943-1599 JEFFP@HATTONPANTIER.COM
-ASSESSOR PARCEL NO.'S	79900002400
-ZONING -	SFL 4-6
-TOTAL AREA	454,169 S.F. (10.43 ACRES)
-NO. OF LOTS	41
-PUBLIC ROADWAY LENGTH	1,118 FT
-PUBLIC ROADWAY AREA	66,263 S.F. (1.52 ACRES)
-PRIVATE ROADWAY LENGTH	403 FT
-PRIVATE ROADWAY AREA	18,891 S.F. (0.43 ACRES)
-NET AREA	6.80 ACRES
-MINIMUM DENSITY SFL	4 X 6.80=27 UNITS
-MAXIMUM DENSITY SFL	6 x 6.80=41 UNITS
-PLANNED DENSITY	41/6.80=6.0 DU/AC
-OPEN SPACE	3.30 ACRES (31.6%)
-SMALLEST LOT AREA -	4,000 S.F.
-AVERAGE LOT AREA -	4,914 S.F.
-SEWER -	CITY OF TUMWATER
-WATER -	CITY OF TUMWATER
-ELECTRICITY -	PUGET SOUND ENERGY
-NATURAL GAS-	PUGET SOUND ENERGY
-COMMUNICATIONS -	COMCAST
-REFUSE -	LEMAY
-SCHOOL DISTICT-	TUMWATER

NET AREA CALC

GROSS AREA-(PUBLIC & PRIVATE ROAD)-(TRACT A & D)
10.43-(1.52+0.43)-(1.58+0.10)=6.80

TRACT USAGE/AREAS

TRACT	USEAGE	AREA (ACRES)
A	WETLAND/OPEN SPACE	1.58
B	STORM/OPEN SPACE	1.44
C	OPEN SPACE/PARK	0.28
D	RESERVED FOR FUTURE BLA	0.10
E	PRIVATE STREET	0.10
F	PRIVATE STREET	0.39

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1. ALL KNOWN WATER SUPPLIES WITHIN 200' OF THE PROJECT BOUNDARY ARE SHOWN HEREON.
2. TRACTS "A", "B", "C", "D", "E" AND "F" SHALL BE OWNED AND MAINTAINED BY THE OWNERS ASSOCIATION.
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- FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- SET 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
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- 6 RIGHT OF WAY PER SS-20-0117-TW RECORDED UNDER AUDITOR'S FILE NO. 4639030

BASIS OF BEARINGS:

PLAT OF KIRSOP CROSSING RECORDED UNDER AUDITOR'S FILE NO. 4639030

SCALE: 1"=40 FEET
0 20 40 80

BLA-0420
A.F. NO.
8609250009

VERTICAL DATUM
NGVD 29
CITY OF TUMWATER
BENCH MARK #1406
RAILROAD SPIKE IN
POWER POLE AT NW CORNER
AND 66TH AVE.
OF INTERSECTION OF KIRSOP RD.
ELEVATION = 178.83

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com
EEP 19-073

NOV. 29, 2022

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable: **Kirsop Crossing Division 3**

2. Name of applicant: **Evergreen Heights, LLC**

3. Address and phone number of applicant and contact person:

Rob Rice
1868 State Avenue NE, Ste Olympia, WA 98506 (360) 754-7010

4. Date checklist prepared: **December 1, 2021**

5. Agency requesting checklist: **City of Tumwater**

6. Proposed timing or schedule (including phasing, if applicable):

The project is intended to start construction in the Spring/Summer 2022. Infrastructure work to continue through 2022/2023.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Geotech Report, Groundwater Monitoring Report, Forestry Report, Gopher Report, Critical Areas Report, Transporation Concurrency Application/Trip Distribution Diagram, Preliminary Storm Drainage Report

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No applications are pending for other governmental approvals for the property.

10. List any government approvals or permits that will be needed for your proposal, if known.

Preliminary and Final Plat Approval, Preliminary and Final PUD Approval, Site Development/Grading Permit, Land Clearing Permit, Demolition Permits, Well Abandonment Permit, Septic Abandonment Permit, IPMP Approval, Sewer and Water Availability, NPDES Permit.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

This project proposes to subdivide 10.43 zoned Single-Family Low Density Residential (SFL) into 41 single-family lots and 6 community tracts. The community tracts will be for tree protection/open space, storm drainage and private roads.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The site address is 6139 Kirsop Road SW, Tumwater WA. Thurston County Tax Parcel No. 79900002400

46.992680 N. -122.951784 W. are the coordinates to the approximate center of the project site.

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 2%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The USDA soils map for Thurston County identifies three soil types within the project boundary. Nisqually Loamy Fine Sand, Indianola Loamy Sand and Mukilteo Muck in the wetland area at the northwest corner of the site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The preliminary grading plan prepared for the site estimates approximately 1,122 cubic yards cut and 24,047 cubic yards of fill with depths ranging from 0 to 5 feet across the site.

Fill material will be source from a licensed local supplier.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion and sedimentation are always a possibility during earthwork associated with a construction project due to mechanized grading and excavation coupled with precipitation and wind.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 55% for buildings, roads and sidewalks.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

An engineered storm water drainage and erosion control plan will be prepared for the project in accordance with the current City of Tumwater Drainage Design and Erosion Control Manual. Erosion and sediment control Best Management Practice (BMP's) will be implemented including, but not limited to, silt fences, temporary sedimentation basins, straw waddles, plastic covering of exposed soils, geotextile lined rip-rap construction entrances, silt socks in existing storm water catch basins in the vicinity of the site, etc.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

During construction of the project exhaust emissions from construction vehicles, mechanized equipment and fueled power tools will be produced. Windborne dust is also a possibility during construction of the project.

After the project is completed air emissions will be those typically associated with a residential development (i.e. passenger vehicle exhaust, fuel burning appliances, fuel burning residential landscape equipment, etc.)

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Use of vehicles, mechanized equipment and fuel powered tools with properly functioning emissions systems.

Installation of Washington State Energy Code compliant appliances in the residences.

3. Water [help]

a. Surface Water: [help]

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes.

A Critical Areas Report has been prepared for the project and found two separate jurisdictional wetlands either on or in the vicinity of the subject property.

Wetland A identified in the report is located in the northwest corner of the subject property and is part of a larger wetland complex that extends off-site.

Wetland B identified in the report is located off-site approximately 230 feet east of the project. The north edge of Wetland B is bordered by Kirsop Road.

The report also identifies a mapped Type N stream segment approximately 280 feet north of the subject property. The stream becomes a Type F stream (Fish Pond Creek) approximately 1,100 feet west of the subject property.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes.

Wetland A identified in the critical areas report prepared by EnviroVector dated August 11, 2020 located in the northwest corner of the subject site is classified as a Category III requiring a 150-foot buffer per the City of Tumwater's wetland regulations (TMC 16.28.170). ✓

Wetland report adequately addresses wetland, site plan reflects appropriate buffer. ✓

The proposed storm water drainage facility for the project and 7 of the proposed single-family lots are located outside the required 150-foot wetland buffer but within 200 feet of the delineated wetland edge of Wetland A.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Not Applicable.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The FEMA Flood Map Panel associated with the project site indicates that the project site is not within a 100-year floodplain. The Panel No. for the project site is 53067C0280E.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No withdrawal of groundwater is proposed. All residential units will be connected to the City of Tumwater's municipal water system for domestic consumption and fire protection needs.

Stormwater treated in accordance with the City of Tumwater 2018 Drainage Design and Erosion Control Manual will be infiltrated on site.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste materials are proposed to be discharged into the ground.

Storm water generated from pollution generating impervious surfaces on the project site will be collected in a series of catch basins and pipes and directed to approved treatment/infiltration designed in accordance with the City's 2018 Drainage Design and Erosion Contol Manual.

Roof water from homes will be handled by tight-lining to the on-site storm drainage system or in the case of lots adjacent to permeable pavement directed to the reservoir under the permeable pavement section.

Sewage generated from the residential units on the project site will be discharged to the City of Tumwater's sanitary sewer system.

Preliminary Drainage report and groundwater monitor report addressed high ground water.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water generated from pollution generating impervious surfaces on the project site will be collected in a series of catch basins and pipes and directed to approved treatment/infiltration designed in accordance with the City's 2018 Drainage Design and Erosion Contol Manual.

Roof water from homes will be handled by tight-lining to the on-site storm drainage system or in the case of lots adjacent to permeable pavement directed to the reservoir under the permeable pavement sections.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Not likely. A engineered stormwater drainage and erosion control plan will be developed for the site complying with the City of Tumwater's 2018 Drainage Design and Erosion Control Manual.

In addition, an Integrated Pest Management Plan (IPMP) will be developed and distributed to homeowners/property owners owning or residing in the development. An IPMP is a document that outlines Best Management Practices (BMP's) for use and storage of pesticides and fertilizers used in the urban landscape.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No. The project site will be graded to maintain the natural drainage pattern in a manner that retains all storm drainage on the project site.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

A engineered stormwater drainage and erosion control plan will be developed for the site complying with the City of Tumwater's 2018 Drainage Design and Erosion Control Manual.

Storm water generated from pollution generating impervious surfaces on the project site will be collected in a series of catch basins and pipes and directed to a treatment/infiltration facility meeting the requirements of the City's 2018 Drainage Design and Erosion Control Manual.

4. Plants [help]

a. Check the types of vegetation found on the site:

__**x**__deciduous tree: alder, maple, aspen, other
__**x**__evergreen tree: fir, cedar, pine, other
____shrubs
__**x**__grass
__**x**__pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

A professional forester's report has been prepared for the project. The forester inventoried 157 existing trees on the project site. Out of the 157 trees on the site, 35 are proposed for retention in proposed Tract A.

c. List threatened and endangered species known to be on or near the site.

After searching the US Fish and Wildlife Information for Planning and Consultation (IPaC) database no threatened or endangered species of plants were listed on or near the site.

A search of the Washington State Department of Natural Resources Natural Heritage database did not find any State listed threatened or endangered species on or near the site.

Mazama Pocket Gopher screening report showed no evidence of gopher activity

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

A landscape/tree replanting plan will be prepared by a Landscape Architect in conjunction with the advise from the project's Professional Forester.

The City of Tumwater's Tree and Vegetation Protection Ordinance requires replanting the project site to meet minimum City standards. After subtracting the wetland and wetland buffer area and proposed public right-of-way from the gross site area, a net area of 7.33 remains for calculating the required Tree Tract(s). A landscape/tree replanting plan is required. Based on City code, a minimum of 270 replacement trees will be required to planted on the project site.

✓

3-1 Mitigation provided

The landscape/tree replanting plan will also include shrubs and groundcover in tree/open space areas and landscape strips within the public rights-of-way.

e. List all noxious weeds and invasive species known to be on or near the site.

A search of the Thurston County Geodata website shows the presence of Tansy Ragwort on the property.

The Thurston County Geodata website also shows the presence of Bohemian Knotweed on an adjacent property to the north of the project site.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Other typical urban mammals would include rabbit, raccoon, squirrel, opossum, rats, mice, moles, voles, coyote, bats, frogs and salamanders.

b. List any threatened and endangered species known to be on or near the site.

The Mazama Pocket Gopher, Oregon Spotted Frog, Streaked Horn Lark and Oregon Vesper Sparrow are known to occur in the southern part of the City of Tumwater and Thurston County.

A Mazama Pocket Gopher Report and Critical Areas Report have been prepared for the project. The reports identified no presence of threatened or endangered species on the project site.

The Critical Areas Report identifies an Oregon Spotted Frog breeding area and individual occurrences approximately 200 feet north of the project site.

c. Is the site part of a migration route? If so, explain.

Western Washington is a part of the Pacific Flyway for migratory bird species.

d. Proposed measures to preserve or enhance wildlife, if any:

A landscape/tree replanting plant will be prepared by a professional Landscape Architect in conjunction with the project's Professional Forester.

Based on City code, a minimum of 270 replacement trees will be required to planted on the project site. The landscape/tree replanting plan will also include shrubs and groundcover in tree/open space areas and landscape strips within the public rights-of-way.

e. List any invasive animal species known to be on or near the site.

Although no invasive species have been observed on or near the site, the Gypsy Moth is considered invasive with known occurrences in Thurston County. The Norway Rat is also known to be present in Thurston County.

6. Energy and Natural Resources [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Energy needs for the project will include electricity and natural gas. Both energy sources will be used for heating and lighting the residences.

The residences in the project will all be constructed "solar ready" in accordance with WA State and City of Tumwater energy code requirements, but it will be left up to the home buyers to decide if solar panels will be installed for the individual units.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The units will be constructed "solar ready" and will be designed in compliance with current WA State Energy Code requirements that affect building insulation, windows, heating and cooling systems, water heater types, etc.

7. Environmental Health [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe.

No.

1) Describe any known or possible contamination at the site from present or past uses.

A search of the WA State Dept. of Ecology Toxic Cleanup database and the contaminated site layer on the Thurston Geodata website resulted in no known contamination on or in the immediate vicinity of the project site.

The ECY database did show three separate sites approximately .5 miles north of the site (Frank's site, BPA Olympia Substation and Tacoma Rail Spill).

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

There are no known hazardous chemical/conditions or hazardous liquid or gas

transmission pipeline in the vicinity of the project site.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

It is not anticipated that toxic or hazardous chemical will be used during project development and construction.

The individual households associated with the project will inevitably store small quantities of hazardous or toxic chemicals for personal use.

The existing homes and structures on the site will be demolished. In accordance with Olympic Region Clean Air Agency (ORCAA) requirements, asbestos surveys and checking for lead based paints will be required to be conducted by a licensed firm to obtain a demolition permit from ORCAA.

4) Describe special emergency services that might be required.

It is not anticipated that special emergency services will be needed related to toxic or hazardous materials.

5) Proposed measures to reduce or control environmental health hazards, if any:

Obtain demolition permits from Olympic Region Clean Air Agency prior to razing the existing homes and outbuildings on the project site.

The excavation contractor on-site will have accidental spill kits in the event of a leak or spill of equipment fuel/fluid.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Traffic from Kirsop Road Road will be the primary noise generator affecting the property.

The project site is also in the vicinity of the ADS Hancor distribution warehouse approximately 900 feet to the west.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indi-
cate what hours noise would come from the site.

Short-term noise will be created during construction of the project by construction equipment, vehicles and construction tools.

Long-term noise will be created by resident, guest and delivery vehicle traffic coming to and from the site.

Short-term noise will be created during normal construction operating hours. The project will abide by the City of Tumwater's noise regulations listed in Tumwater Municipal Code 8.08 which limit construction hour from 7 am to 8 pm on weekdays and 9 am and 8 pm on weekends.

Long-term noise from resident and guests will vary throughout the day and evening.

3) Proposed measures to reduce or control noise impacts, if any:

Compliance with City of Tumwater noise regulations outlined in Tumwater Municipal Code 8.08 and with WA State Permissible Noise Standards outline in WAC 173-60.

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

There is one manufactured home and several outbuildings on the property.

Surrounding land uses are low density residential.

There is an existing Bonneville Power Administration High Voltage Transmission corridor directly to the west of the site.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

It appears the previous owners of the site ran livestock on the property.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

The site contains one manufactured home and several outbuildings.

d. Will any structures be demolished? If so, what?

All existing structures will be demolished.

e. What is the current zoning classification of the site?

Single-Family Low Density Residential (SFL).

f. What is the current comprehensive plan designation of the site?

Single-Family Low Density Residential (SFL).

g. If applicable, what is the current shoreline master program designation of the site?

Not Applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

A portion of a Category lll wetland has be identified in the northwest portion of the site.

i. Approximately how many people would reside or work in the completed project?

Thurston Regional Planning Council data puts average household size at 2.51 people county wide. The numbers are slightly lower for the City of Tumwater at 2.38.

With a total of 41 units in the project, the number of people projected to live in the neighborhood using the City's number of 2.38 people per household is 98 people.

j. Approximately how many people would the completed project displace?

One existing manufactured home will be removed from the site.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None. The net new number of households that will be provided after project completion will be 40 units.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The project will be designed to meet all applicable Comprehensive Plan policies, Zoning regulations, Development Standards, Design Guidelines and Building and Fire Code standards adopted by the City of Tumwater.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

There are no agricultural or forest lands of long-term significance that will be impacted by the project.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

A total of 41 residential units will be provided.

The units will fall into the middle-income range.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

1 existing middle income unit would be eliminated.

c. Proposed measures to reduce or control housing impacts, if any:

None proposed.

10. Aesthetics [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The height of the single-family homes would be 35 feet or less.

Exterior material would be concrete cement siding with brick or stone accents.

b. What views in the immediate vicinity would be altered or obstructed?

Views from existing residences on the east and south sides of the property would change from a low density 10-acre homesite to a low-density single-family neighbourhood.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Compliance with the City of Tumwater Building Design Guidelines.

11. Light and Glare [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Light from the project will be produced by fixtures inside and outside the residential units. Freestanding street lighting in the public right-of-ways and private roads will be installed pursuant to City of Tumwater standards.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Not likely.

c. What existing off-site sources of light or glare may affect your proposal?

Typical lighting from existing residential uses and public streets in vicinity of the project site.

d. Proposed measures to reduce or control light and glare impacts, if any:

Compliance with the City of Tumwater's Exterior Illumination requirement outlined in Tumwater Municipal Code 18.40.035.

12. Recreation [help]

a. What designated and informal recreational opportunities are in the immediate vicinity?

Kirsop Crossing south of the site has a neighborhood playground area.

Black Lake Bible Camp, Kenneydale Park and a WDFW boat launch for Black Lake are located approximately 1 mile to the west of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Parks and open space meeting the minimum requirements of Tumwater Municipal Code 17.12.210 will be provided within the project.

The project open space with include both passive and active recreation elements.

Park impact fees will be paid at the time of building permit issuance for each single-family home in the neighborhood.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

A search of the Thurston Geodata website Historic Sites layer shows no buildings, structures or sites listed in or eligible for listing on said registers on or near the project site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

A search of the Thurston Geodata website Historic Sites layer shows no buildings, structures or sites listed in or eligible for listing on said registers on or near the project site.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

An Inadvertent Discovery Plan will be developed for the project prior to excavation/construction in accordance with Tumwater Municipal Code 18.40.065 that outlines procedure in the event of discovery of cultural or historic resources.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The site will be served from Kirsop Road SW at one location.

The new internal street system will be connected to Patio Drive in the Kirsop Crossing neighbourhood to the south as a second means of ingress/egress to the site.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

No. The nearest Intercity Transit stop is approximately .85 miles southeast of the site at the intersection of Littlerock Road and Israel Road.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The project will comply with the City minimum parking standards for the proposed residential uses within the project.

City code requires 2 off-street parking stalls per single-family residence.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

Kirsop Road will be improved to City Standard along the project frontage.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

Kirsop Road intersection Tumwater Blvd. Mitgating measures added.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

The project will generate 458 daily weekday trips. The weekday AM Peak Hour is 34 trips and the weekday PM Peak Hour is 43 trips.

The volume of truck traffic is estimated at less than 1 percent.

Trip generation was derived from the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

Payment of City of Tumwater transportation impact fees for each unit.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

Additional fire, police, and school services will be required.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Each single-family residence will pay impact fees to the Tumwater School District as a condition of building permit issuance. ✔

16. Utilities [help]

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____**Well.**

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Water and sanitary sewer will be provided by the City of Tumwater. Electricity and natural gas will be provided by Puget Sound Energy. Telephone will be provided by both Comcast and Centurylink. Cable will be provided by Comcast. Refuse and recycling service will be provided by Lemay Inc.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Chris Carlson

Name of signee: Chris Carlson, AICP

Position and Agency/Organization: Hatton Godat Pantier

Date Submitted: 12-06-2021

CITY OF TUMWATER
Reviewed by: Tami Merriman, Permit Manager
Date: February 3, 2022

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-5855
Fax: 360-754-4138

NOTICE OF PUBLIC HEARING
May 27, 2022

NOTICE IS HEREBY GIVEN that the City of Tumwater Hearing Examiner will conduct a public hearing at or about **7:00 p.m. on Wednesday, June 8, 2022**, for consideration of the following items:

Case #: **TUM-21-1887 Kirsop Crossing III Preliminary Plat and Preliminary Planned Unit Development.**

Description of Proposal: The applicant proposes to subdivide approximately 10.43 acres into a 41 single family lots.

Applicant: Evergreen Heights, LLC, 1868 State Avenue NE, Olympia, WA 98506.

Location of Proposal: 6139 Kirsop Road SW, Tumwater, WA 98512. Section 05, Township 17N, Range 2W. Parcel # 79900002400.

To comply with Governor Inslee's Proclamation 20-28, the Tumwater Hearing Examiner meetings will be conducted remotely, not in-person, using a web-based platform. The public will have telephone and online access to all meetings and hearings.

WATCH Online
Go to http://www.zoom.us/join, and enter the Webinar ID: 885 9076 5178 Passcode 799517.

LISTEN by Telephone
Call (253) 215-8782, listen for the prompts, and enter the Webinar ID: 885 9076 5178 Passcode 799517.

The City of Tumwater Hearing Examiner will hear testimony from interested parties via computer audio or by telephone by registering in advance to provide comment. Register in advance for this webinar:

https://us02web.zoom.us/webinar/register/WN_fCG_L19pSh61E35ONUR1IA

After registering, you will receive a confirmation email containing information about joining the webinar.

Written comments may be submitted to City of Tumwater, Community Development Department, 555 Israel Road SW, Tumwater, WA 98501, or by email at tmerriman@ci.tumwater.wa.us or by fax to 360-754-4138, and must be received by 6:00 p.m. on Wednesday, June 8, 2022.

The staff report for this request will be available for review five business-days prior to the public hearing. If you have any questions or would like additional information, please contact Tami Merriman, at 360-754-4180.

Do not publish below this line

Published: May 27, 2022
Posted: May 27, 2022

CITY OF TUMWATER
555 ISRAEL RD. SW, TUMWATER, WA 98501
Email: cdd@ci.tumwater.wa.us
(360) 754-4180

PRELIMINARY PLAT
Application

TUM - 21-	DATE STAMP
1887	December 9, 2021
Kerri	
RCVD BY	

Application fee: $2,750.00, plus $38.50 per lot.

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6139 Kirsop Road SW, Tumwater, WA 98512

PROJECT NAME: Kirsop Crossing Division 3 PARCEL NUMBER(s): 79900002400

APPLICANT *(please print neatly)*

NAME OF APPLICANT: Evergreen Heights, LLC

APPLICANT'S MAILING ADDRESS (COMPLETE): 1868 State Avenue NE, Olympia, WA 98506

APPLICANT'S TELEPHONE(S): 360-754-7010 APPLICANT'S E-MAIL: rob@robricehomes.com

PROJECT REPRESENTATIVE

NAME OF PROJECT REPRESENTATIVE: Hatton Godat Pantier, Attn: Chris Carlson

REPRESENTATIVE'S MAILING ADDRESS (COMPLETE): 3910 Martin Way East, Suite B, Olympia, WA 98506

REPRESENTATIVE'S TELEPHONE(S): 360-943-1599 REPRESENTATIVE'S E-MAIL: chrisc@hattonpantier.com

PROPERTY OWNER

NAME OF PROPERTY OWNER: Same as applicant

OWNER'S MAILING ADDRESS (COMPLETE):

OWNER'S TELEPHONE(S): OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

The applicant is seeking preliminary plat and planned unit development approval to subdivide 10.43 acres zoned Single-Family Low Density Residential (SFL) into 41 lots and 6 community tracts.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

Signature of Applicant/Representative Date

Please attach the **Preliminary Plat submittal checklist** to this Application.

CITY OF TUMWATER
555 ISRAEL RD. SW, TUMWATER, WA 98501
Email: cdd@ci.tumwater.wa.us
(360) 754-4180

PRELIMINARY PLANNED UNIT DEVELOPMENT Application

TUM - 21-	DATE STAMP
1889	December 9, 2021
Kerri	
RCVD BY	

Application fee: $1,320.00, plus $33.00 per lot.

SUBJECT PROPERTY

ADDRESS OF PROPERTY (COMPLETE): 6139 Kirsop Road SW, Tumwater, WA 98512

PROJECT NAME: Kirsop Crossing Division 3 PARCEL NUMBER(s): 79900002400

APPLICANT *(please print neatly)*

NAME OF APPLICANT: Evergreen Heights, LLC

APPLICANT'S MAILING ADDRESS (COMPLETE): 1868 State Avenue NE, Olympia, WA 98506

APPLICANT'S TELEPHONE(S): 360-754-7010 APPLICANT'S E-MAIL: rob@robricehomes.com

PROJECT REPRESENTATIVE

NAME OF PROJECT REPRESENTATIVE: Hatton Godat Pantier, attn: Chris Carlson

REPRESENTATIVE'S MAILING ADDRESS (COMPLETE): 3910 Martin Way E., Suite B, Olympia, WA 98506

REPRESENTATIVE'S TELEPHONE(S): 360-943-1599 REPRESENTATIVE'S E-MAIL: chrisc@hattonpantier.com

PROPERTY OWNER

NAME OF PROPERTY OWNER: Same as applicant

OWNER'S MAILING ADDRESS (COMPLETE):

OWNER'S TELEPHONE(S): OWNER'S E-MAIL:

PROJECT DESCRIPTION *(attach additional sheets and documentation, as needed)*

The applicant is seeking preliminary plat and planned unit development approval to subdivide 10.43 acres zoned Single-Family Low Density Residential (SFL) into 41 lots and 6 community tracts.

I affirm that all answers, statements, and information submitted with this application are correct and accurate to the best of my knowledge. I also affirm that I am the owner of the subject site or am duly authorized by the owner to act with respect to this application. Further, I grant permission to any and all employees and representatives of the City of Tumwater and other governmental agencies to enter upon and inspect said property as reasonably necessary to process this application. I agree to pay all fees of the City that apply to this application.

Signature of Applicant/Representative Date

Please attach the **Preliminary Planned Unit Development submittal checklist** to this Application.

Kirsop Crossing Division 3 Preliminary Plat/PUD
Project Narrative

Kirsop Crossing Division 3 represents a 41-lot preliminary plat and planned unit development comprised of 10.43 acres zoned Single-Family Low Density Residential (SFL). The project site is located at 6139 Kirsop Road SW, Tumwater, WA 98512. Thurston County tax parcel number 79900002400.

The development will provide a variety of home styles and designs including traditional front loaded garage homes and homes accessed from an alley.

The project will provide 3.30 acres of open space. Proposed Tract A is a tree/critical areas tract that is 1.58 acres in size. Tract B is a tree/stormwater tract that is 1.44 acres in size. Tract C is .28 acres in size and will be a pocket park that will include both active and passive recreation elements.

The street system will connect to Kirsop Road SW at one location and the internal public street will connect to Patio Drive and Lanai Drive in the Kirsop Crossing neighborhood to the south. The project also includes two private street tracts and one private alley tract to serve the lots associated with the project.

Gravity sanitary sewer will be extended as far north along Kirsop Road SW as possible and will transition to a force main system to serve the lots north of the new public street proposed into the development. In addition, gravity sewer will be extended from the last sewer manhole on Lanai Drive in the Kirsop Crossing neighborhood to the south and internally to serve the remainder of the lots. Water will be extended along the Kirsop Road frontage, internally within the new street and will be looped into the existing City system in Patio Drive and Lanai Drive to the south.

Several technical reports have been prepared in support of the planned design, including the following, Geotechnical Report; Groundwater Report; Stormwater Report; Wetland/Critical Area Report; Wildlife Report; Forester's Report; Topographic Survey; Transportation Trip Generation and Distribution Memo. The technical reports prepared to support the preliminary design may require amendments and/or updates as directed by the City of Tumwater during the project review process.

In accordance with the City's PUD application supporting documents requirements listed in TMC 18.36.040.C, we offer the following:

1. Each single-family lot associated with this subdivision will be individually owned and the tree/open space, private road/alley tracts will be owned by the Homeowner Association (HOA).

2. Operation and maintenance of the landscaping in the tree/open space and private street/ally tracts will be the responsibility of a Homeowner Association (HOA) that will be formed for the project. In addition, all landscaping in the public rights-of-way will be maintained by the HOA.

3. Depending upon project approvals and market demands it is anticipated that construction of the project could begin in Spring 2022 and continue through project completion.

4. As indicated in #2 above, an HOA will be formed and Covenants, Conditions, and Restrictions (CCR's) will be developed outlining maintenance responsibilities for the platted tracts provided for tree/open space and private street/alleys.

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-5855
Fax: 360-754-4138

NOTICE OF APPLICATION
Kirsop Crossing Division 3
TUM-21-1887 and TUM-21-1889
January 3, 2022

Proposal: The applicant proposes to subdivide approximately 10.43 acres into a 41 single family lots.

Applicant: Evergreen Heights, LLC, 1868 State Avenue NE, Olympia, WA 98506.

Location: 6139 Kirsop Road SW, Tumwater, WA 98512. Section 05, Township 17N, Range 2W. Parcel # 79900002400.

Complete Application: Application submitted: December 9, 2021. Application deemed complete: December 30, 2021.

Project Permit/Approvals: The following permits or approvals may be required: Preliminary Plat, Preliminary Planned Unit Development, SEPA threshold determination, Transportation Concurrency Ruling, Site Development/Grading and Building Permits.

Environmental Documents Relating to the Project: A completed environmental checklist and related reports were submitted.

Preliminary Determination of Consistency: No determination of consistency with City of Tumwater or State of Washington plans, regulations, or standards has been made. At a minimum, this project will be subject to the following plans and regulations: Tumwater Comprehensive Plan, Tumwater Zoning Code (TMC Title 18), Tumwater Environmental Policy Ordinance (TMC 16.04), the City of Tumwater Drainage Design and Erosion Control Manual, and the International Building Code.

Public Hearing: A public hearing is required. No specific date has been set, however, persons receiving this notice will be informed of the date, time, and place of the hearing a minimum of 10 days prior to the hearing date.

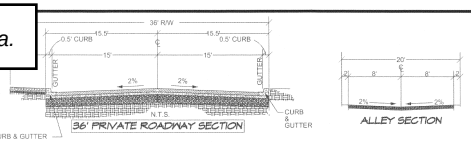
Public Comment Period: The 15 day comment period ends at 5:00 p.m. on January 18, 2022. Written comments may be submitted to City of Tumwater Community Development Department, Attn: Tami Merriman, 555 Israel Road SW, Tumwater, WA 98501, or email tmerriman@ci.tumwater.wa.us.

If you have any questions or would like additional information, please contact Tami Merriman, Permit Manager, at 360-754-4180.

Item 2a.

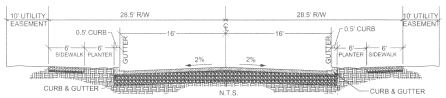
PRELIMINARY PLAT AND PLANNED UNIT DEVELOPMENT OF KIRSOP CROSSING DIVISION 3

A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.



36' PRIVATE ROADWAY SECTION

ALLEY SECTION

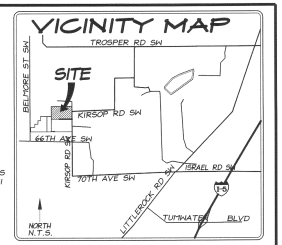


57' PUBLIC ROADWAY SECTION

TOPO LEGEND

- MONITOR WELL
- POWER POLE
- SERVICE POLE
- POLE ANCHOR
- SANITARY SEWER MANHOLE
- CATCH BASIN
- SIGN
- EDGE OF WETLAND DELINATED BY ENVIROVECTOR SEPTEMBER 11, 2020
- STANDARD WETLAND BUFFER BASED REPORT BY ENVIROVECTOR
- BARBED WIRE FENCE
- FENCE (CATTLE PANELS)
- WOOD RAIL FENCE W/ HOG WIRE
- OVERHEAD POWER TRANSMISSION LINES
- OVERHEAD UTILITIES (POWER, COMMUNICATIONS)
- WETLANDS (0.16 ACRES)
- CONCRETE
- ASPHALT
- GRAVEL
- BUILDING FOOTPRINT AT GROUND LEVEL

VICINITY MAP



DESCRIPTION

TRACT 24 OF THURSTON COUNTY FARMS, AS RECORDED IN VOLUME 8 OF PLATS, PAGE 41 IN THURSTON COUNTY, WASHINGTON.

SITE DATA/PROJECT INFOMATION

-APPLICANT-	ROB RICE EVERGREEN HEIGHTS, LLC 1868 STATE AVENUE NE OLYMPIA, WA 98506 360-754-7010 ROB@ROBRICEHOMES.COM
-REPRESENTATIVE-	JEFF PANTIER HATTON GODAT PANTIER, INC. 3910 MARTIN WAY E, SUITE B OLYMPIA, WA 98506 360-443-3591 JEFF@HATTONPANTIER.COM
-ASSESSOR PARCEL NO.'S	79900002400
-ZONING -	SFL 4-6
-TOTAL AREA	454,164 S.F. (10.43 ACRES)
-NO. OF LOTS	41
-PUBLIC ROADWAY LENGTH	1118 FT
-PUBLIC ROADWAY AREA	66,263 S.F. (1.52 ACRES)
-PRIVATE ROADWAY LENGTH	403 FT
-PRIVATE ROADWAY AREA	18,898 S.F. (0.43 ACRES)
-NET AREA	6.80 ACRES
-MINIMUM DENSITY SFL	4 x 6.80=27 UNITS
-MAXIMUM DENSITY SFL	6 x 6.80=41 UNITS
-PLANNED DENSITY	41/6.80=6.0 DU/AC
-OPEN SPACE	3.30 ACRES (31.6%)
-SMALLEST LOT AREA -	4,000 S.F.
-AVERAGE LOT AREA -	4,914 S.F.
-SEWER -	CITY OF TUMWATER
-WATER -	CITY OF TUMWATER
-ELECTRICITY -	PUGET SOUND ENERGY
-NATURAL GAS-	PUGET SOUND ENERGY
-COMMUNICATIONS -	COMCAST
-REFUSE	LEMAY
-SCHOOL DISTICT-	TUMWATER

NET AREA CALC

GROSS AREA-PUBLIC & PRIVATE ROAD)-(TRACT A & D)
10.43-(1.52+0.43)-(1.58+0.10)=6.80

TRACT USEAGE/AREAS

TRACT USEAGE	AREA (ACRES)
A WETLAND/OPEN SPACE	1.58
B STORM/OPEN SPACE	1.44
C OPEN SPACE/PARK	0.28
D RESERVED FOR FUTURE BLA	0.10
E PRIVATE STREET	0.10
F PRIVATE STREET	0.39

PLAT NOTES

1. ALL KNOWN WATER SUPPLIES WITHIN 200' OF THE PROJECT BOUNDARY ARE SHOWN HEREON.
2. TRACTS "A", "B", "C", "D", "E" AND "F" SHALL BE OWNED AND MAINTAINED BY THE OWNERS ASSOCIATION.
3. ALL EXISTING STRUCTURES, WELLS AND SEPTIC SYSTEMS TO BE DEMOLISHED/ABANDONED PRIOR TO DEVELOPMENT.

SURVEYORS NOTES

1. TITLE INFORMATION NOTED/DEPICTED HEREON IS BASED ON COMMITMENT FOR TITLE INSURANCE ISSUED BY CHICAGO TITLE INSURANCE COMPANY DATED SEPTEMBER 17, 2019 UNDER COMMITMENT NO. 190032406 (SECOND REPORT).
2. THE LAND DESCRIBED HEREON HAS BEEN ASSIGNED PROPERTY TAX ACCOUNT NO. 79900002400 BY THURSTON COUNTY.
3. A PORTION OF THE LAND DESCRIBED HEREON IS SUBJECT TO EASEMENT GRANTED TO PUGET SOUND POWER AND LIGHT COMPANY RECORDED UNDER AUDITOR'S FILE NO. 8201130013.
4. THE LAND DESCRIBED HEREON IS INCLUDED IN THE AREA OF ANNEXATION INTO THE CITY OF TUMWATER PURSUANT TO ORDINANCE NO. 02008-001 RECORDED UNDER AUDITOR'S FILE NO. 3983782.

LEGEND

- FOUND BRASS DISK IN CONCRETE STAMPED "JSP 28073"
- FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- SET 5/8" REBAR WITH PLASTIC CAP STAMPED "JSP 28073"
- VEGETATION PRESERVATION AREA (1.58 ACRES)
- (1) EASEMENT GRANTED TO PUGET SOUND POWER & LIGHT COMPANY RECORDED UNDER AUDITOR'S FILE NO. 8201130013 (SEE SURVEY NOTE #3.)
- (2) EASEMENT FOR POWER TRANSMISSION LINES GRANTED TO THE UNITED STATES OF AMERICA PER A.F. NO. 836007
- (3) PLANNED 10' WIDE UTILITY EASEMENT
- (4) PLANNED 11' WIDE RIGHT OF WAY DEDICATION
- (5) PLANNED 25' WIDE EASEMENT FOR INGRESS, EGRESS AND UTILITIES
- (6) RIGHT OF WAY PER 55-20-0117-TW RECORDED UNDER AUDITOR'S FILE NO. 4639030

BASIS OF BEARINGS: GRID BEARINGS AS RECORDED UNDER AUDITOR'S FILE NO. 4639030

SCALE: 1"=40 FEET (0, 20, 40, 80)

BLA-0420
A.F. NO.
8609250009

VERTICAL DATUM
NGVD 29
CITY OF TUMWATER
BENCH MARK #1406
RAILROAD SPIKE IN
POWER POLE AT NW CORNER
AND 66TH AVE.
OF INTERSECTION OF KIRSOP RD.
ELEVATION = 178.83

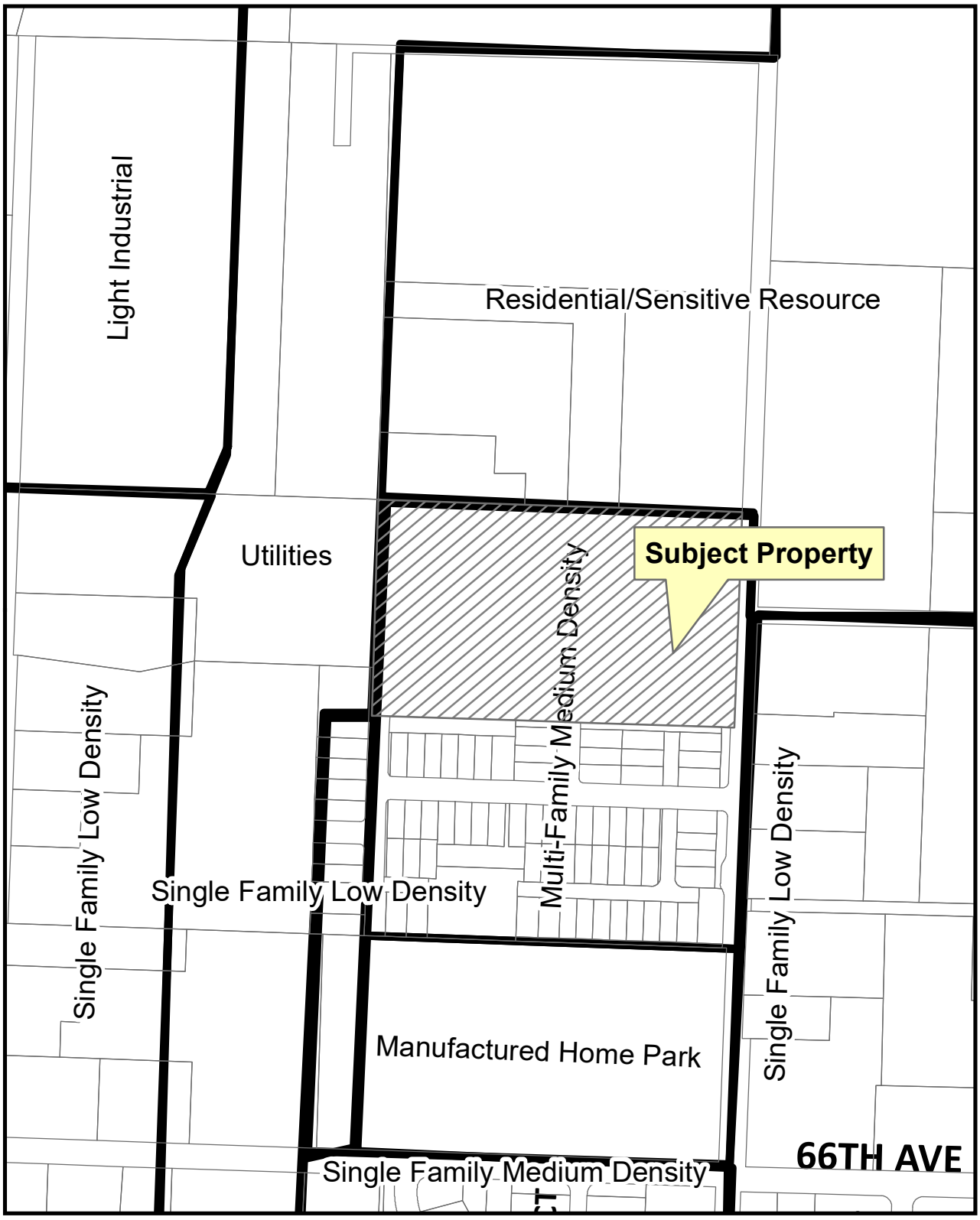
JEFF S. PANTIER — STATE OF WASHINGTON — 19073 — REGISTERED PROFESSIONAL LAND SURVEYOR

NOV. 29, 2021

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

19-073

COMPREHENSIVE PLAN DESIGNATION AND ZONING
KIRSOP CROSSING 3 TUM-21-1887 (TPN 79900002400)



DISCLAIMER:
The City of Tumwater does not warrant, guarantee, or accept any liability for the accuracy, precision, or completeness of any information shown hereon or for any inferences made herefrom.

N W E S

0 0.025 0.05 0.1 Miles

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-5855
Fax: 360-754-4138

CERTIFICATION OF PUBLIC NOTICE

I, Tami Merriman, Permit Manager for the City of Tumwater hereby certify that public notice for Kirsop Crossing Div 3, Project # TUM-21-1887 Preliminary Plat, TUM-21-1888 SEPA, TUM-21-1889 Preliminary Planned Unit Development, and TUM-21-1892 Transportation Concurrency was given as follows:

APPLICATION

Notice of Application Published in Olympian:	December 30, 2021
Notice of Application Uploaded to Website:	January 18, 2022
Notice of Application Mailed:	December 30, 2021
Notice of Application Posted:	December 30, 2021
Posting Locations:	Kirsop Road & Kirsop Ext Road
Environmental Determination Published:	February 17, 2022
Environmental Determination Uploaded to Website:	February 16, 2022
Environmental Determination Mailed:	February 17, 2022
Environmental Determination Posted:	February 17, 2022
Posting Locations:	Kirsop Road & Kirsop Ext Road

HEARING

Notice of Public Hearing Published:	May 27, 2022
Notice of Public Hearing Uploaded to Website:	May 27,2022
Notice of Public Hearing Mailed:	May 27, 2022
Notice of Public Hearing Posted:	May 27, 2021
Posting Locations:	Kirsop Road & Kirsop Ext Road

The above is an accurate accounting of the public notice provided for the project.

Tami Merriman, Permit Manager — May 31, 2022
NAME, TITLE — Date

Tami Merriman

From: Shaun Dinubilo <sdinubilo@squaxin.us>
Sent: Thursday, January 6, 2022 10:55 AM
To: Tami Merriman
Subject: RE: NOA - Kirsop Crossing Division 3

Hello Tami,

Thank you for contacting the Squaxin Island Tribe Cultural Resources Department regarding the above listed project for our review and comment. The project area has a high potential for the location of cultural resources. We recommend a cultural resources survey and report be completed for this project. We would prefer to receive an electronic copy by email once completed.

Shaun Dinubilo
Archaeologist
Cultural Resource Department
Squaxin Island Tribe
200 S.E. Billy Frank Jr. Way
Shelton, WA 98584
Office Phone: 360-432-3998
Cell Phone: 360-870-6324
Email: sdinubilo@squaxin.us

Email is my perfered method of communication.

As per 43 CFR 7.18[a][1]) of the Archaeological Resource Protection Act, Section 304 of the National Historic Preservation Act, and RCW 42.56.300 of the Washington State Public Records Act-Archaeological Sites, all information concerning the location, character, and ownership of any cultural resource must be withheld from public disclosure.

From: Kelly Wallace <KWallace@ci.tumwater.wa.us>
Sent: Tuesday, January 4, 2022 11:16 AM
Subject: NOA - Kirsop Crossing Division 3

Please see attached.

Kelly Wallace, CPT | Permit & Planning Technician
City of Tumwater, Community Development
555 Israel Rd SW | Tumwater, WA 98501
(360) 754-4180
KWallace@ci.tumwater.wa.us | www.ci.tumwater.wa.us

Tami Merriman

From: Bonnie Blessing <bonnie.blessing@gmail.com>
Sent: Tuesday, January 4, 2022 10:19 AM
To: Tami Merriman
Subject: Kirsop crossing

Hi;

Hello;
re: Kirsop Crossing
Its pretty clear the region needs more housing.
I drive Kirsop Road about once/week and used to help pick up litter in the ditches along Kirsop Road. Kirsop Crossing would add traffic to Kirsop road during and after construction. The roads from Trosper Road seem to be sinking into the muck and there's very little shoulder for walking. Stabilizign the road is complicated. Ther'es a very unique bog there on Kirsop. Its on Greenwood Peat. This type of Peat also occurs where I once lived near 85th and Greenwood in Seattle. As buildings were built on this peat, they had to drive pilings into the peat to stabilize parking lots and structures. But the wetlands there behind Kirsop are quite rare. See the lodgepole pine there. Under that is sphagnum peat, Labrador Tea, sundew. Its going away, perhaps due to fluctuations or introductions of nutrients. I don't know. Protecting the wetland is more than protecting the road surface. Is there any way large trucks for construction can avoid driving those swampy crossings as the road just seems to settle every year.
Can you ask the property owners along Kirsop between Kirsop Crossing and Trosper how their road condition and adjoining natural areas mpacts their lives.
Best
Bonnie Blessing

Tami Merriman

From: bmcsound@comcast.net
Sent: Monday, January 17, 2022 2:41 PM
To: Tami Merriman
Subject: Tum-21-1887 and Tum-21-1889

Tami,
I am opposed to the further development at 6139 Kirsop RD SW- Kirsop Crossing DIv 3.
I am concerned about the impact of more cars and trucks on the failing Kirsop RD from the proposed development site to Trosper Rd. When I moved here in the early 2000's we never had the issues of this many cars using this road as a major thoroughfare. This has caused the road to deteriorate , property damage, and cause safety issues with anyone wanting to walk or kids and dogs play in our yards. Many cars drive at very high speeds.
I am concerned about the water runoff and where all that water will go. This is a sensitive area. This used to be a salmon run area. The city has already choked off the flow of water which has created even more flooding issues to our properties.
I am also concerned about the wildlife in this area that will be affected with more housing.

Brian McCarroll

Tami Merriman

From: Joseph Darbro <josephdarbro@gmail.com>
Sent: Tuesday, January 18, 2022 7:08 AM
To: Tami Merriman
Subject: Public comment re Kirsop development

Hi Tammy

We purchased our home on Kirsop Rd SW in 2018 and really feel priveledged to be here. Truly, I can still hardly believe it.

Among the best parts of our dwelling is the tight nit community of neighbors who looks after each other and celebrates joys together. Dale, Barbara, Ron and his family, Carrie & Brian, Ted and his family...

We also deeply love the swamp, the nature, a relative seclusion from the pollution of the busy Trosper Rd area. We love the sound of frogs at night and of the ducks who fly over our home almost daily.

My family was disheartened when we learned that the developer Rob Rice had purchased acres of forest at the end of the East side of Kirsop to be developed into suburban style homes... once developed, that land will never go back to serving the Earth and the creatures that live there.

We are now also concerned about the newly planned development on the West side of Kirsop, where the farm with horses currently sits. In addition to the relative loss of Nature in this little corner of our world we are concerned about potential increase in traffic, litter, impacts to the wildlife and pollution.

Also there is no sidewalk on our little street and I use it to commute to work by bike and to go for bike rides with my little one (using a bike trailer). We are concerned for the risks an increase in car traffic may create for our safety when biking and more generally for our little one as he gains more independence and seeks to explore the outside world.

This road where we live is special, we hope it does not develop into decay...

We also understand that housing is a human need and that the cost of housing can only become achievable for many with added supply. We understand that making determination regarding approval of development projects it is a complex matter which involves balancing the needs and interests of community, environment and business interest.

Thank you for taking time to understand our view and for incorporating it into the bigger picture you are bringing to light.

JD Darbro, Jasmine & Sam

Tami Merriman

From: KSWorth <ksworth@protonmail.com>
Sent: Tuesday, January 18, 2022 4:36 PM
To: Tami Merriman
Subject: Re: Public Comment - Kirsop Crossing Division 3 Application

City of Tumwater - Community Development Department
Attn: Tami Merriman, Permit Manager
555 Israel Road SW, Tumwater, WA 98501

Good afternoon,

I write about the notice of application my husband and I received regarding Kirsop Crossing Division 3, TUM-21-1887 and TUM-21-1889.

There are many mature trees on that property, including several on the boundary line between what is labeled Tract H (adjacent to the proposed lots 12-18) on the map on the backside of the notice we received and the proposed new development. While there are trees periodically along the boundary line between the current and proposed developments, in particular, there is a clustered patch of trees along the boundary line between proposed lots 17 and 18 and Tract H. We are fairly certain that there are rabbits and at least one owl living in that patch of trees.

I write to encourage conservation of at least some of these trees, both for natural beauty and habitat. If there is a safety reason, such as the trees are diseased or structurally unsound, that these trees cannot be saved and incorporated into the new development in some way, I am hopeful the developer will plant new trees to help mitigate the loss of these trees.

I understand that Tumwater has a tree protection ordinance, but as I did not see a reference to that ordinance or a tree plan in the notice, I am unsure whether it has been considered or applies to this situation.

Sincerely, and with thanks for your consideration,

Katie Worthington

Tami Merriman

From: Rick Guthrie <guthrie.rick@gmail.com>
Sent: Saturday, January 15, 2022 10:46 AM
To: Tami Merriman
Subject: Kirsop Crossing 3

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Tami Merriman,

I am in favor of the development of Kirsop Crossing #3 adjacent to Kirsop Crossing #1, where I live.

Currently, the proposed development Kirsop Crossing #3 is a home and pasture for horses. It will be a loss to see the horses go. This property has remained undeveloped for many years. As a result several, a dozen or so, magnificent trees have grown up, approximately 80 feet tall, maybe taller. There are other trees also on this property that are smaller. The smaller trees just do not match the grandeur that the huge tall trees provide.

I have looked at a Rob Rice development off of Log Cabin Rd in Olympia. The development is very nice and it represents what is common to see for new developments in urban settings, i.e. tall trees are clear cut and new trees are planted. Eighty foot trees in these new developments have become a thing of the past. Kirsop Crossing is different because so much of this location is rural. I think that one of the things that helps to provide the rural experience are trees, not just the planting of new trees but the retention of very tall Evergreen trees that currently exist. I know my neighbors enjoy these tall trees and the birds that land on the limbs for us to see and hear.

My request is that the very tall, approximately 80 foot tall, trees be required to remain and not be cut down as part of the Kirsop Crossing #3.

Thank you,
Rick Guthrie

Tami Merriman

From: Rick Guthrie <guthrie.rick@gmail.com>
Sent: Sunday, January 16, 2022 5:07 PM
To: Tami Merriman
Subject: Kirsop Crossing #3

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Tammi Merriman,

I believe the ground to the north of Kirsop Crossing #3 is a wet land and prone to flooding. Several homes along Kirsop Rd. experience flooding and pump water onto Kirsop Rd. I am concerned that with the changes in our weather that the wetland could easily flood Kirsop Crossing #3. Please make sure the evaluations for surface water and flooding take the recent weather patterns and the flooding of the land to the north of Kirsop Crossing #3 into consideration.

Thank you,
Rick Guthrie

Tami Merriman

From: Rick Guthrie <guthrie.rick@gmail.com>
Sent: Sunday, January 16, 2022 5:18 PM
To: Tami Merriman
Subject: Kirsop Crossing #3 - community property

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Tammi Merriman,

The addition of Kirsop Crossing #3's 38 lots increases the size of Kirsop Crossing significantly. A combined neighborhood of 112 residences is no longer a mid-sized development. Please make sure Kirsop Crossing #3 has space for children to play including basketball. Also, many of the homes in Kirsop Crossing #1 are ideal for single and/or retiree households. Myself, and I believe several of my adult neighbors would benefit from a pickleball court. Perhaps the pickleball court could be shared with the basketball court in Kirsop Crossing #3. I think having a "play area" within Kirsop Crossing #3 is critical so that children do not have to go more than two or three blocks to participate in fitness related activities. Kirsop Crossing #1 has a "play area" on the southern perimeter and is too far from Kirsop Crossing #3 to be easily accessible or safe.

Thank you,
Rick Guthrie

Tami Merriman

From: Rick Guthrie <guthrie.rick@gmail.com>
Sent: Friday, January 21, 2022 10:17 AM
To: Tami Merriman
Subject: Kirsop #3 - Tall trees - doves

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Tammi Merriman,

On the subject of very tall trees, can your forester confirm whether or not the Dove birds nest in these trees? I heard these beautiful birds recently and they sound magnificent. I believe they are Doves. The point I would like to make is that I don't hear the Doves coming from any of the trees planted in Kirsop Crossing #1 or #2. These birds definitely nest in the trees located on the proposed Kirsop Crossing #3. With the approval of Kirsop Crossing #3 we will lose the enjoyment of the horses and the donkey. My request is that we do everything possible to maintain the habitat for these Dove birds. The sounds they make are really wonderful and it keeps something no longer found in Kirsop Crossing #1 and #2.

Thank you,
Rick Guthrie

City Hall
555 Israel Road SW
Tumwater, WA 98501-6515
Phone: 360-754-4140
Fax: 360-754-4142

Memo

To: Tami Merriman, Permit Manager

From: Mary Heather Ames, Transportation Manager

Date: January 8, 2022

Re: Transportation Concurrency – Kirsop Crossing Div. 3

Based on the Trip Generation and Distribution prepared for the Kirsop Crossing Division 3 project (undated, received December 9, 2021) and the City of Tumwater Capital Facilities Plan, the City finds that the Kirsop Crossing Division 3 project is concurrent in regards to Transportation conditioned as follows:

1. Shall pay Transportation Impact Fees per the Fee Resolution current at time of permit application.
2. Shall construct transportation improvements as shown on the approved formal site plan.
3. A recent study of the I-5 interchange at Tumwater Boulevard indicates improvements are needed in order to meet established safety and level of service standards. This project shall either:
    a. Construct a roundabout at the northbound Interstate 5 On/Off Ramp and Tumwater Boulevard intersection;
    b. Voluntarily pay a mitigation fee of $4,219 per peak trip generated by this project under RCW 82.02.020 to be used as described herein:
    Tumwater Boulevard/I-5 Interchange: The City's planned transportation improvements at the Tumwater Boulevard/I-5 interchange include converting the interchange to a roundabout diamond interchange by replacing the southbound on/off ramp signal and northbound stop controlled intersections with roundabouts.
4. Shall reconstruct the intersection at the Kirsop Road access as determined through design and transportation review.

March 4, 2022

Alex Baruch, SEPA Contact
City of Tumwater
Development Services Department
555 Israel Road Southwest
Tumwater, WA 98501

Dear Alex Baruch:

Thank you for the opportunity to comment on the mitigated determination of nonsignificance for the Kirsop Crossing Division 3 Project (TUM-21-1888) located at 6139 Kirsop Road Southwest as proposed by Evergreen Heights, LLC. The Department of Ecology (Ecology) reviewed the environmental checklist and has the following comment(s):

SOLID WASTE MANAGEMENT: Derek Rockett (360) 407-6287

The applicant proposes to demolish an existing structure(s). In addition to any required asbestos abatement procedures, the applicant should ensure that any other potentially dangerous or hazardous materials present are removed prior to demolition. It is important that these materials and wastes are removed and appropriately managed prior to demolition. It is equally important that demolition debris is also safely managed, especially if it contains painted wood or concrete, treated wood, or other possibly dangerous materials. Please review the "Dangerous Waste Rules for Demolition, Construction, and Renovation Wastes," on Ecology's website at: Construction & Demolition Guidance. All removed debris resulting from this project must be disposed of at an approved site. All grading and filling of land must utilize only clean fill. All other materials may be considered solid waste and permit approval may be required from your local jurisdictional health department prior to filling. Contact the local jurisdictional health department for proper management of these materials.

TOXICS CLEANUP: Thomas Middleton (360) 407-7263

If contamination is suspected, discovered, or occurs during the proposed SEPA action, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily apparent, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator for the Southwest Regional Office (SWRO) at (360) 407-6300. For assistance and information about subsequent cleanup and to

identify the type of testing that will be required, contact Thomas Middleton with the SWRO, Toxics Cleanup Program at (360) 407-7263.

WATER QUALITY/WATERSHED RESOURCES UNIT:
Evan Wood (360) 407-7320

Erosion control measures must be in place prior to any clearing, grading, or construction. These control measures must be effective to prevent stormwater runoff from carrying soil and other pollutants into surface water or stormdrains that lead to waters of the state. Sand, silt, clay particles, and soil will damage aquatic habitat and are considered to be pollutants.

Any discharge of sediment-laden runoff or other pollutants to waters of the state is in violation of Chapter 90.48 RCW, Water Pollution Control, and WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and is subject to enforcement action.

Construction Stormwater General Permit:
The following construction activities require coverage under the Construction Stormwater General Permit:

1. Clearing, grading and/or excavation that results in the disturbance of one or more acres **and** discharges stormwater to surface waters of the State; and
2. Clearing, grading and/or excavation on sites smaller than one acre that are part of a larger common plan of development or sale, if the common plan of development or sale will ultimately disturb one acre or more **and** discharge stormwater to surface waters of the State.
    a) This includes forest practices (including, but not limited to, class IV conversions) that are part of a construction activity that will result in the disturbance of one or more acres, **and** discharge to surface waters of the State; and
3. Any size construction activity discharging stormwater to waters of the State that Ecology:
    a) Determines to be a significant contributor of pollutants to waters of the State of Washington.
    b) Reasonably expects to cause a violation of any water quality standard.

If there are known soil/ground water contaminants present on-site, additional information (including, but not limited to: temporary erosion and sediment control plans; stormwater pollution prevention plan; list of known contaminants with concentrations and depths found; a site map depicting the sample location(s); and additional studies/reports regarding contaminant(s)) will be required to be submitted. For additional information on contaminated construction sites, please contact Carol Serdar at Carol.Serdar@ecy.wa.gov, or by phone at (360) 742-9751.

Additionally, sites that discharge to segments of waterbodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high

pH, or phosphorous, or to waterbodies covered by a TMDL may need to meet additional sampling and record keeping requirements. See condition S8 of the Construction Stormwater General Permit for a description of these requirements. To see if your site discharges to a TMDL or 303(d)-listed waterbody, use Ecology's Water Quality Atlas at: https://fortress.wa.gov/ecy/waterqualityatlas/StartPage.aspx.

The applicant may apply online or obtain an application from Ecology's website at: http://www.ecy.wa.gov/programs/wq/stormwater/construction/ - Application. Construction site operators must apply for a permit at least 60 days prior to discharging stormwater from construction activities and must submit it on or before the date of the first public notice.

Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments, please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(GMP:202200747)

cc: Derek Rockett, SWM
Thomas Middleton, TCP
Evan Wood, WQ

Tami Merriman

From: Lauren Whybrew <lauren.whybrew@orcaa.org>
Sent: Friday, February 18, 2022 8:24 AM
To: Alex Baruch
Cc: Rob Wyland
Subject: ORCAA Comment on TUM-21-1888 Kirsop Crossing 3
Attachments: MDNS site plan checklistr.pdf

Greetings,

I recently reviewed a an environmental checklist for Evergreen Heights LLC Construction of a 41 lot residential subdivision, located at 6139 Kirsop Road SW in Tumwater. The project proposes the demolition of the existing manufactured home and several outbuildings. Olympic Region Clean Air Agency (ORCAA) has the following comments for the applicant:

ORCAA regulations require an asbestos survey for all demolition projects. Demolition projects by definition also include renovations performed to load-bearing structural members on the current building as part of a remodel.

Prior to any demolition project, the following must be completed:

- A good faith asbestos survey must be conducted on the structure by a certified Asbestos Hazardous Emergency Response Act (AHERA) building inspector;
- If asbestos is found during the survey, an ORCAA Asbestos Removal Notification must be completed and all asbestos containing material must be properly removed prior to the demolition; and,
- If the structure is 120 sq. ft. or greater, an ORCAA Demolition Notification must be submitted regardless of the results of the asbestos survey. There is a mandatory 14-day waiting period after ORCAA receives notification, so we recommend the applicant complete the Demolition Notification promptly after receiving the survey.

**These requirements are specific to ORCAA and are not synonymous with any city or county permitting jurisdiction requirements*

Helpful Links:

A list of certified asbestos contractors is available at https://www.orcaa.org/wp-content/uploads/2020/01/Asbestos_Contractors_Jan2020.pdf

The Demolition Notification form is available at https://www.orcaa.org/asbestos-demolition-programs/demolition-notification/

If applicable, the Contractor Asbestos Removal Application is available at https://www.orcaa.org/asbestos-demolition-programs/contractor-asbestos/

If you have any questions or concerns regarding the process, please contact Rob Wyland by email (cc'd) or by calling our main office at 360-539-7610.

Thank you,

Lauren Whybrew, Engineer I

Olympic Region Clean Air Agency - "Clean Air is Everyone's Business!"
2940 Limited Lane NW · Olympia WA 98502 · www.orcaa.org
(360) 539-7610 ext. 107 · 1-800-422-5623

Tami Merriman

From: Jolivette, Stephanie (DAHP) <stephanie.jolivette@dahp.wa.gov>
Sent: Thursday, May 5, 2022 3:55 PM
To: Tami Merriman
Cc: Beth Mathews; Shaun Dinubilo; Brad Beach; Dan Penn; Seth Russell; James, Justine
Subject: DAHP Concur RE: Cultural Resources Assessment submitted for 2022-01-00319 Kirsop Crossing 3 Tumwater
Attachments: 2022-01-00319_DAHP_Concur_FollowIDP_KirsopCrossing_79900002400.pdf

Hello Tami,

The DAHP has been provided a copy of the survey report entitled "Cultural Resource Assessment for the Kirsop Crossing Division 3, Tumwater, Thurston County, WA." Please see the attached letter from the DAHP concurring with the results and recommendations in the survey report, and recommending that the project move forward follow an Inadvertent Discovery Plan.

Feel free to contact me if you have questions about these recommendations.
Best,
Stephanie

My hours are 8 am – 4:30 pm Monday - Friday. Staff no longer have land lines. For a directory of staff cell phone numbers please see the Meet the Staff page on our website.

Stephanie Jolivette | Local Government Archaeologist
(pronouns: she / her / hers)
Work Cell: 360-628-2755 | stephanie.jolivette@dahp.wa.gov

Department of Archaeology & Historic Preservation | www.dahp.wa.gov
1110 Capitol Way S, Suite 30 | Olympia WA 98501
PO Box 48343 | Olympia WA 98504-8343

From: Beth Mathews <antiquityconsulting@gmail.com>
Sent: Thursday, April 21, 2022 8:05 AM
To: DAHP SEPA (DAHP) <sepa@dahp.wa.gov>; Shaun Dinubilo <sdinubilo@squaxin.us>; Brad Beach <beach.brad@nisqually-nsn.gov>; Dan Penn <dpenn@chehalistribe.org>; Seth Russell <srussell@cowlitz.org>; James, Justine <jjames@quinault.org>; Chris Carlson <ChrisC@hattonpantier.com>
Subject: Cultural Resources Assessment submitted for 2022-01-00319 Kirsop Crossing 3 Tumwater

External Email

I have submitted the assessment and APE for 2022-01-00319 the Kirsop Crossing 3, 6139 Kirsop Rd SW, Olympia, WA. We conducted a pedestrian and shovel probe survey on March 31 to April 1 but did not observe cultural resources in the project area. We recommend compliance with an IDP.
The report is attached here.

Please let me know if I can do anything to assist during your review.
Thank you,
B

--
Beth Mathews, MA, RPA
Archaeologist & Principal
Antiquity Consulting, LLC
1107 West Bay Dr NW, Suite 101, Olympia, WA
360.819.4998 office M-F 0900am-500pm
360.463.2622 cell
antiquityconsulting@gmail.com
www.antiquityconsulting.com

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

May 5, 2022

Tami Merriman
Planner
City of Tumwater

In future correspondence please refer to:
Project Tracking Code: 2022-01-00319
Property: City of Tumwater Kirsop Crossing Division 3 TUM-21-1887 and TUM-21-1889
Re: Archaeology - Concur with Survey; Follow Inadvertent Discovery Plan

Dear Tami Merriman:

The State Historic Preservation Officer (SHPO) and the Department of Archaeology and Historic Preservation (DAHP) has been provided with documentation regarding the above referenced project. In response, we concur with the results and recommendations made in the survey report. Specifically, as no cultural resources were found during the survey, we do not recommend further direct archaeological supervision of the project. However, we do recommend that a standard Inadvertent Discovery Plan is followed during all ground disturbing activities.

Please note that the recommendations provided in this letter reflect only the opinions of DAHP. Any interested Tribes may have different recommendations. We appreciate receiving copies of any correspondence or comments from Tribes or other parties concerning cultural resource issues that you receive.

These comments are based on the information available at the time of this review and on behalf of the SHPO pursuant to Washington State law. Please note that should the project scope of work and/or location change significantly, please contact DAHP for further review.

Thank you for the opportunity to review and comment. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is attached to any future communications about this project. Should you have any questions, please feel free to contact me.

Sincerely,

Stephanie Jolivette
Local Governments Archaeologist
(360) 586-3088
Stephanie.Jolivette@dahp.wa.gov

Tami Merriman

From: Alex Baruch
Sent: Tuesday, February 22, 2022 1:25 PM
To: Tami Merriman
Subject: FW: Kirsop Crossing Division 3

Hi Tami,

I can handle this inquiry if you'd like me to send them the requested information. Let me know and I'll copy you on the response.

Sincerely,

Alex Baruch | **he/him**
Associate Planner, Community Development
City of Tumwater
555 Israel Rd SW | Tumwater, WA 98501
(360) 754-4180 | ABaruch@ci.tumwater.wa.us
www.ci.tumwater.wa.us

From: no-reply@enotify.visioninternet.com <no-reply@enotify.visioninternet.com>
Sent: Tuesday, February 22, 2022 1:22 PM
To: Alex Baruch <ABaruch@ci.tumwater.wa.us>
Subject: Kirsop Crossing Division 3

Message submitted from the <City of Tumwater, WA> website.

Site Visitor Name: Cheryl Threatt
Site Visitor Email: threatt_cheryl@yahoo.com

I would like to see (read) the completed environmental check list as well as other file information, regarding this planned 41 lot subdivision. I am particularly interested in information regarding roads. Thank You

Tami Merriman

From: Alex Baruch
Sent: Tuesday, February 22, 2022 4:10 PM
To: threatt_cheryl@yahoo.com
Cc: Tami Merriman
Subject: Kirsop Crossing Division 3
Attachments: TUM-21-1888 MDNS site plan SEPA checklist.pdf; Concurrency Ruling 02-08-2022.pdf; Generation and Distribution 12-09-2021.pdf

Good afternoon Cheryl,

I hope you are doing well. I have attached the MDNS, preliminary plat and environmental checklist (TUM-21-1888 MDNS site plan SEPA checklist document) and traffic impact analysis with concurrency ruling (Generation and Distribution and Concurrency Ruling documents) per your request. Please let us know if you have any follow-up questions or any other documentation you would like us to send over.

Sincerely,

Alex Baruch | **he/him**
Associate Planner, Community Development
City of Tumwater
555 Israel Rd SW | Tumwater, WA 98501
(360) 754-4180 | ABaruch@ci.tumwater.wa.us
www.ci.tumwater.wa.us

Tami Merriman

From: Matt Webb
Sent: Tuesday, April 5, 2022 3:03 PM
To: threatt_cheryl@yahoo.com
Cc: Jeff Query; Alex Baruch
Subject: Kirsop Crossing 3
Attachments: Preliminary Civils 12-09-2021.pdf; 2015 General Sewer Plan - FINAL a.pdf

Greetings Cheryl.

Our Transportation manager will respond to question #1. Her name is Mary Heather Ames. I sent her your email.

I have attached the preliminary civil drawings of the plat and a map showing existing sewer. They will be extending sanitary sewer from their plats to the south. All lots will be connected to the sewer system.

Regards,

Matt

From: Cheryl Threatt <threatt_cheryl@yahoo.com>
Sent: Monday, March 7, 2022 12:56 PM
To: Alex Baruch <ABaruch@ci.tumwater.wa.us>
Subject: Kirsop Crossing

Thank you for sending me documents I asked for. I have a few questions and I am hoping you will forward to the appropriate department/person.

1. Assuming around 100 more cars will travel Kirsop Rd. to Trosper (versus traveling Kirsop to 70th) on the road per day, will Mr. Rice or the city of Tumwater fix the road which now goes over/across the wetland'? This part of Kirsop continually buckles. Also, there is a 14,000 lb. restriction on Kirsop. How does this work with dump trucks and other heavy machinery?

2. The documents indicate that the homes will be connected to Tumwater's sewage system. Am I correct then in assuming Mr. Rice will be extending Tumwater's sewage system by laying a main sewage line and all the homes will be connected? The sewage map for Tumwater, seems to stop at Kirsop Rd.

I appreciate your time with this.

Cheryl Threatt
threatt_cheryl@yahoo.com
360 956 3358

Professional Forestry Services, Inc.

100 Ruby St. SE, Suite B
Tumwater, WA 98501

Phone (360) 943-1470

Since 1960

December 1, 2021

Jeff Pantier
Hatton Godat Pantier
3910 Martin Way E, Suite B
Olympia, WA 98506

Re: Tree Plan for Kirsop Crossing Division 3, City of Tumwater, Washington

Dear Mr. Pantier:

As you authorized, Professional Forestry Services, Inc. has inspected the trees on the site where the proposed project is to take place. The following information should satisfy your requirement for a tree plan, as needed for submission before land-clearing begins.

1. **LOCATION**

   All trees involved are on portions of parcel 79900002400, which total 10.68 acres, and are within portions of the NE¼ of Section 5, T17N, R2W, W.M., Thurston County Washington.

2. **TREES ON-SITE**

   Approximately 90% of the area is pastureland and buildings. Douglas-fir and associated species of Red Alder, Redcedar and others are scattered on the property.

   The current inventory of trees on the site are:

Douglas-fir	106
Hemlock	8
Redcedar	11
True fir	1
Red Alder & Others	31
Total Trees On-site	= 157

3. **TREES OFF SITE**

   There are no offsite trees to be impacted by this proposal.

4. TREES TO BE RETAINED

As outlined in Chapter 16.08.070R of the Tumwater Tree Ordinance, at least twelve trees per acre, or 20% of the trees on the site whichever is greater shall be retained. If this number cannot be met by existing trees, a 5% tree tract is required. Tract A (1.58 acres) and Tract C (.28 acres) are considered open space.

Required Trees: 10.43 x 12/acre = 125 Trees

Trees to be Retained On-Site:
Open Space Tract A = 35
Retained Trees = 35

Trees to be Mitigated: 125 – 35 = 90

5. TREE TRACT REQUIREMENT

10.43 acres minus public right-of-way (1.52) minus wetland/buffer (1.58) = 7.33 x .05 = .367 acres **Required**.

Open Space Tracts on proposed Development:

Tract	Acres
A	1.58
C	0.28
Total Tree Tracts =	1.86 acres **Planned**

Jeff Pantier, Hatton Godat Pantier
Tree Plan – Kirsop Crossing Division 3
December 1, 2021

6. PROTECTION OF TREES BEING RETAINED

In our opinion, a four-foot high protection fence would protect the proposed trees from any entry by equipment. Six-foot steel fence posts need to be placed at 6-8' intervals along the fence to keep the fence erect during land-clearing.

7. ADDITIONAL TREES TO BE PLANTED

As currently planned, 270 additional trees (90 x 3) will need to be planted to meet the tree ordinance standards. Any trees to be planted on the individual lots and street trees will be addressed in the landscape plan, contracted by the developer. The 270 additional trees will be planted on the open space tracts.

8. DEPARTMENT OF NATURAL RESOURCES PERMIT

All land clearing permits will need to be approved by City of Tumwater.

Once the land-clearing permit is approved by the City of Tumwater and **before land-clearing begins**, PFSI will meet on-site with the owner or owner's representative to make sure there is ample protection of the trees being retained.
If further information is needed in regard to the trees on this site, please contact us.

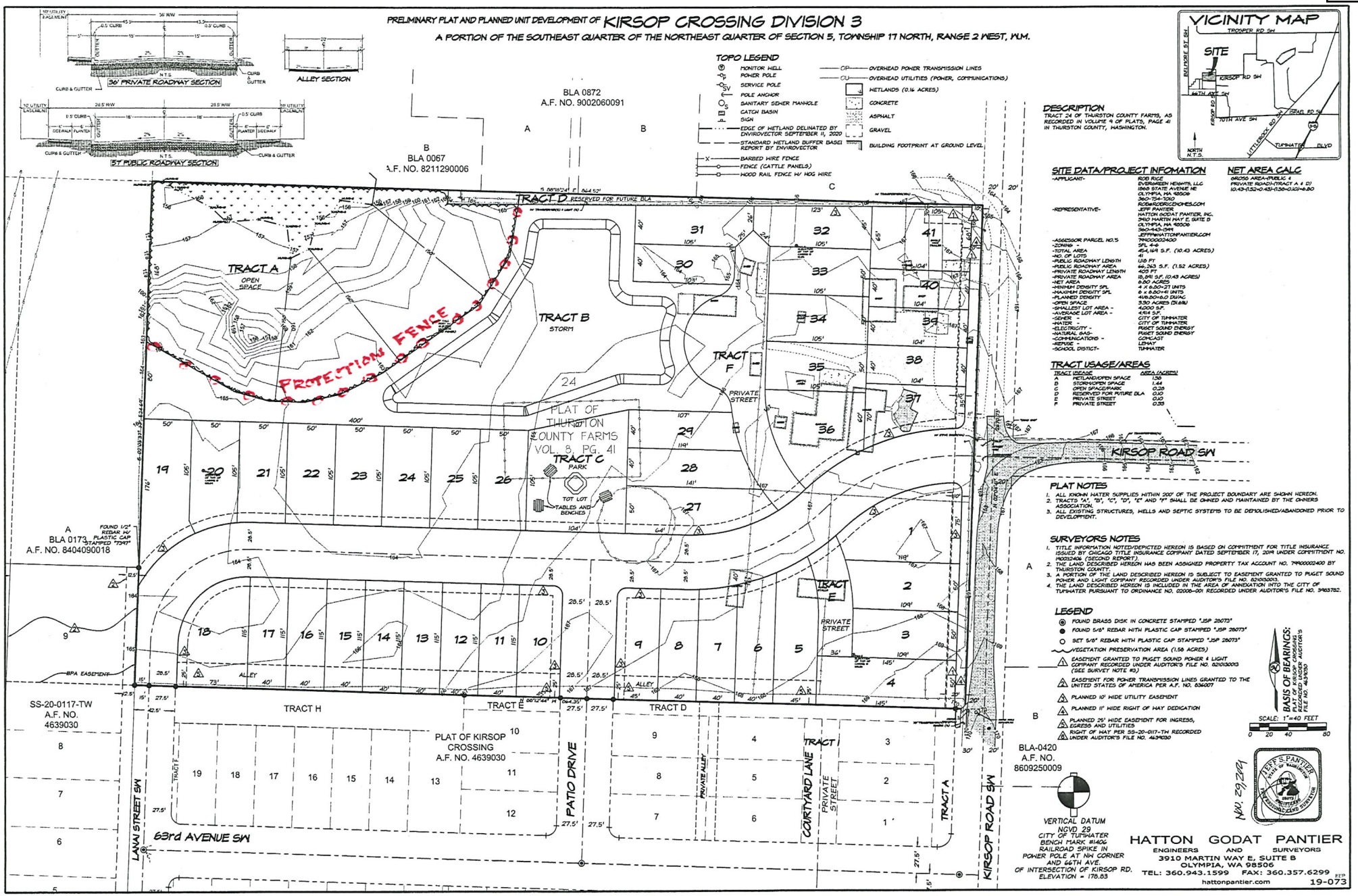
Sincerely,

Michael D. Jackson, CF, ACF
Professional/Certified Forester #1244

Enclosure: Map Exhibit I

MDJ: dkd

EXHIBIT I


PRELIMINARY PLAT AND PLANNED UNIT DEVELOPMENT OF KIRSOP CROSSING DIVISION 3
A PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 5, TOWNSHIP 17 NORTH, RANGE 2 WEST, W.M.
36' PRIVATE ROADWAY SECTION
ALLEY SECTION
28' PUBLIC ROADWAY SECTION
TOPO LEGEND
MONITOR WELL
POWER POLE
SERVICE POLE
POLE ANCHOR
SANITARY SEWER MANHOLE
CATCH BASIN
SIGN
EDGE OF WETLAND DELINATED BY ENVIROVECTOR SEPTEMBER 11, 2020
STANDARD WETLAND BUFFER BASED REPORT BY ENVIROVECTOR
BARBED WIRE FENCE
FENCE (CATTLE PANELS)
WOOD RAIL FENCE W/ HOG WIRE
OVERHEAD POWER TRANSMISSION LINES
OVERHEAD UTILITIES (POWER, COMMUNICATIONS)
WETLANDS (0.16 ACRES)
CONCRETE
ASPHALT
GRAVEL
BUILDING FOOTPRINT AT GROUND LEVEL
VICINITY MAP
SITE
DESCRIPTION
TRACT 24 OF THURSTON COUNTY FARMS, AS RECORDED IN VOLUME 9 OF PLATS, PAGE 41 IN THURSTON COUNTY, WASHINGTON.
SITE DATA/PROJECT INFOMATION
NET AREA CALC
TRACT USAGE/AREAS
PLAT NOTES
SURVEYORS NOTES
LEGEND
BASIS OF BEARINGS:
SCALE: 1"=40 FEET
VERTICAL DATUM
NGVD 29
CITY OF TUMWATER
BENCH MARK #1406
RAILROAD SPIKE IN
POWER POLE AT NW CORNER
AND 66TH AVE.
OF INTERSECTION OF KIRSOP RD.
ELEVATION = 178.83
HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com
19-073
TRACT A
OPEN SPACE
TRACT B
STORM
TRACT C
PARK
TRACT D
RESERVED FOR FUTURE BLA
TRACT E
PRIVATE STREET
TRACT F
PRIVATE STREET
TRACT H
TRACT I
TRACT D
TRACT A
PROTECTION FENCE
PLAT OF THURSTON COUNTY FARMS VOL. 8, PG. 41
PLAT OF KIRSOP CROSSING A.F. NO. 4639030
BLA 0872
A.F. NO. 9002060091
BLA 0067
A.F. NO. 8211290006
BLA 0173
A.F. NO. 8404090018
SS-20-0117-TW
A.F. NO. 4639030
BLA-0420
A.F. NO. 8609250009
KIRSOP ROAD SW
63rd AVENUE SW
LANAI STREET SW
PATIO DRIVE
COURTYARD LANE
BPA EASEMENT
ALLEY
TOT LOT
TABLES AND BENCHES

KIRSOP CROSSING - DIV 3

6139 KIRSOP RD SW, TUMWATER, WA

PROJECT PROPONENT
ROB RICE
EVERGREEN HEIGHTS, LLC
1868 STATE AVENUE NE
OLYMPIA, WA 98506-4600
PH. (360) 754-7010

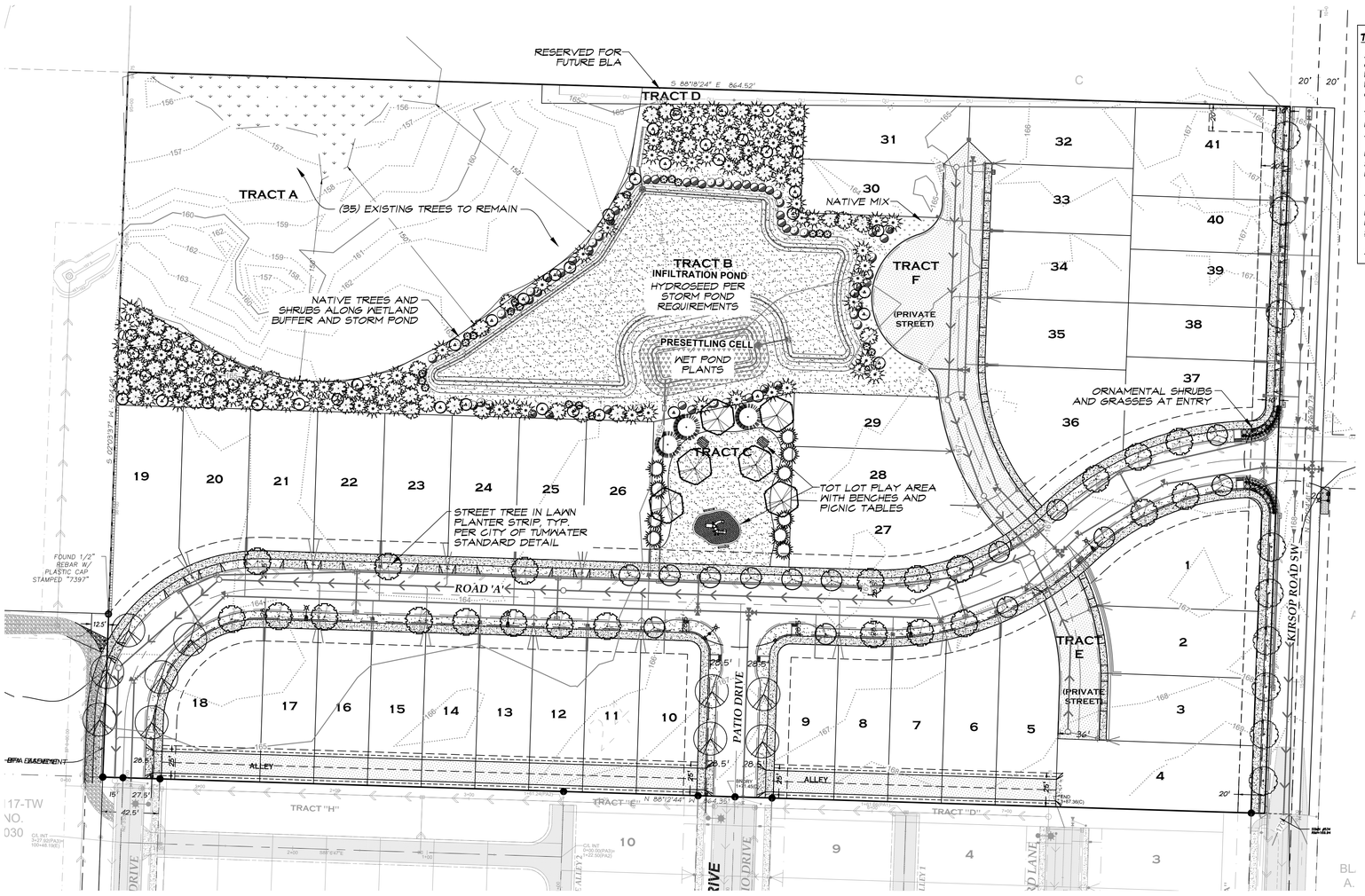
SCALE: 1" = 50'

HATTON GODAT PANTIER

CITY OF TUMWATER

VERTICAL DATUM (NGVD 29)	MERIDIAN (HORIZ DATUM)
CITY OF TUMWATER BENCH MARK #1406 RAILROAD SPIKE IN POWER POLE AT NW CORNER AND 66TH AVE. OF INTERSECTION OF KIRSOP RD. ELEVATION = 178.83	PLAT OF KIRSOP CROSSING RECORDED UNDER AUDITOR'S FILE NO. 4639030

DESIGNED BY: DL
DRAWN BY: DL
CHECKED BY: CC
DATE: NOVEMBER 2021
SCALE: H 1" = 50'
V N/A



TREE SUMMARY

AS OUTLINED IN CHAPTER 16.08.070R OF THE TUMWATER TREE ORDINANCE, AT LEAST 20% OF THE TREES ON THE SITE OR 12 TREES PER ACRE, WHICHEVER IS GREATER, SHALL BE RETAINED. ALSO, 5 PERCENT OF THE AREA MUST BE DESIGNATED AS "TREE PROTECTION OPEN SPACE".

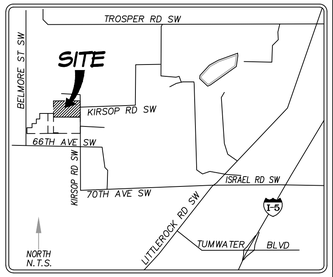
TREE TRACT 'A' 1.56 ACRES AND TRACT 'C' 0.28 ACRES = 1.84 ACRES
10.43 ACRES - R.O.W. (1.52 AC) - WET. BUFFER (1.58) = 7.33 X .05 = .367 AC. REQUIRED

12 X 10.43 ACRES = 125 TREES REQ.
EX. TREES IN TRACT 'A' = 35
125 - 35 (RETAINED) = 90 TREES TO BE MITGATED

ADDITIONAL TREES TO BE PLANTED = 90 X 3 FOR EACH TREE = 270

19 TRACT 'C' TREE PROTECTION OPEN SPACE
196 TRACT 'B' STORM TRACT
55 STREET TREES

270 TREES TOTAL



VICINITY MAP

PRELIMINARY PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	NOTES	QTY.
Deciduous Trees	STREET TREES				
	Acer t. x. A.p. 'Warrenred'	Pacific Sunset Maple	2" CAL.	B&B	22
	Tilia Cordata 'Halka'	Summer Sprite Linden	2" CAL.	B&B	9
	Malus x 'Prairifire'	Prairifire Crabapple	2" CAL.	B&B	14
	Fraxinus excelsior 'Golden Desert'	Golden Desert Ash	2" CAL.	B&B	10
	OPEN SPACE TREES				
	Cercidophyllum japonicum	Katsura Tree	2" CAL.	B&B	6
Conifer Trees	OPEN SPACE TREES				
	Calocedrus decurrens	Incense Cedar	6'-7' HT.	B&B	3
	Chamaecyparis nootkatensis 'Pendula'	Weeping Alaskan Cedar	6'-7' HT.	B&B	10
	STORM TRACT TREES				
	Acer circinatum	Vine Maple	6'-7' HT.	B&B	46
	Thuja plicata	Western Red Cedar	6'-7' HT.	B&B	64
	Psuedotsuga menziesii	Douglas Fir	6'-7' HT.	B&B	86
Shrubs	OPEN SPACE/ENTRY SHRUBS				
	Nandina dom. Gulf Stream'	Gulf Stream Nandina	3 GAL.		17
	Pennisetum a. 'Hameln'	Dwarf Fountain Grass	1 GAL.		32
	Hemmerocallis	Daylily	1 GAL.		36
	STORM TRACT SHRUBS				
	Cornus stolonifera	Red-Twig Dogwood	3 GAL.		21
	Physocarpus capitatus	Pacific Ninebark	5 GAL.		28
	Vaccinium ovatum	Evergreen Huckleberry	5 GAL.		32
NATIVE MIX	Arctostaphylos uva-ursi Gaultheria shallon Mahonia repens	Kinnikinnick Evergreen Salal Lon Oregon Grape	1 GAL	36" O.C.	35 35 35
WET POND	Iris pseudacorus Sagittaria latifolia Scirpus acutus Carex obnupta Juncus effusus	Yellow Flag Arrowhead Bulrush Sedge Rush	PLUGS	24" O.C.	200 200 200 200 200
	HYDROSEED LAWN				

NOTES:
1. AN IRRIGATION SYSTEM PROVIDING FULL COVERAGE IN ALL LAWN AND SHRUB AREAS SHALL BE INCLUDED IN THIS PROJECT.

2. LANDSCAPING AND IRRIGATION SYSTEM SHALL BE PROFESSIONALLY MAINTAINED FOR THE LIFE OF THIS PROJECT.

3. FINAL PLANT QUANTITIES AND LOCATIONS WILL BE DETERMINED BY FINAL APPROVED LANDSCAPE PLAN

TOPOGRAPHIC NOTE:
THE EXISTING TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, IN PART, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, HGP CANNOT ENSURE ITS ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF THAT INFORMATION OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.

CONSTRUCTION STAKING:
THIS PROJECT MUST BE STAKED PRIOR TO CONSTRUCTION BY THE DESIGN ENGINEER OR A LICENSED LAND SURVEYOR.

RECORD DOCUMENTS:
THE CONTRACTOR SHALL FURNISH HATTON GODAT PANTIER WITH A DRAWING(S) SHOWING THE CHANGES HE/SHE HAS MADE TO THE DESIGN DRAWING(S).

THIS DRAWING DOES NOT REPRESENT A RECORD DOCUMENT, UNLESS CERTIFIED BY HATTON GODAT PANTIER.

ANY ALTERATIONS TO THE DESIGN SHOWN HEREON MUST BE REVIEWED AND APPROVED BY HATTON GODAT PANTIER.

NOTE: THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 811 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION.

STATE OF WASHINGTON
DAVID LOUTHAIN
21764
EXP. 04/21/2023
LICENSED LANDSCAPE ARCHITECT

REVISIONS: DATE:

HATTON GODAT PANTIER
ENGINEERS AND SURVEYORS
3910 MARTIN WAY E, SUITE B
OLYMPIA, WA 98506
TEL: 360.943.1599 FAX: 360.357.6299
hattonpantier.com

KIRSOP CROSSING - DIV 3
6139 KIRSOP RD SW, TUMWATER, WA
PRELIMINARY
LANDSCAPE - TREE PLAN
A PORTION OF THE SE 1/4 OF SECTION 31 TOWNSHIP 18 NORTH, RANGE 1 WEST, W.M.

TP# 79900002400

AGENCY NO.
SHEET: 1 OF 1
E:\landscape\19-000\19-073\
INDEX: 19-073 Prelim LS.dwg
JOB: 19-073

KIRSOP PROPERTY

CITY OF TUMWATER, WASHINGTON

CRITICAL AREAS REPORT

Prepared By:

Curtis Wambach, M.S.
Senior Biologist and Principal

EnviroVector
OPTIMIZE USABLE LAND

11 August 2020

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KIRSOP PROPERTY

CRITICAL AREAS REPORT

Prepared For:

Jeff Pantier

Prepared By:

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11 August 2020

Table of Contents

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Critical Areas Report is to identify and map Critical Areas on the subject property and within three hundred (300) feet of the subject property. Potential Critical Areas and their buffers were evaluated on the subject property and within three hundred (300) feet of the subject property. This Critical Areas Report has been prepared to satisfy the City of Tumwater reporting requirements.

1.2 Property Location

The 10.68-acre subject property is located at 6139 Kirsop RD SW, City of Tumwater, Thurston County, WA in Section 05, Township 17 North, Range 02 West, Willamette Meridian. (**Figure 1, Table 1**).

Table 1. Parcels Comprising Subject Property

No#	Property Address	Parcel Number	Property Size (Acres)
1	6139 Kirsop RD SW	79900002400	10.68
1 Parcel	Total Size		10.68 acres

The permitting jurisdiction is the City of Tumwater.

1.3 Site Evaluation

A wetland evaluation was performed on 19 September 2019 covering the subject property and three hundred (300) feet of the subject property.

2.0 METHODOLOGY

This report is based on a review of existing information and field investigations. The goal of these efforts is to collect and document existing information that reflects current site conditions for assessing potential impacts.

2.1 Review of Existing Literature

Prior to conducting fieldwork, and throughout the duration of project design, biologists reviewed existing information to identify wetlands, streams, vegetation patterns, topography, soils, wildlife habitats, and other natural resources in the project area. Existing data sources that were reviewed for this report included, but were not limited to, the following:

- Washington. U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), online wetlands mapper
- Washington Department of Fish and Wildlife (WDFW) SalmonScape Database
- (WDFW) Priority and Habitat Species (PHS) Database
- Washington State Department of Natural Resources (DNR) Natural Heritage Database
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) and Flood Insurance Studies

2.2 Field Investigation

A wetland evaluation was performed on-site as well as off-site of the subject property to determine if wetlands, streams, or their buffers extend onto the subject property. The routine on-site determination method was used to identify potential wetlands using the procedures outlined in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the U.S. Army Corps of Engineers Regional Wetland Supplement (USACE, 2010).

Under the City of Tumwater Municipal Code (TMC), wetlands are defined as areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands. Wetland determination data forms were recorded for each wetland (**Appendix J**).

2.3 Wetland Identification

Prior to 2010, biologists delineated wetlands according to the methods specified in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987). At that time, these methods complied with those in the Washington State Wetland Identification and Delineation Manual (Washington State Department of Ecology [Ecology], 1997).

Following 2010, biologists evaluate wetlands according to the methods specified in the USACE's Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). These methods comply with those adopted by Washington State pursuant to Washington Administrative Code (WAC) 173-22-035, Revised Code of Washington (RCW) 90.58.380.

2.3.1 Vegetation

The dominant plants and their wetland indicator status were evaluated to determine whether the vegetation is hydrophytic. Hydrophytic vegetation is generally defined as vegetation adapted to prolonged saturated soil conditions. To meet the hydrophytic vegetation criterion, more than fifty percent (50%) of the dominant plants must be facultative, facultative wetland, or obligate, according to the plant indicator status category assigned to each plant species by the USACE National Wetland Plant List. **Table 2** provides the definitions of the indicator status categories. The scientific and common names for plants follow the currently accepted nomenclature. Dominant plant species were observed and recorded on wetland determination data forms for each data plot (**Appendix J**).

Table 2. Key to Plant Indicator Status Categories

Plant Indicator Status Category	Symbol	Description
Obligate Wetland Plants	OBL	Plants that almost always (>99% of the time) occur in wetlands but may rarely (<1% of the time) occur in non-wetlands
Facultative Wetland Plants	FACW	Plants that often (67% to 99% of the time) occur in wetlands but sometimes (1% to 33% of the time) occur in non-wetlands
Facultative Plants	FAC	Plants with a similar likelihood (33% to 66% of the time) of occurring in both wetlands and non-wetlands
Facultative Upland Plants	FACU	Plants that sometimes (1% to 33% of the time) occur in wetlands but occur more often (67% to 99% of the time) in non-wetlands
Upland Plants	UPL	Plants that rarely (<1% of the time) occur in wetlands and almost always (> 99% of the time) occur in non-wetlands

2.3.2 Soils

Soils were excavated to eighteen (18) inches or more below the surface within test pits to evaluate soil characteristics and hydrological conditions throughout the property. Soil chroma (color) is evaluated using the *Munsell Color Chart* (Munsell Color, 1988). Generally, an area must have hydric soils to be considered a wetland. Hydric soil forms when soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper portion. Biological activities in saturated soil result in reduced concentrations of oxygen that in turn result in a preponderance of organisms that use anaerobic processes for metabolism. Over time, anaerobic biological processes result in certain soil color patterns, which are used as indicators of hydric soil. Typically, low-chroma colors are formed in the matrix of hydric soil. Bright-colored redoximorphic features form within the matrix under a fluctuating water table. Other important hydric soil indicators include organic matter accumulations in the surface layer, reduced sulfur odors, and organic matter staining in the subsurface.

2.3.3 Hydrology

The project area was examined for evidence of hydrology. The USACE (2005) provides a technical standard for monitoring hydrology on such sites. This standard requires fourteen (14) or more consecutive days of flooding or ponding, or a water table twelve (12) in. (thirty [30] cm) or less below the soil surface, during the growing season at a minimum frequency of five (5) years in 10 (fifty percent [50%] or higher probability). The USACE 2010 Regional Supplement provides a list of hydrology indicators to evaluate whether the hydrology standard is satisfied. If wetland hydrology, including pooling, ponding, and soil saturation, is not clearly evident, hydrological conditions may be observed through surface or soil indicators. Indicators of hydrological conditions include oxidized root channels, drainage patterns, drift lines, sediment deposition, watermarks, historic records, visual observation of saturated soils, and visual observation of inundation.

2.4 Wetland Classification and Rating

Delineated wetlands were classified according to the USFWS Classification of Wetlands and Deepwater Habitats of the United States (USFWS, 1979). Hydrogeomorphic classifications were assigned to wetlands using USACE methods established in A Hydrogeomorphic Classification for Wetlands (USACE, 1993) and were then rated using the revised Washington State Wetland Rating System for Western Washington.

3.0 STUDY RESULTS

3.1 Background Information

3.1.1 Thurston County Geodata Soils

Three (3) soil types are mapped on the subject property by the Thurston County Geodata Center database (**Table 3; Appendix B**). One (1) of the three (3) soil types, Mukilteo muck, is listed as hydric. Mukilteo muck is mapped on the northwestern corner of the subject property.

Table 3. Thurston County Geodata Center Soil Summary

Soil Unit	Hydric	Comments
Mukilteo muck	Yes	Northwestern corner of the subject property
Indianola loamy sand 0 to 3% slopes	No	Located in the northwestern portion of the subject property
Nisqually loamy fine sand, 0 to 3% slopes	No	Located in the southeastern portion of the subject property

3.1.2 Thurston County Geodata Center Wetlands & Streams

No wetlands are mapped on the subject property by the Thurston County Geodata Center database. Two (2) wetlands are mapped to the northwest and northeast and one stream to the north within three hundred (300) feet of the subject property (**Appendix C**).

3.1.3 Thurston County Geodata Topography

No slopes were mapped on the subject property by Thurston County Geodata Center database, other than one small area on the northwestern corner of the subject property (**Appendix D)**

3.1.4 WDFW SalmonScape Database

No salmonids are mapped on the subject property by the WDFW SalmonScape database (**Appendix E**). Cutthroat (*Oncorhynchus clarkii*) and rainbow trout (*Oncorhynchus mykiss*) are mapped approximately two hundred eighty (280) feet north of the subject property.

3.1.5 Department of Natural Resources (DNR) Steam Typing Database

No Type F Streams are mapped on the subject property by the Department of Natural Resources (DNR) Stream Typing database (**Appendix F**). One (1) Type N stream segment is mapped approximately two hundred eighty (280) feet north of the subject property. This stream becomes a Type F approximately one thousand one hundred (1,100) feet west of the subject property.

3.1.6 WDFW Priority Habitats & Species (PHS) Database

No priority species or habitats are mapped on the subject property by the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species database (**Appendix G**). Freshwater Forested/Shrub wetlands are mapped north and east of the subject property within three hundred (300) feet.

An Oregon spotted frog (*Rana pretiosa*) breeding area and individual occurrences are mapped approximately two hundred (200) feet northwest of the subject property. The Oregon spotted frog is Federally listed as Threatened under the Endangered Species Act (ESA).

Cutthroat trout (*Onocorhynchus clarkii*) and Rainbow trout (*Onocorhynchus mykiss*), State Priority Species, are mapped in a stream located approximately two hundred (200) feet northwest of the subject property.

Big brown bat (*Eptesicus fuscus*), and Townsend's big-eared bat (*Corynorhinus townsendii*) are mapped in the township.

3.1.7 Department of Ecology 303(d) list & TMDL

No 303(d) listed waters are mapped on the subject property or within one (1) mile downstream of the subject property by the Department of Ecology water quality atlas (**Appendix H**). Black Lake is a 303(d) listed water located greater than one (>1) mile downstream of the subject property.

3.1.8 Department of Ecology Total Maximum Daily Load (TMDL)

No TMDL is mapped on the subject property according to the Department of Ecology Water Quality Atlas map (**Appendix I**). A TMDL "In Development" is mapped one thousand four hundred (1,400) feet to the east of the subject property.

3.2 Field Results

Two (2) wetlands, labeled Wetlands A & B, were identified on the subject property and within three hundred (300) feet of the subject property (**Figures 2; Table 4**). The on-site portion of Wetland A is located in the northwestern corner of the subject property. The off-site portion of Wetland A extends from Kirsop Road SW to the east and south to Belmore Street SW to the west (**Figure 3**). Wetland B is located south and east of Kirsop Road SW and east of the subject property. Wetland B is separated from Wetland A by Kirsop Road SW.

Table 4. Summary of Critical Areas Results

Wetlands						
Wetland	Area of Wetland		Cowardin Class	Buffer Condition	Habitat Features	Comments
	Onsite	Total				
Wetland A	2,737sf (0.06 acres)	~3,742,858 sf (85.92 acres)	PSSC[1] PEMC[2] PEMH[3] PSSH[4] PFOC[5]	Forest, lawns, single-family, roads	Logs & snags, stream, and amphibian habitat	On-site portion of wetland very small part of larger wetland
Wetland B	0 sf (0.00 acres)	26,060 sf (0.60 acres)	PSSC[1]	Roads, & Single-family	Some amphibian habitat	Separated from Wetland A by Kirsop Road SW
Stream						
Streams	Reach onsite	Fish		Riparian Habitat	Comments	
Stream A	None	Mapped by DNR 1,000 ft west of subject property		Forested, scrub-shrub, open water.	Located approximately 280 feet north of the northwestern corner of the subject property.	

1. PSSC: Palustrine Scrub-shrub Seasonally-flooded
2. PEMC: Palustrine Emergent Seasonally-flooded
3. PEMH: Palustrine Emergent Permanently-flooded
4. PSSH: Palustrine Scrub-shrub Permanently-flooded
5. PFOC: Palustrine Forested Seasonally-flooded

3.2.1 Wetland A

Wetland A is an approximately eighty-six (86) acre wetland containing multiple Cowardin classes (**Figures 2 & 3, Table 4)**. The eastern edge of the wetland is bordered by Kirsop Road SW and the western edge of the wetland is bordered by Belmore Street SW (**Figure 3**).

Wetland A has been delineated onsite and GNSS-located off-site to the east of the subject property (**Figures 4a & 4b)**. The off-site portion of Wetland A east of the subject property has been GNSS-located at points A-1nf to A-5nf (*e.g.*, nf stands for 'no flag') (**Figure 4a; Appendix A, Photo 1**). The on-site wetland boundary has been marked using orange ribbon flagging labeled sequentially from B-1 through B-14 (**Figure 4b)**. Wetland flags were GNSS located using a Trimble Geo 7x device with sub-foot accuracy and plotted onto AutoCAD. Wetland data has been collected at test plots (**Appendix J**).

Wetland Conditions

Wetland A consists of forest, shrub-shrub, and emergent areas that are seasonally or permanently flooded. The on-site portion of the wetland boundary is well defined by a topographic break and abrupt change in vegetation and hydrology (**Appendix A, Photos 13-22**).

Greater than ten percent (>10%) of the area within one hundred fifty (150) feet of Wetland A may generate potential pollutants as defined in the DOE (2014) Wetland Rating System (**Figure 6**).

Habitat within one (1) kilometer is shown in **Figure 9**, and the wetland contributing basin is shown in **Figure 8**.

Hydrology

Hydrology derives from local precipitation, groundwater, and Stream A.

Vegetation

Dominant plant species observed in Wetland A include (**Appendix A, Photos 5-24**):

- Skunk cabbage (*Lysichiton americanus*, OBL)
- Lady fern (*Athyrium filix-femina*, FACW)
- False lily of the valley (*Maianthemum dilatatum*, FAC)
- Vine maple (*Acer circinatum*; FAC)
- Salmonberry (*Rubus spectabilis*, FAC)
- Reed canarygrass (*Phalaris arundinacea*; FACW)
- Douglas spirea (*Spiraea douglasii*, FACW)
- Slough sedge (*Carex obnupta*, OBL)
- Red alder (*Alnus rubra*, FAC)
- Oregon ash (*Fraxinus latifolia*, FACW)
- Western red cedar (*Thuja plicata*, FAC)
- Western crabapple (*Malus fusca*, FACW)
- Giant horsetail (*Equisetum telmateia*, FACW)

Dominant upland plant species in the on-site portion of the wetland buffer include (**Appendix A, Photos 5-7**):

- Bigleaf maple (*Acer macrophyllum*, FACU)
- English holly (*Ilex aquifolium,* FACU)
- Trailing blackberry (*Rubus ursinus*, FACU)
- Sword fern (*Polystichum munitum*, FACU)
- Osoberry (*Oelmaria cerasiformis*, FACU)
- Red alder (*Alnus rubra*, FAC)
- Western redcedar (*Thuja plicata,* FAC)
- Vine maple (*Acer circinatum*, FAC)
- Beaked hazelnut (*Corylus cornuta*, FACU)
- Himalayan blackberry (*Rubus armeniacus*, FAC)
- Scotch broom (*Cytisus scoparius*, FACU)
- Orchard grass (*Dactylis glomerata*, FACU)
- Sweet vernalgrass (*Anthoxanthum odoratum*, FACU)
- Velvet grass (*Holcus lanatus*, FAC)
- Ryegrass (*Lolium perenne*, FAC)
- Douglas fir (*Pseudotsuga menzeisii*, FACU)
- Bracken fern (*Pteridium aquilinum*, FACU)
- Salal (*Gautheria shallon*, FACU)

Soils

Soils in Wetland A consists of a very dark gray (10YR 3/1) sandy silt from the surface to twenty (20) inches of the surface (**Appendix J**)**.0**

Upland soils adjacent to the wetland consist of a very dark grayish brown (10YR 3/2) sandy silt from the surface to six (6) inches and a dark brown (10YR 3/3) sandy silt from six (6) to twenty (20) inches of the surface (**Appendix J)**.

Habitat Features

Logs and snags, stream, and amphibian habitat were identified in Wetland A.

3.2.3 Wetland B

Wetland B is a twenty-six thousand sixty (26,060) sf wetland located approximately two hundred thirty (230) feet east of the subject property (**Figures 2 & 3, Table 4)**. The north edge of the wetland is bordered by Kirsop Road SW, which separates Wetland B from Wetland A (**Figure 3**). Wetland data has been collected at test plots (**Appendix J**).

Wetland Conditions

Wetland B consists of scrub-shrub vegetation that is seasonally flooded. Wetland boundary is well defined by a topographic break and abrupt change in vegetation and hydrology.

Greater than ten percent (>10%) of the area within one hundred fifty (150) feet of Wetland B may generate potential pollutants as defined in the DOE (2014) Wetland Rating System (**Figure 6**).

Habitat within one (1) kilometer is shown in **Figure 9**, and the wetland contributing basin is shown in **Figure 8**.

Hydrology

Hydrology derives from local precipitation, groundwater, and Wetland A.

Vegetation

Dominant plant species observed in Wetland B include (**Appendix A, Photos 5-24**):

- Skunk cabbage (*Lysichiton americanus*, OBL)
- Lady fern (*Athyrium filix-femina*, FACW)
- Vine maple (*Acer circinatum*; FAC)
- Salmonberry (*Rubus spectabilis*, FAC)
- Reed canarygrass (*Phalaris arundinacea*; FACW)
- Douglas spirea (*Spiraea douglasii*, FACW)
- Slough sedge (*Carex obnupta*, OBL)
- Western crabapple (*Malus fusca*, FACW)
- Giant horsetail (*Equisetum telmateia*, FACW)

Dominant upland plant species in the wetland buffer include (**Appendix A, Photos 5-7**):

- Bigleaf maple (*Acer macrophyllum*, FACU)
- English holly (*Ilex aquifolium,* FACU)
- Trailing blackberry (*Rubus ursinus*, FACU)
- Sword fern (*Polystichum munitum*, FACU)
- Osoberry (*Oelmaria cerasiformis*, FACU)
- Red alder (*Alnus rubra*, FAC)
- Western redcedar (*Thuja plicata,* FAC)
- Vine maple (*Acer circinatum*, FAC)
- Beaked hazelnut (*Corylus cornuta*, FACU)
- Himalayan blackberry (*Rubus armeniacus*, FAC)
- Scotch broom (*Cytisus scoparius*, FACU)
- Orchard grass (*Dactylis glomerata*, FACU)
- Sweet vernalgrass (*Anthoxanthum odoratum*, FACU)
- Velvet grass (*Holcus lanatus*, FAC)
- Ryegrass (*Lolium Penne*, FAC)
- Douglas fir (*Pseudotsuga menzeisii*, FACU)
- Bracken fern (*Pteridium aquilinum*, FACU)
- Salal (*Gautheria shallon*, FACU)

Soils

Soils in Wetland B consists of a very dark gray (10YR 3/1) sandy silt from the surface to twenty (20) inches of the surface (**Appendix J**).**0**

Upland soils adjacent to the wetland consist of a very dark grayish brown (10YR 3/2) sandy silt from the surface to six (6) inches and a dark brown (10YR 3/3) sandy silt from six (6) to twenty (20) inches of the surface (**Appendix J)**.

Habitat Features

Logs and snags, stream, and amphibian habitat were identified in Wetland B.

3.2.3 Stream A

Stream A is located further from the subject property than the larger Riparian Habitat Area under TMC 16.32.065---*Riparian Habitat Areas—Buffers*. The closest part of the stream is located two hundred eighty (280) feet of the northwestern property corner, and the largest Riparian Habitat Area under TMC 16.32.065, Table 1 is 250 feet. Thereby, the Riparian Habitat Area would not extend onto the subject property.

4.0 REGULATORY CONSIDERATIONS

Wetland regulatory considerations have been summarized in **Table 5** and illustrated in **Figure 5**.

Table 5. Summary of Regulatory Considerations

Wetlands								
Wetland	Area of Wetland		Category	Habitat Score	Land Use Intensity	Standard Buffer	Reduced Buffer	Comments
	Onsite	Total						
Wetland A	2,737sf (0.06 acres)	~3,742,858 sf (85.92 acres)	III	7 (HLH)	High	150 ft	110 ft	Buffer can be reduced with mitigation measures
Wetland B	0 sf (0.00 acres)	26,060 sf (0.60 acres)	IV	4 (LLM)	High	50 ft	40 ft	Buffers do not extend onto the subject t property
Stream								
Stream	DNR Stream Type	City Stream Type	Riparian Habitat Area	Comments				
Stream A	N	Type 4	50 ft	Stream located further from site than largest riparian Habitat Area				

4.1 Wetland A

Wetland A has been classified as a Category III wetland by the 2014 Department of Ecology Wetland Rating Form for Western Washington as required under TMC 16.28.090---*Wetlands Rating System*. Wetland A is a depressional wetland under the 2014 Department of Ecology Wetland Rating System.

Under City of Tumwater Municipal Code (TMC) Title 16---*Environment*, TMC 16.28.090---*Wetlands Rating System*, wetland buffers are calculated based on category of wetland, land use intensity, and the habitat score determined by the 2014 Washington State Department of Ecology Wetland Rating System (publication 14-06-029, effective January 2015), as revised. Wetland A scored for habitat a "High (H)" potential to provide habitat, a "Low (L)" landscape potential to support habitat, and a "High (H)" potential value to society. Wetlands that rate as an L, H, H (order of ratings are not important) receive a score of seven (7) points for total habitat functions (**Appendix K**).

The standard buffer for wetlands that score seven (7) points for Habitat Functions provided by the rating of L, H, H and HIGH Intensity proposed land use require a buffer width of one hundred fifty (150) feet (TMC 16.28.170---*Wetland buffers*, Table 16.28.170(3)---*Category III Wetland Buffer Widths)* (**Figure 5; Table 5**).

The one hundred fifty (150)-foot buffer on Wetland A could be reduced to one hundred ten (110) feet pursuant to compliance with criteria under TMC Chapter 16.28.170---*Wetland buffers*, Subsection (C)---*Buffer Width Reduction*.

4.2 Wetland B

Wetland B has been classified as a Category IV wetland by the 2014 Department of Ecology Wetland Rating Form for Western Washington as required under TMC 16.28.090---*Wetlands Rating System*. Wetland B is a depressional wetland under the 2014 Department of Ecology Wetland Rating System.

Under City of Tumwater Municipal Code (TMC) Title 16---*Environment*, TMC 16.28.090---*Wetlands Rating System*, wetland buffers are calculated based on category of wetland, land use intensity, and the habitat score determined by the 2014 Washington State Department of Ecology Wetland Rating System (publication 14-06-029, effective January 2015), as revised. Wetland B scored for habitat a "Low (L)" potential to provide habitat, a "Low (L)" landscape potential to support habitat, and a "Medium (M)" potential value to society. Wetlands that rate as an L, L, M (order of ratings are not important) receive a score of four (4) points for total habitat functions (**Appendix K**).

The standard buffer for wetlands that score four (4) points for Habitat Functions provided by the rating of L, L, M and HIGH Intensity proposed land use require a buffer width of fifty (50) feet (TMC 16.28.170---*Wetland buffers,* Table 16.28.170(3)---*Category III Wetland Buffer Widths)* (**Figure 5; Table 5**).

The fifty (50)-foot buffer on Wetland B could be reduced to forty (40) feet pursuant to compliance with criteria under TMC Chapter 16.28.170---*Wetland buffers,* Subsection (C)---*Buffer Width Reduction*. However, the wetland buffer does not extend onto the subject property.

4.3 Permitted uses in buffers---Stormwater

Under TMC 16.28.170---*Wetland buffers,* Subsection H---*Permitted Uses in a Wetland Buffer Zone,* Regulated activities shall not be allowed in a buffer zone except for the following:

1. Activities having minimal adverse impacts on buffers and no adverse impacts on regulated wetlands. These may include low-intensity, passive recreational activities such as pervious trails, nonpermanent wildlife watching blinds, short-term scientific or educational activities, and sports fishing or hunting.
2. With respect to category III and IV wetlands, surface level stormwater management facilities may be allowed in the outer twenty-five percent of the wetland buffer using best management practices; provided the community development director makes all of the following determinations.
    a. No other location is feasible.
    b. The location of such facilities will not degrade the functions or values of the wetland.
3. Stormwater management facilities are not allowed in buffers of category I or II wetlands.

4.3 Signs and Fencing of Wetlands

Under TMC 16.28.170---*Wetland buffers,* Subsection I:

1. Temporary Markers

   The outer perimeter of the wetland or buffer and the limits of those areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in such a way as to ensure that no unauthorized intrusion will occur and is subject to inspection by the community development director prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.

2. Permanent Signs

   As a condition of any permit or authorization issued pursuant to these requirements, the community development director may require the applicant to install permanent signs along the boundary of a wetland or buffer. Permanent signs shall be made of an enamel coated metal face and attached to a metal post, or another untreated material of equal durability. Signs must be posted at an interval of one per lot or every fifty feet, whichever is less, and must be maintained by the property owner in perpetuity. The sign shall be worded as follows or with alternative language approved by the community development director:

   - Protected Wetland Area
   - Do Not Disturb
   - Contact Tumwater Community Development 754-4180
   - Regarding Uses and Restrictions

3. Fencing

   The community development director shall determine if fencing is necessary to protect the functions and values of the critical area. If found to be necessary, the community development director shall condition any permit or authorization issued pursuant to these regulations to require the applicant to install a permanent fence at the edge of the wetland buffer, when fencing will prevent future impacts to the wetland. The applicant will be required to install a permanent fence around the wetland or buffer when domestic grazing animals are present or may be introduced on site.

4.4 Wetland Buffers End at Roads

Under TMC 16.28.170---*Wetland buffers*, Subsection (D)---*Reductions in Buffer Widths Where Existing Roads or Structures Lie Within the Buffer*, where a legally established, nonconforming use of the buffer exists, such as a road or structure that lies within the width of buffer recommended for that wetland, proposed actions in the buffer may be permitted as long as they do not increase the degree of nonconformity. This means no significant increase in the impacts to the wetland from activities in the buffer.

4.5 Wetland Buffer Reduction (TMC 16.28.170(C))

Under TMC Chapter 16.28.170---*Wetland buffers*, Subsection (C)---*Buffer Width Reduction*, the buffer widths recommended for land uses with high-intensity impacts to wetlands can be reduced to those widths recommended for moderate-intensity impacts under the following conditions:

1. For wetlands that score moderate or high for habitat (five points or more), the width of the buffer around the wetland can be reduced if both the following criteria are met:
   a. A relatively undisturbed vegetated corridor at least one hundred feet wide is protected between the wetland and any other priority habitats as defined by the Washington State Department of Fish and Wildlife. The corridor must be protected for the entire distance between the wetland and the priority habitat via some type of legal protection such as a conservation easement; and
   b. Measures to minimize the impacts of different land uses on wetlands, such as the examples summarized in Table 16.28.170(5), are applied.

Table 16.28.170(5): Measures to Minimize Impacts to Wetlands

Examples of Disturbance	Examples of Measures to Minimize Impacts	Activities That Cause the Disturbance
Lights	Direct lights away from wetland	Parking lots, warehouses, manufacturing, residential
Noise	Locate activity that generates noise away from wetland	Manufacturing, residential
Toxic runoff (1)	*Route all new runoff away from wetland while ensuring that wetland is not dewatered *Establish covenants limiting use of pesticides within 150 ft of wetland *Apply integrated pest management	Parking lots, roads, manufacturing, residential areas, application of agricultural pesticides, landscaping
Stormwater runoff	*Retrofit stormwater detention and treatment for roads and existing adjacent development *Prevent channelized flow from lawns that directly enters the buffer	Parking lots, roads, manufacturing, residential areas, commercial, landscaping
Change in water regime	Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns	Impermeable surfaces, lawns, tilling
Pets and human disturbance	*Use privacy fencing *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	Residential areas
Dust	Utilize best management practices to control dust	Tilled fields

Under TMC Chapter 16.28.170---Wetland buffers, Subsection (E)---*Standard Wetland Buffer Width Averaging*, standard wetland buffer zones may be modified by averaging buffer widths if it will improve the protection of wetland functions, or if it is the only way to allow for reasonable use of a parcel.

Averaging cannot be used in conjunction with the provisions for reductions in buffer widths. Wetland buffer width averaging is allowed to improve wetland protection only where a qualified wetlands professional demonstrates all of the following:

1. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a category I area adjacent to a lower rated area
2. The buffer is increased adjacent to the higher functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower functioning or less sensitive portion;
3. The total area contained in the buffer area after averaging is not less than that which would be contained within the standard buffer; and
4. The buffer at its narrowest point is never less than three-fourths of the required width.

4.6 Stream Regulations

The Washington State DNR rates Stream A as a Type N water, which is equivalent to the City of Tumwater Type 4 water. The Riparian Habitat Area (*i.e.*, Stream Buffer) for Type 4 streams is fifty (50) feet. However, the stream is located further from the subject property than the larger Riparian Habitat Area under TMC 16.32.065---*Riparian Habitat Areas—Buffers*. The closest part of the stream is located two hundred eighty (280) feet of the northwestern property corner, and the largest Riparian Habitat Area under TMC 16.32.065, Table 1 is 250 feet. Thereby, the Riparian Habitat Area would not extend onto the subject property.

5.0 LAND USE ACTION

Land use would consist of a subdivision consistent with land use under construction on the parcel adjoining the southern property line. No site plan is available at this time.

6.0 CONCLUSION

Two (2) wetlands, labeled Wetlands A & B, and one (1) stream, labeled Stream A, have been identified as part of this project to satisfy Tumwater Municipal Code requirements. The on-site portion of Wetland A was delineated and GNSS located using a Trimble Geo 7x with sub-foot accuracy. Wetland A rates as a Category III maintaining a one hundred fifty (150)-foot standard buffer under high intensity land use. The one hundred fifty (150)-foot standard buffer for high intensity can be reduced to the one hundred ten (110)-foot moderate land use intensity buffer in compliance with TMC Chapter 16.28.170 (C). Buffer averaging also is allowed under TMC Chapter 16.28.170---Wetland buffers, Subsection (E)---*Standard Wetland Buffer Width Averaging.*

Under TMC 16.28.170---*Wetland buffers*, Subsection H---*Permitted Uses in a Wetland Buffer Zone*, surface level stormwater management facilities may be allowed in the outer twenty-five percent of the wetland buffer using best management practices.

Although the proposed land sue would likely consist of a subdivision, no site plan is available at this time.

7.0 REFERENCES

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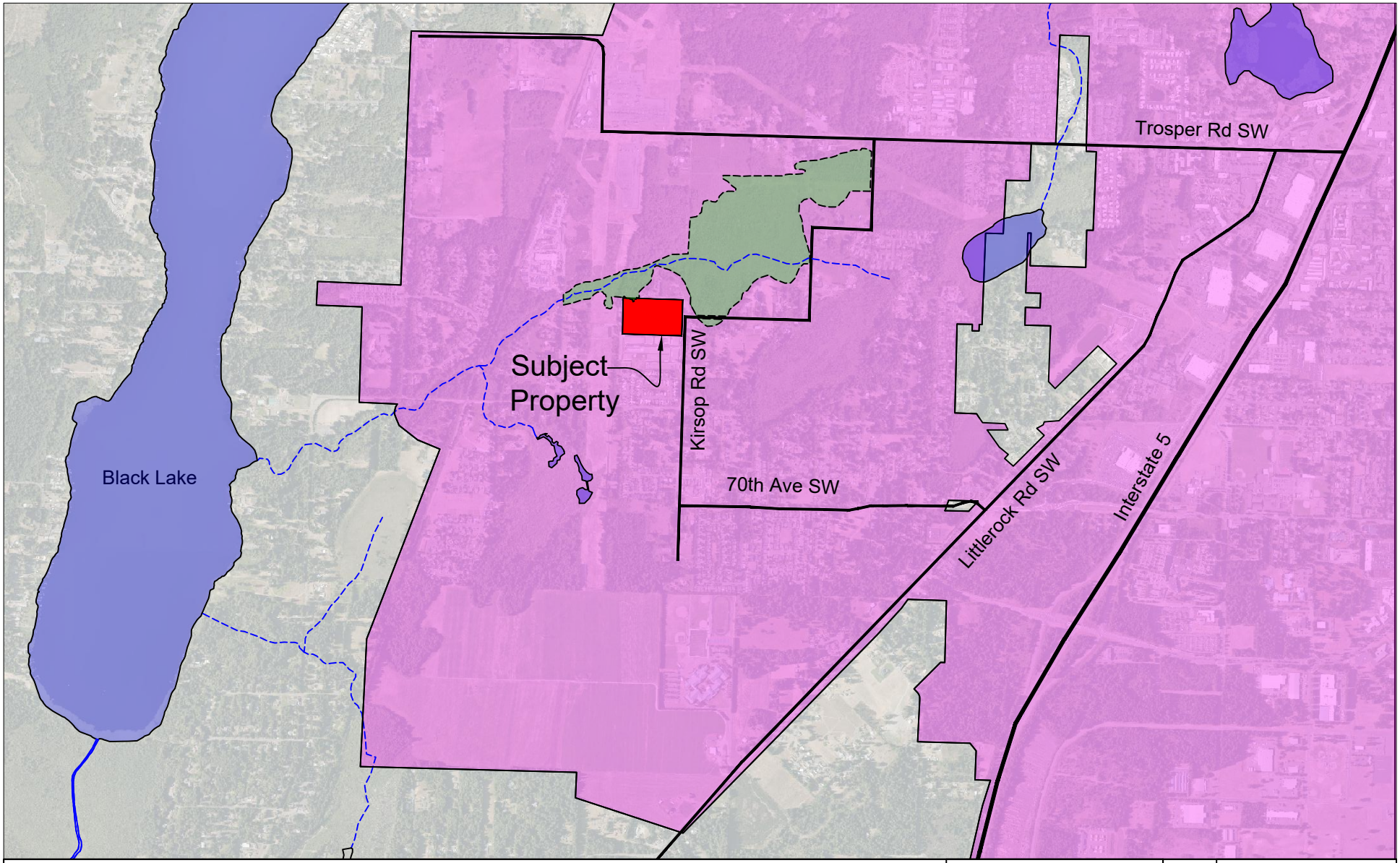
Figures



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360-790-1559

City of Tumwater
Wetland (Delineated)
Wetlands (Not Delineated)
Water Bodies
Watercourse

Figure 1

Kirsop Property

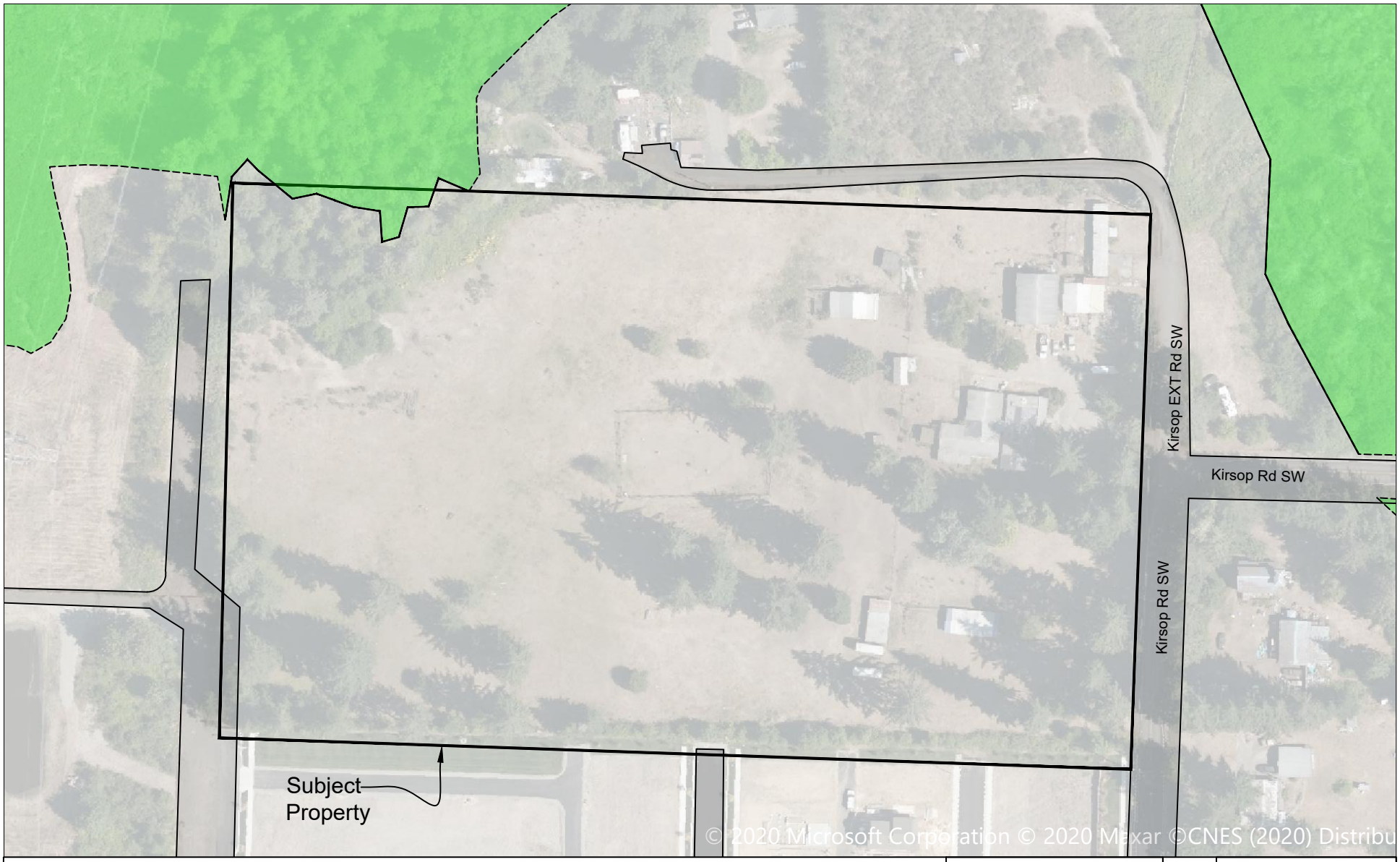
Vicinity Map

N

Scale: 1" = 2000'

0 2000'

31 July 2020



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Wetlands (Delineated)
Wetlands (Not Delineated)
Existing Roads

Figure 2

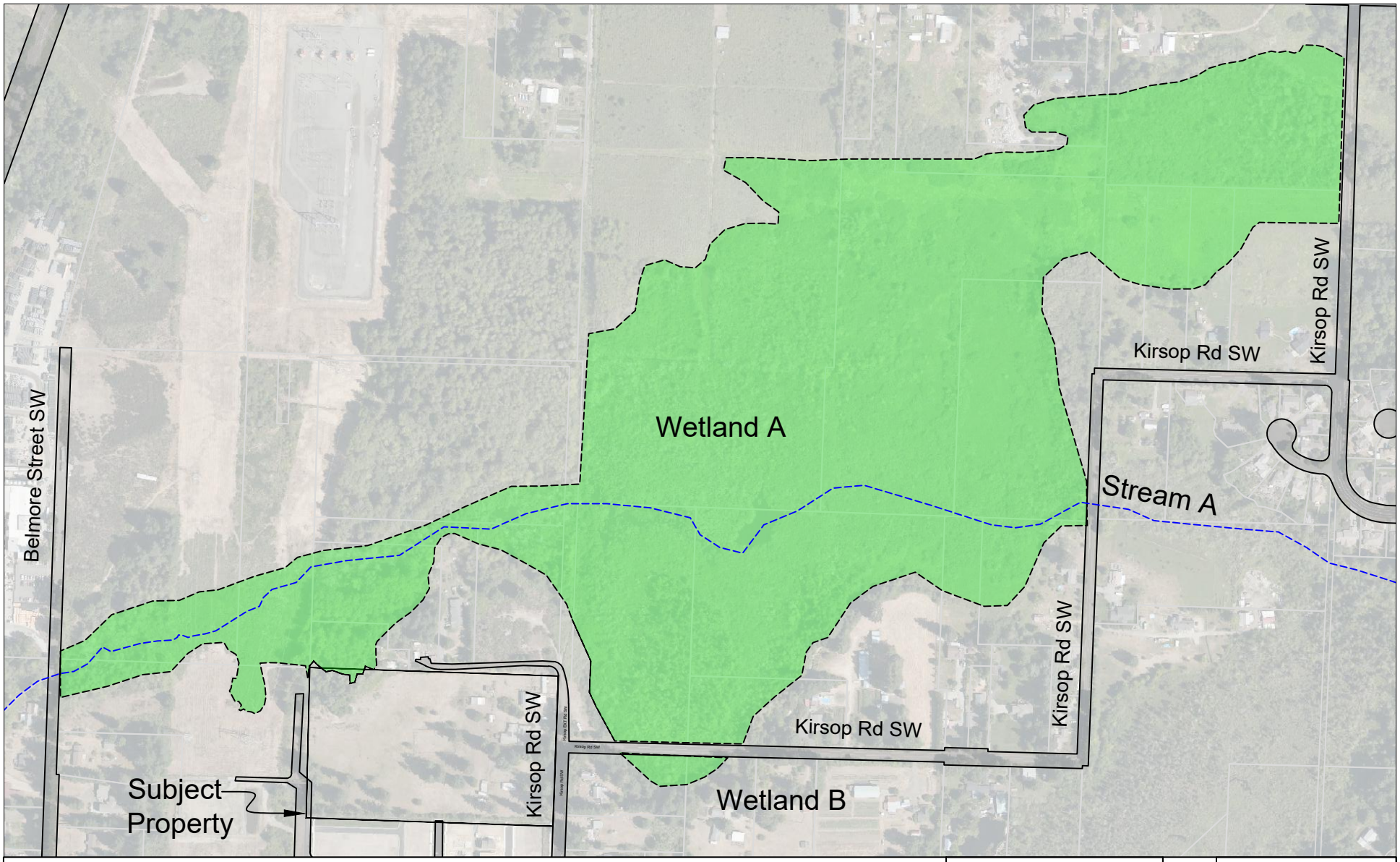
Kirsop Property

Existing Conditions

Scale: 1" = 130'

0 130'

31 July 2020



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Wetlands (Delineated)
Wetlands (Not Delineated)
Existing Roads
Stream A

Figure 3

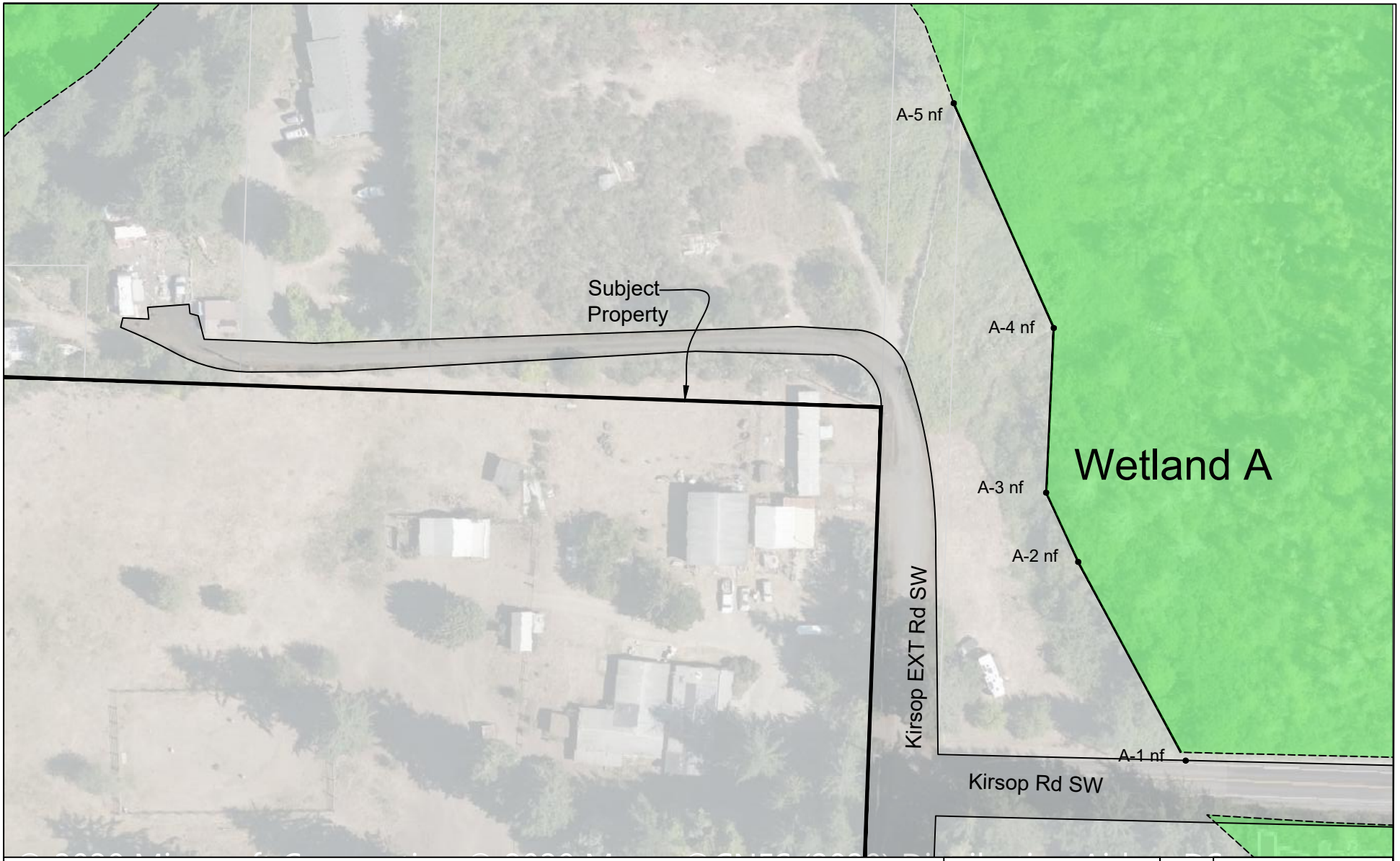
Kirsop Property

Existing Conditions

Scale: 1" = 480'

0 480'

31 July 2020



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A-1 A-2 Wetland Delineation

Wetlands (Delineated)

Wetlands (Not Delineated)

Existing Roads

Figure 4a

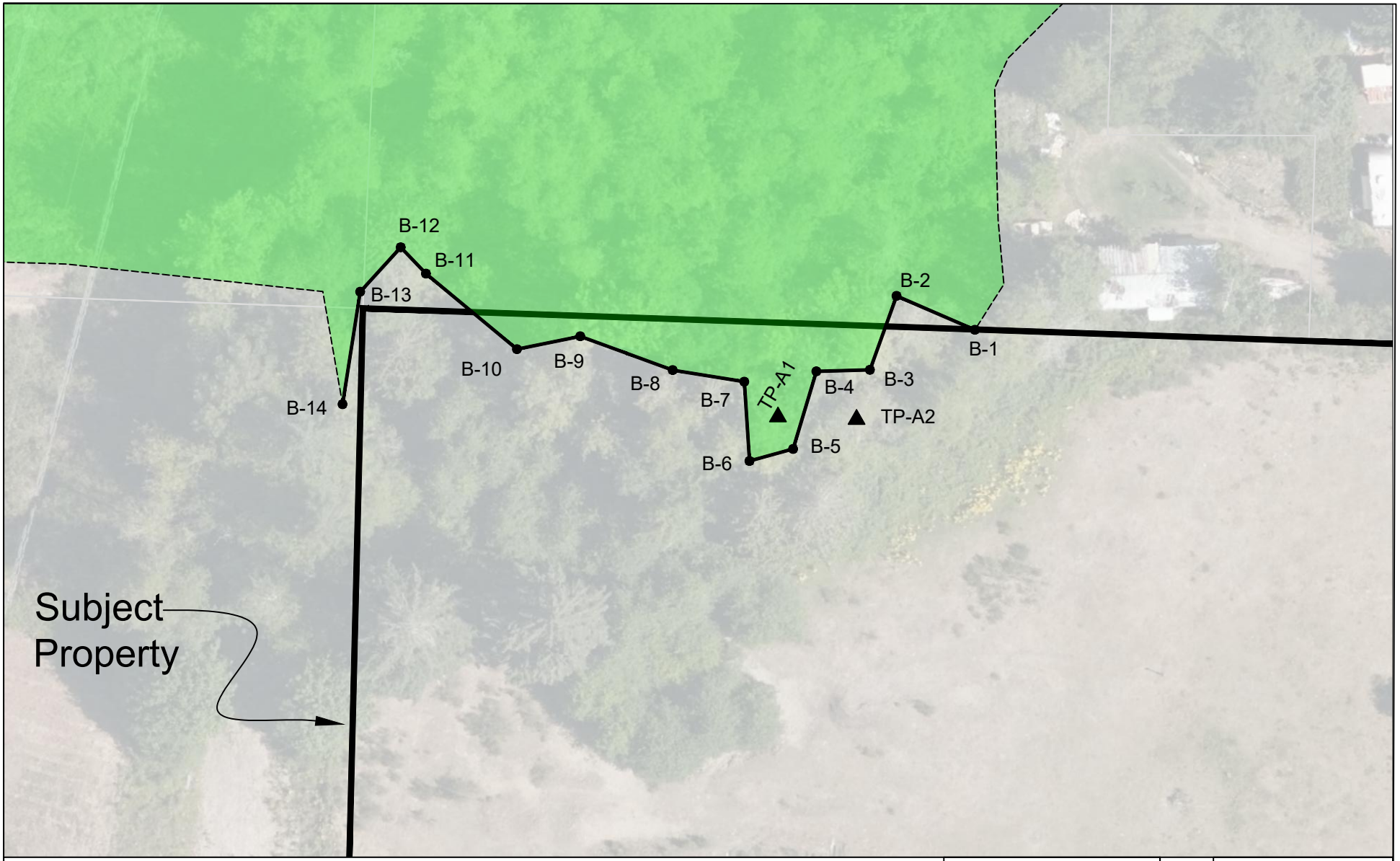
Kirsop Property

Wetland Delineation

Scale: 1" = 90'

0 90'

31 July 2020



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B-1 — B-2 Wetland Delineation

▲TP A1 Test Plot

Wetlands (Delineated)

Wetlands (Not Delineated)

Figure 4b

Kirsop Property

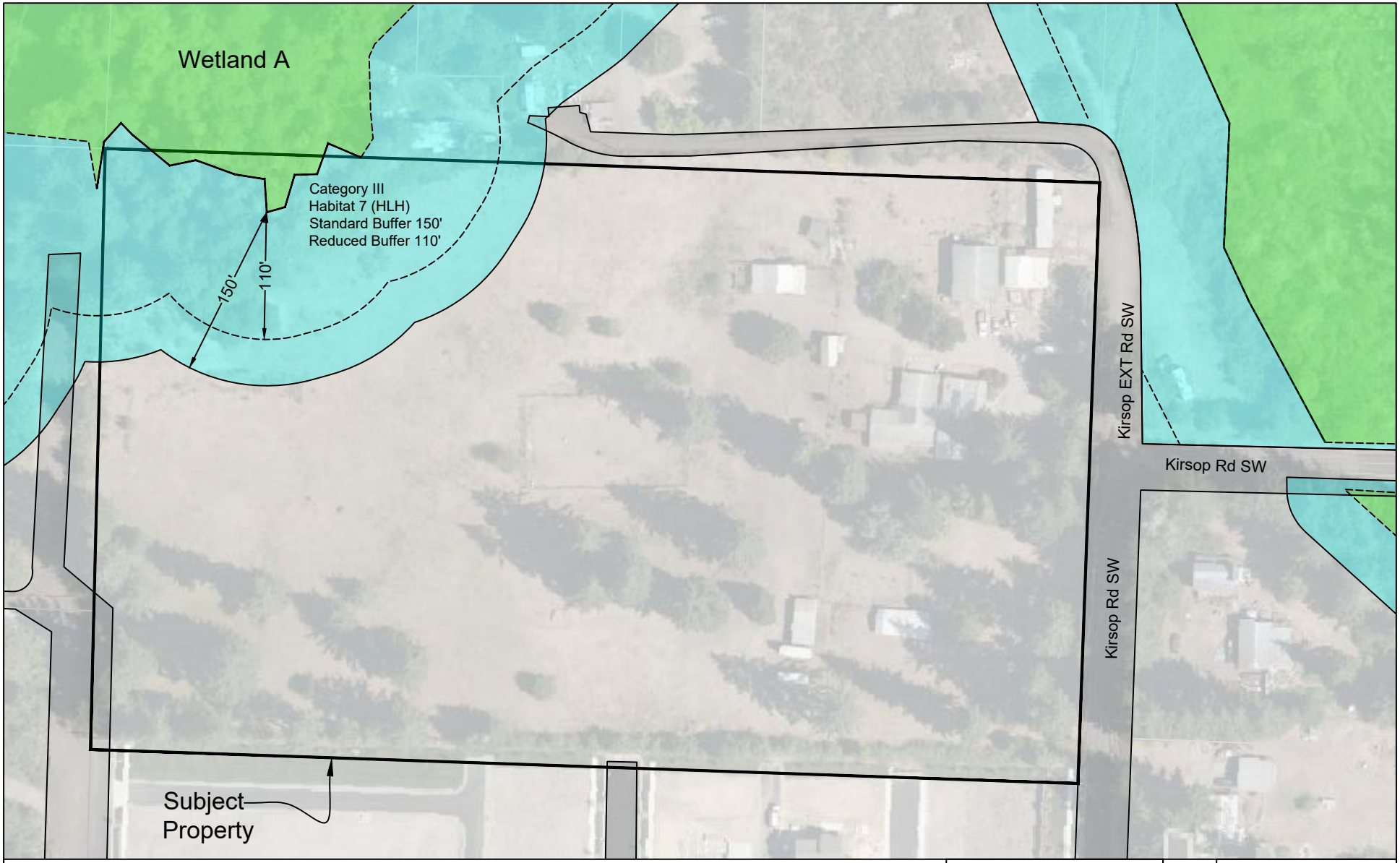
Wetland Delineation

N

Scale: 1" = 50'

0 50'

31 July 2020



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Wetlands (Delineated)

Wetlands (Not Delineated)

Standard Wetland Buffer (150 ft)

Reduced Wetland Buffer (110 ft)

Figure 5

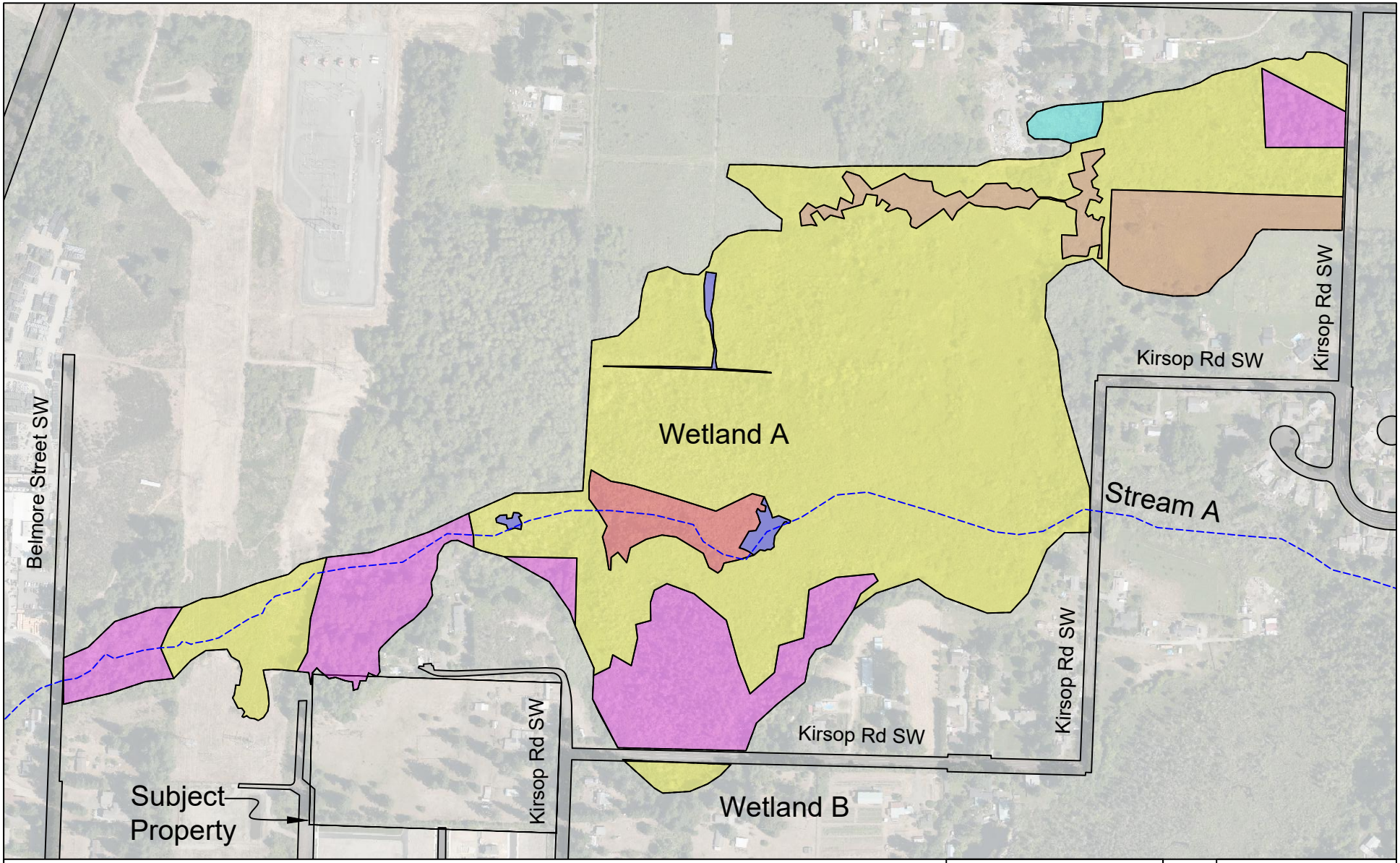
Kirsop Property

Wetland Buffers

Scale: 1" = 120'

0 120'

31 July 2020



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Scrub-shrub, Seasonally-flooded
Emergent, Seasonally Flooded
Emergent Permanently-flooded
Stream A
Scrub-shrub, Permanently-flooded
Forested, Seasonally-flooded
Open Water

Figure 6

Kirsop Property

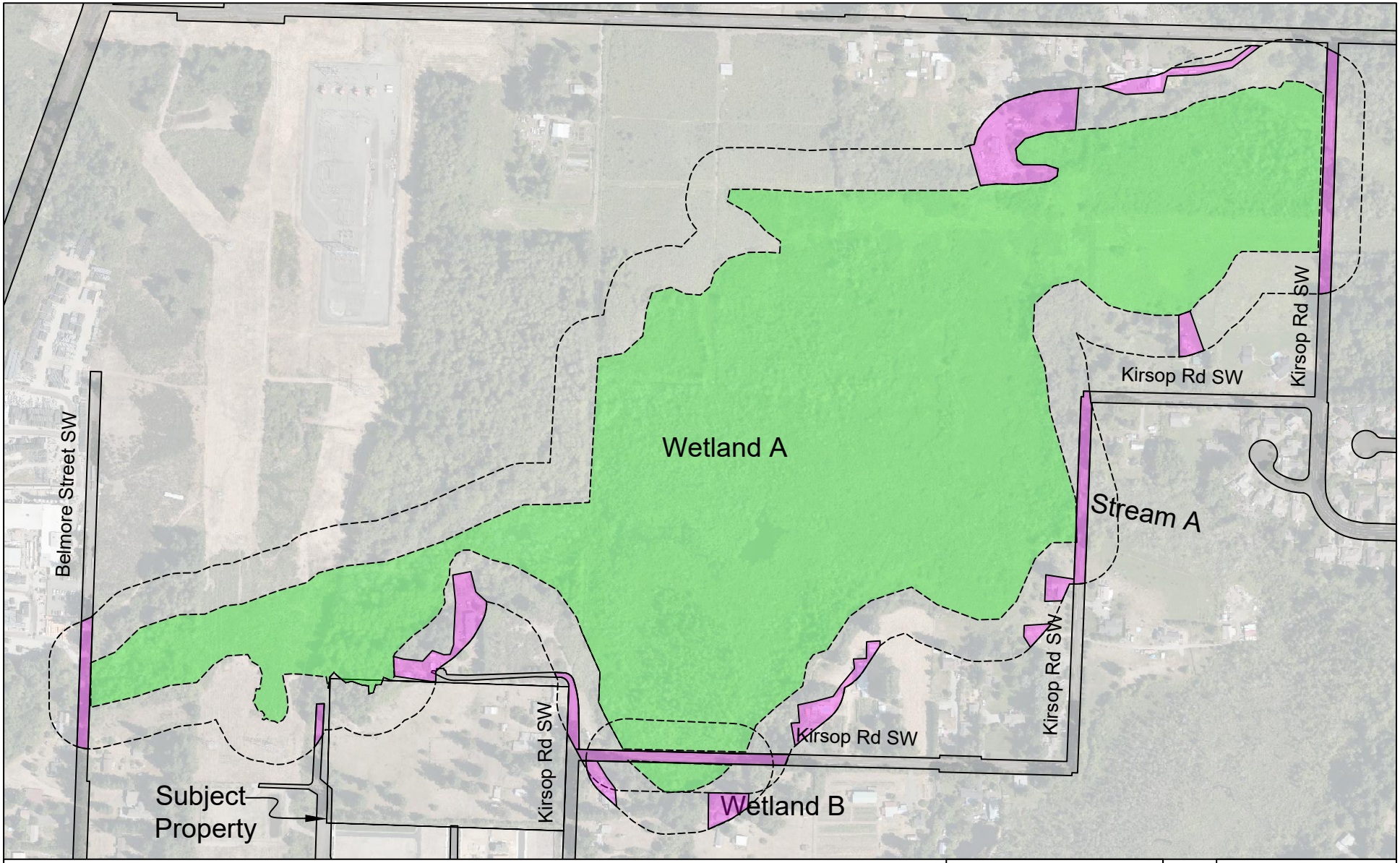
Vegetation Classes & Hydroperiods

N

Scale: 1" = 480'

0 480'

31 July 2020



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Wetland

> 10% Potential Sources of Pollutants

Figure 6

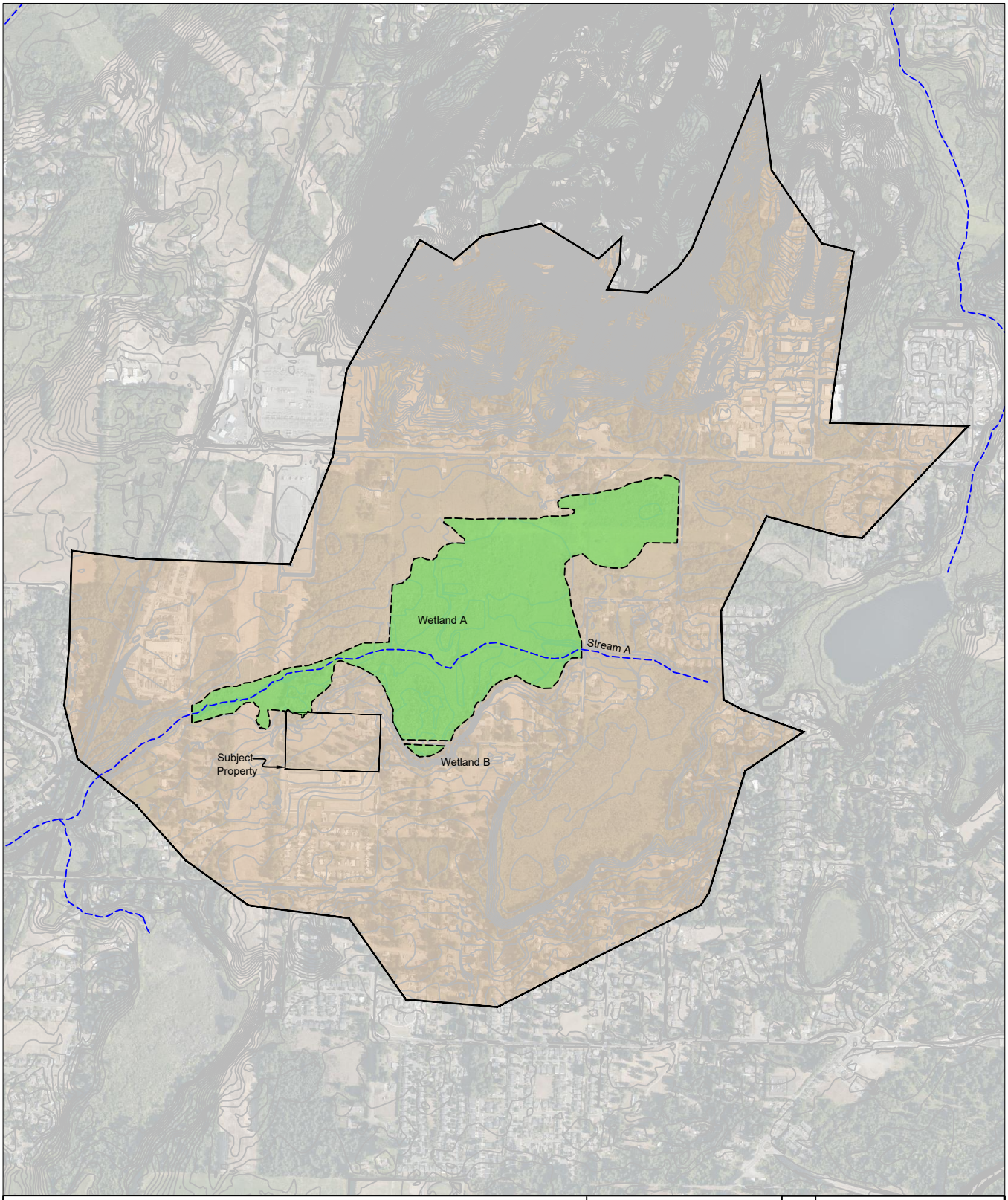
Kirsop Property

Potential Pollutants Within 150'

Scale: 1" = 500'

0 500'

31 July 2020



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Wetlands (Delineated)

Wetlands (Not Delineated)

Contributing Basin
Wetland A (<10x Wetland)
Wetland B (>100x Wetland)

Figure 8

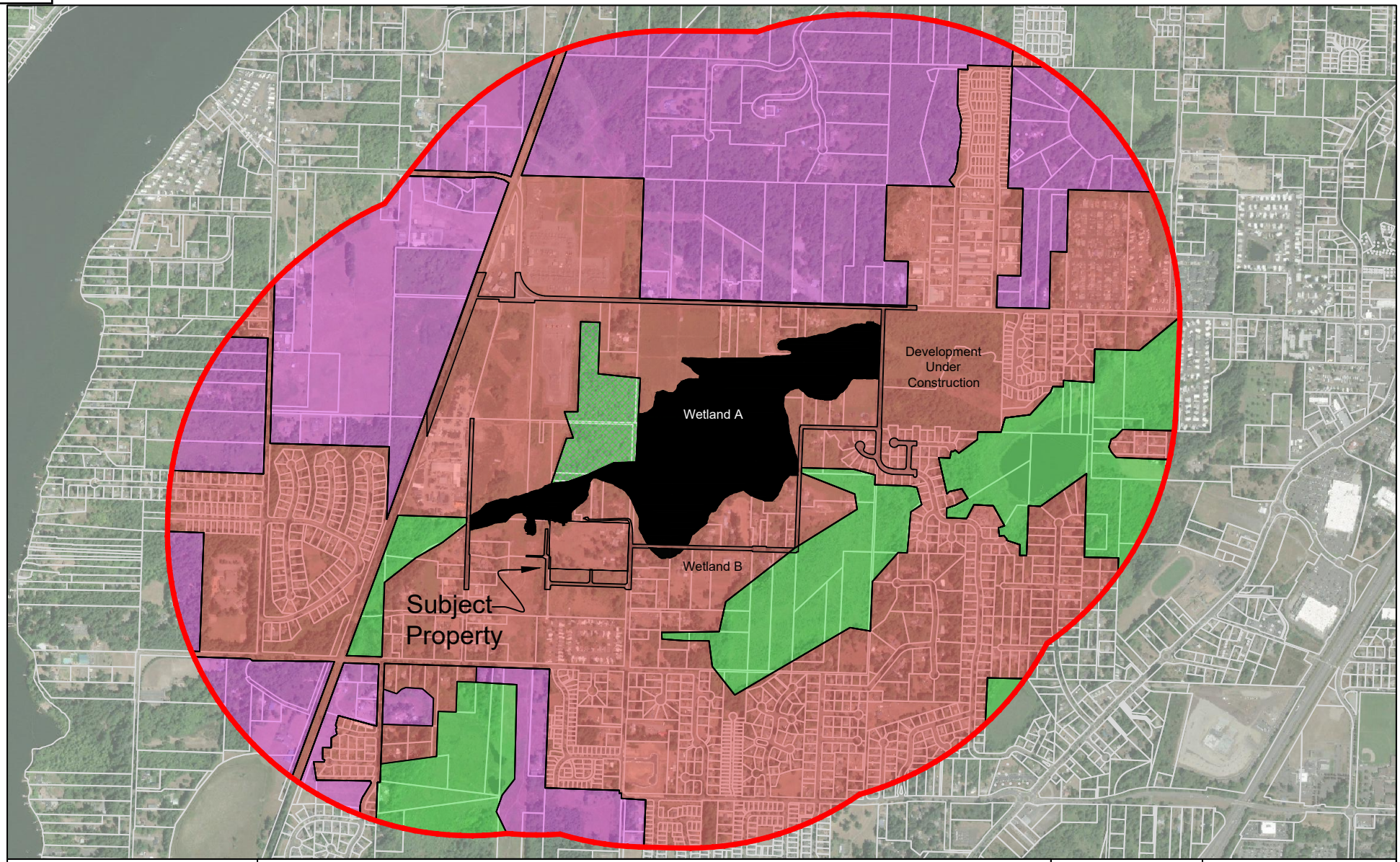
Kirsop Property

Contributing Basin

Scale: 1" = 1300

0 1300

31 July 2020



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Accessible Habitat (434,157.98 sf, 10 acres, 1%)

Accessible Moderate to Low Intensity Land Use (0 sf, 0 acres, 0%)

Total Undisturbed Habitat + Accessible Habitat (8,686,644 sf, 199 acres, 11%)

Low to Moderate Intensity Land Use +Accessible (24,147,294 sf, 554 acres, 31%)

High Intensity Land Use (39,308,088 sf, 902 acres, 51%)

1km Polygon around Wetland A 76,987,053 sf, 1,767 acres

H2.1: 1% + 0%/2 = 1% (0 point) H2.2: 11% + 31%/2 = 26.5% (1 point) H2.3: High Intensity = >50% (-2 points)

Figure 9

Kirsop Property

1km Polygon

Scale: 1" = 1500'

0 1500'

31 July 2020

Appendix A

Photographs

Photo 1. Pastureland is the majority of the subject property

Photo 2. Livestock in the pasture

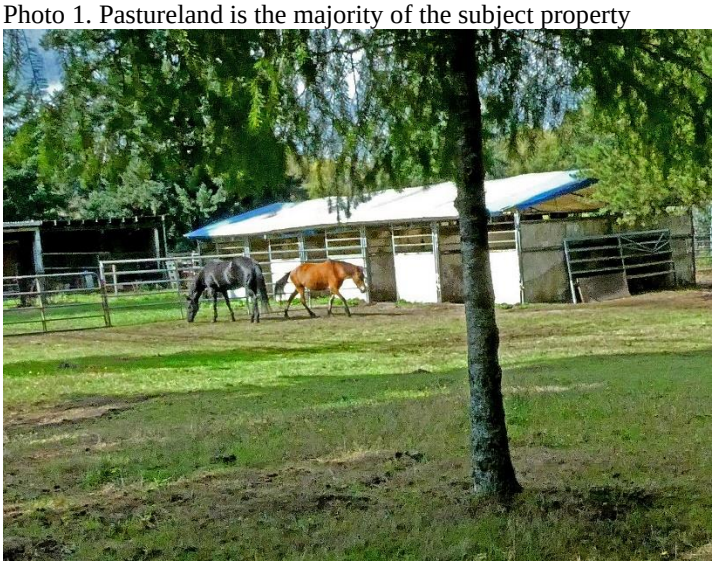


Photo 3. Livestock at the stables

Photo 4. Subdivision next door to the south

Photo 5. Vegetation TP-A1

Photo 6. Soils and vegetation at TP-A1

Photo 7. Soils vegetation at TP-A2

Photo 8. Soils and vegetation at TP-A2


Photo 9. Pastureland invaded by conifers

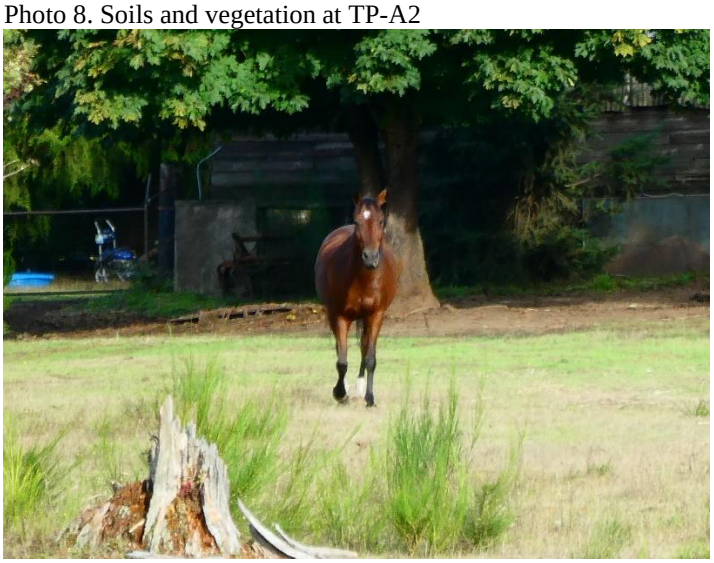


Photo 10. Livestock in pasture

Photo 11. Trimble collecting points, sub-foot accuracy


Photo 12. Wetland vegetation in Wetland A

Photo 13. Wetland flag on Wetland A

Photo 14. Flag B-4 at skunk cabbage (OBL)

Photo 15. Wetland Flag B-4

Photo 16. Wetland Flag B-5

Photo 23. Wetland Flag on Wetland A

Photo 24. Wetland Flag B-11

Photo 19. Wetland Flag at skunk cabbage (OBL)

Photo 20. Wetland flag on Wetland A

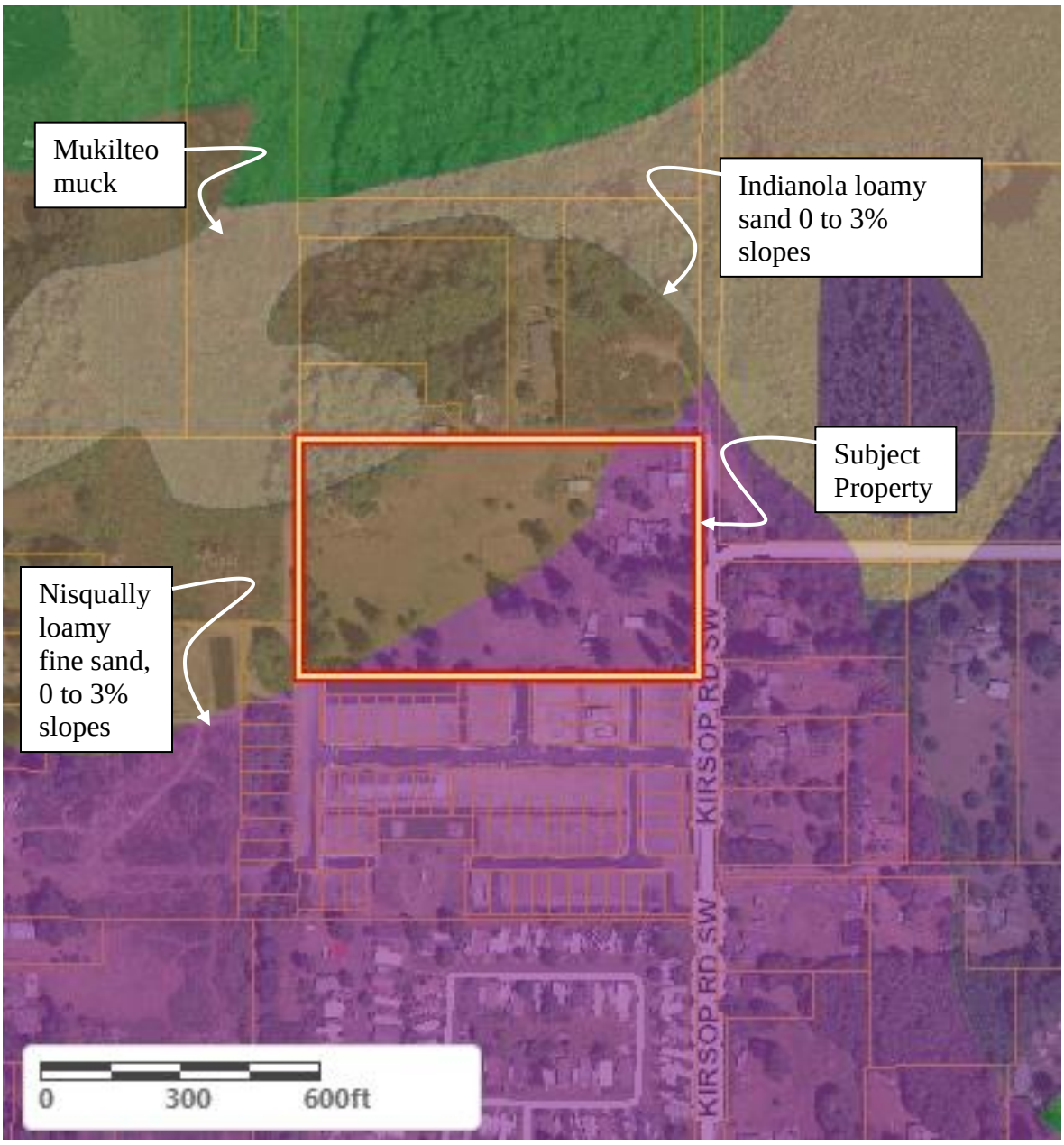
Photo 21. Wetland Flag B-12 at fence line

Photo 22. Wetland Flag B-12 at fence line

Appendix B

Thurston County Geodata

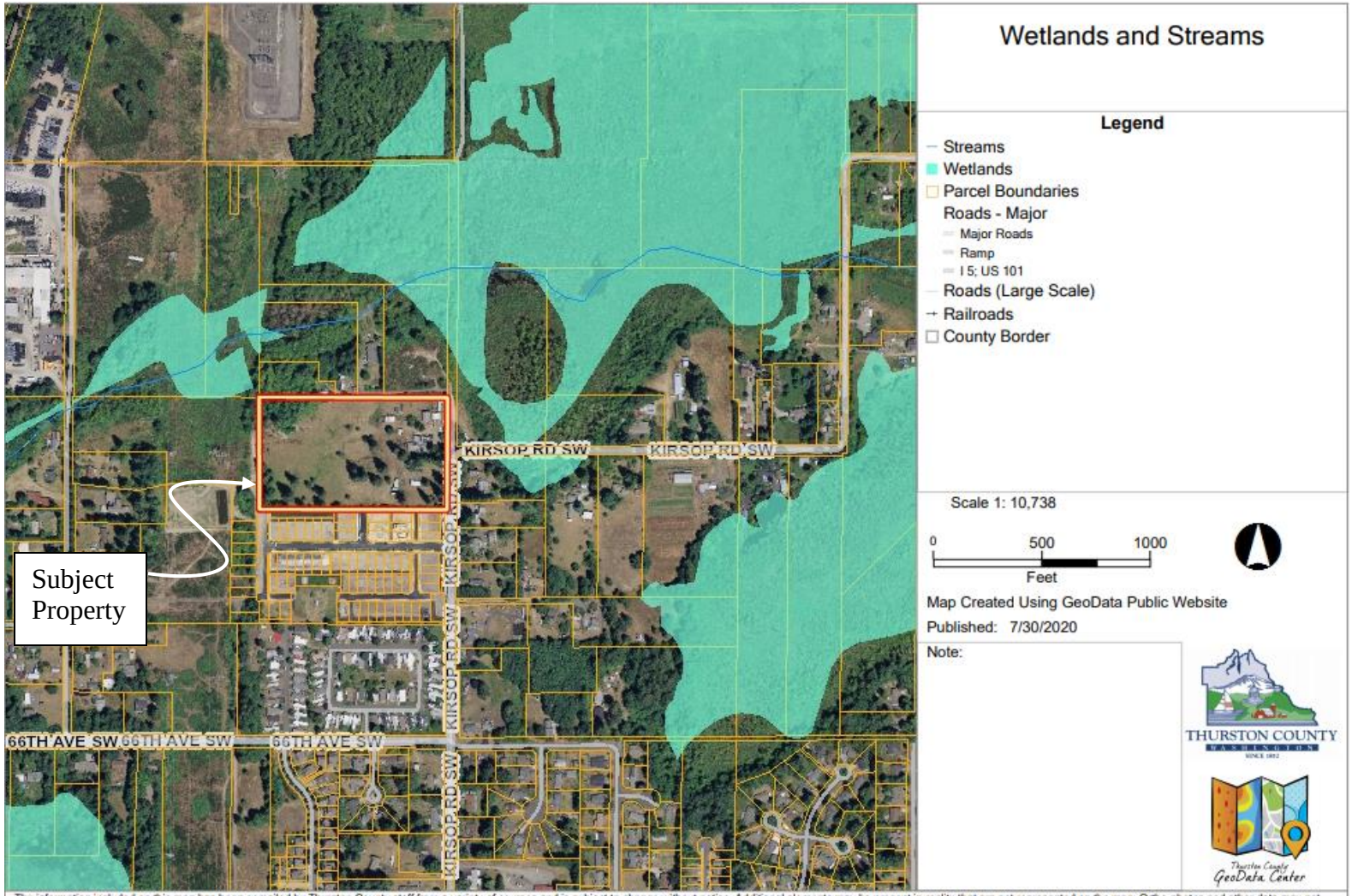
Soils


Mukilteo muck
Indianola loamy sand 0 to 3% slopes
Subject Property
Nisqually loamy fine sand, 0 to 3% slopes
KIRSOP RD SW
KIRSOP RD SW
0
300
600ft

Appendix C

Thurston County Geodata

Wetlands & Streams


Wetlands and Streams
Legend
Streams
Wetlands
Parcel Boundaries
Roads - Major
Major Roads
Ramp
I 5; US 101
Roads (Large Scale)
Railroads
County Border
Scale 1: 10,738
0
500
1000
Feet
Map Created Using GeoData Public Website
Published: 7/30/2020
Note:
THURSTON COUNTY
Thurston County GeoData Center
Subject Property
KIRSOP RD SW
KIRSOP RD SW
KIRSOP RD SW
KIRSOP RD SW
66TH AVE SW
66TH AVE SW
66TH AVE SW
The information included on this map has been compiled by Thurston County staff from a variety of sources and is subject to change without notice. Additional elements may be present in reality that are not represented on the map. Ortho-photos and other data may not align. The boundaries depicted by these datasets are approximate. This document is not intended for use as a survey product. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. Thurston County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. In no event shall Thurston County be liable for direct, indirect, incidental, consequential, special, or tort damages of any kind, including, but not limited to, lost revenues or lost profits, real or anticipated, resulting from the use, misuse or reliance of the information contained on this map. If any portion of this map or disclaimer is missing or altered, Thurston County removes itself from all responsibility from the map and the data contained within. The burden for determining fitness for use lies entirely with the user and the user is solely responsible for understanding the accuracy limitation of the information contained in this map. Authorized for 3rd Party reproduction for personal use only.
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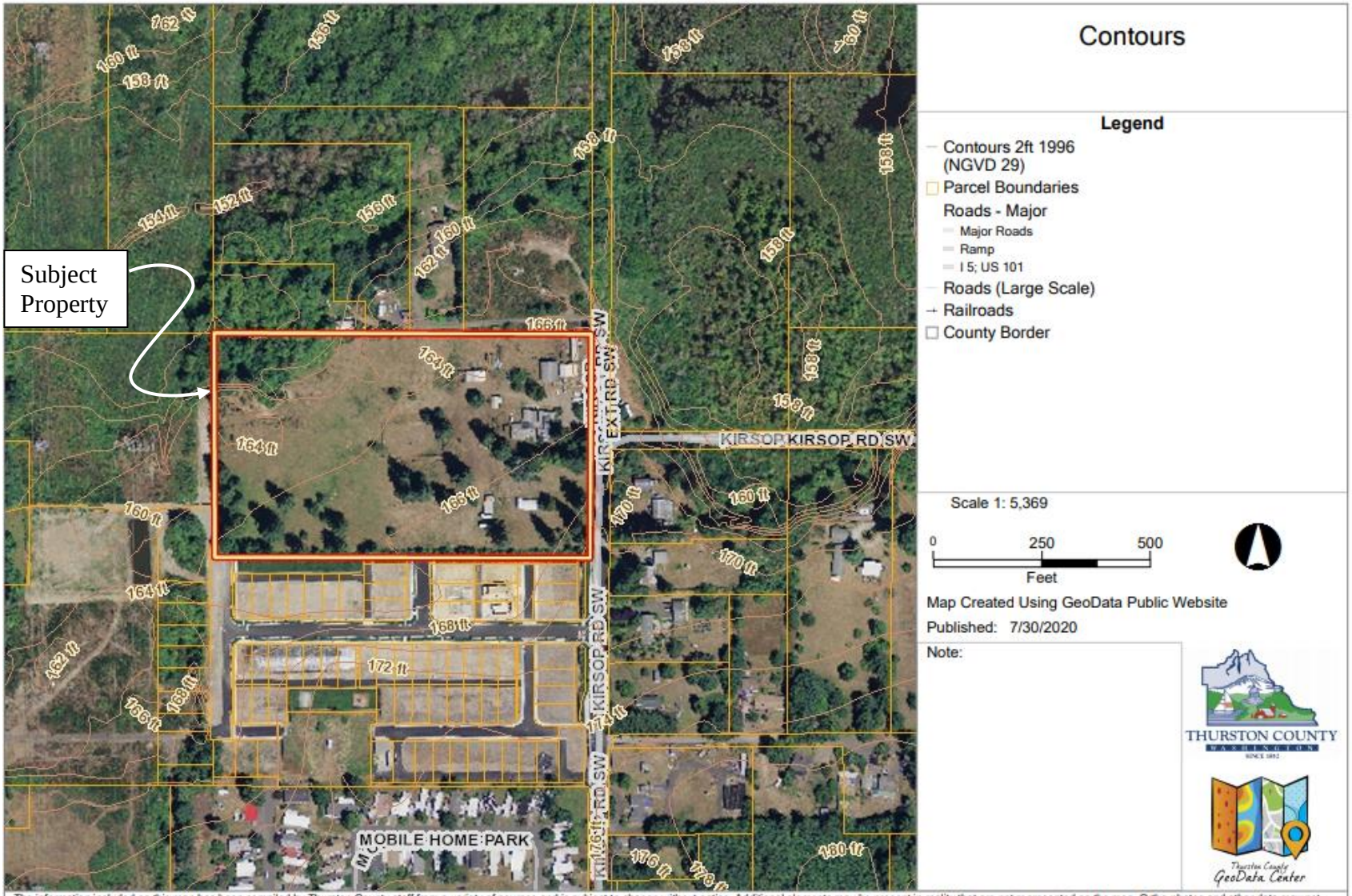
Appendix D

Thurston County Geodata

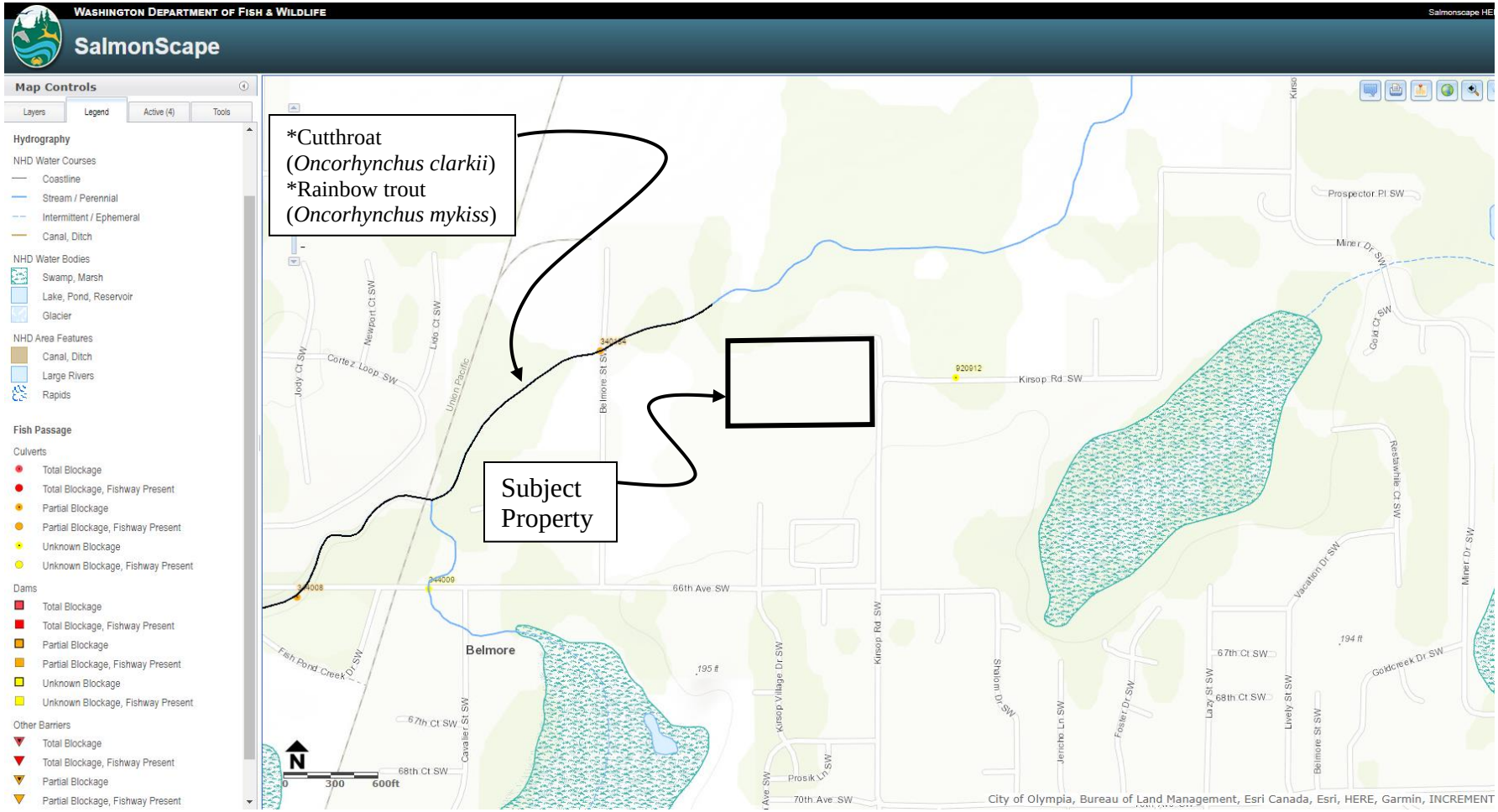
Topography



Appendix E

Washington Department of Fish and Wildlife (WDFW)

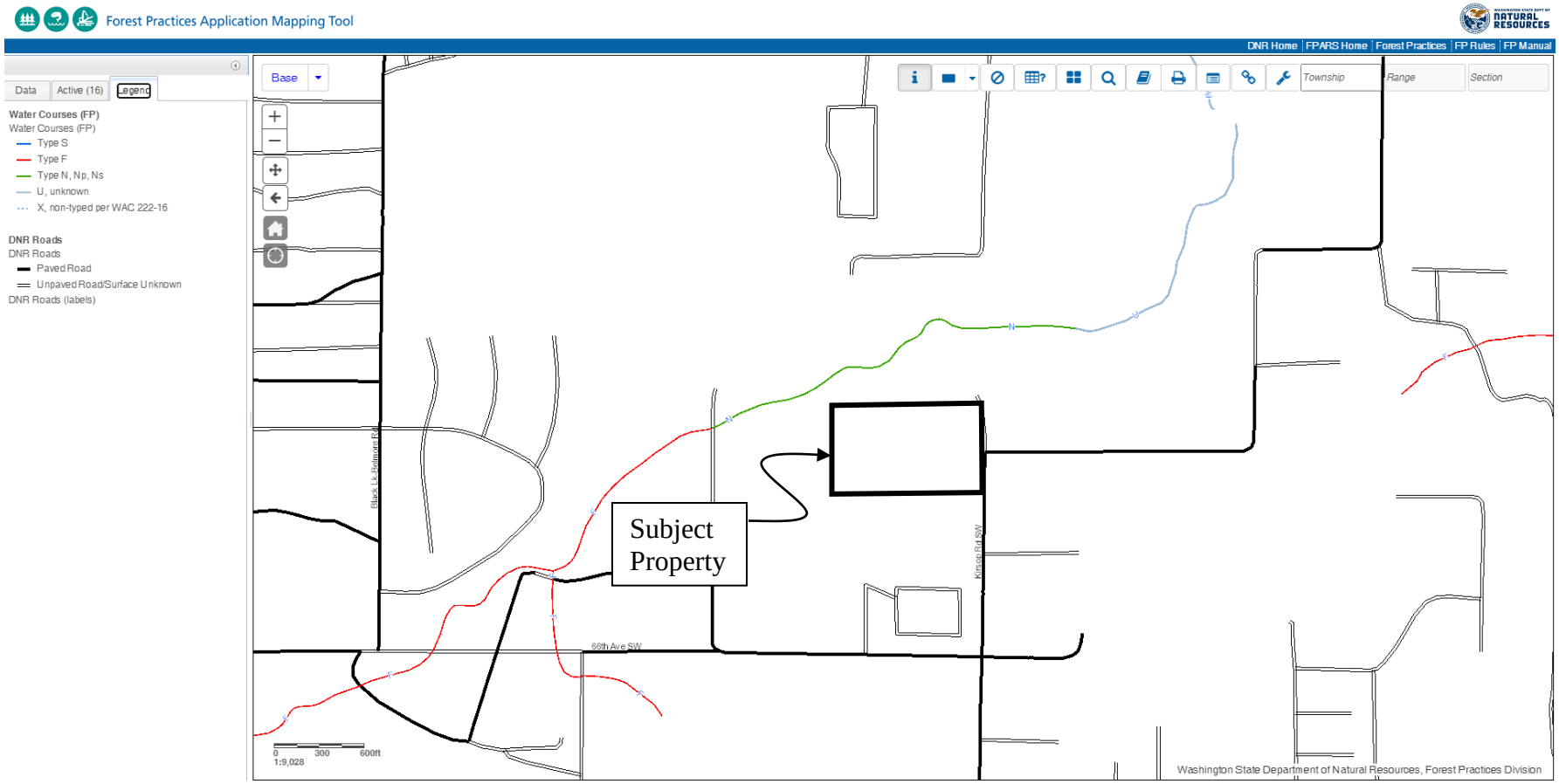
SalmonScape Database


WASHINGTON DEPARTMENT OF FISH & WILDLIFE
SalmonScape
Map Controls
Layers
Legend
Active (4)
Tools
Hydrography
NHD Water Courses
Coastline
Stream / Perennial
Intermittent / Ephemeral
Canal, Ditch
NHD Water Bodies
Swamp, Marsh
Lake, Pond, Reservoir
Glacier
NHD Area Features
Canal, Ditch
Large Rivers
Rapids
Fish Passage
Culverts
Total Blockage
Total Blockage, Fishway Present
Partial Blockage
Partial Blockage, Fishway Present
Unknown Blockage
Unknown Blockage, Fishway Present
Dams
Total Blockage
Total Blockage, Fishway Present
Partial Blockage
Partial Blockage, Fishway Present
Unknown Blockage
Unknown Blockage, Fishway Present
Other Barriers
Total Blockage
Total Blockage, Fishway Present
Partial Blockage
Partial Blockage, Fishway Present
*Cutthroat (Oncorhynchus clarkii)
*Rainbow trout (Oncorhynchus mykiss)
Subject Property
Kirsop Rd SW
66th Ave SW
Belmore
Prospector Pl SW
Miner Dr SW
Cortez Loop SW
Fish Pond Creek Dr SW
67th Ct SW
68th Ct SW
70th Ave SW
Goldcreek Dr SW
Vacation Dr SW
Lively St SW
Belmore St SW
N
0 300 600ft
City of Olympia, Bureau of Land Management, Esri Canada, Esri, HERE, Garmin, INCREMENT

Appendix F

State Department of Natural Resources (DNR)

Water Typing Database


Forest Practices Application Mapping Tool
DNR Home
FPARS Home
Forest Practices
FP Rules
FP Manual
Data
Active (16)
Legend
Water Courses (FP)
Water Courses (FP)
Type S
Type F
Type N, Np, Ns
U, unknown
X, non-typed per WAC 222-16
DNR Roads
DNR Roads
Paved Road
Unpaved Road/Surface Unknown
DNR Roads (labels)
Base
Township
Range
Section
Subject Property
66th Ave SW
Kirsop Rd SW
0 300 600ft
1:9,028
Washington State Department of Natural Resources, Forest Practices Division

Appendix G

Washington Department of Fish and Wildlife (WDFW)

Priority Habitats and Species (PHS)

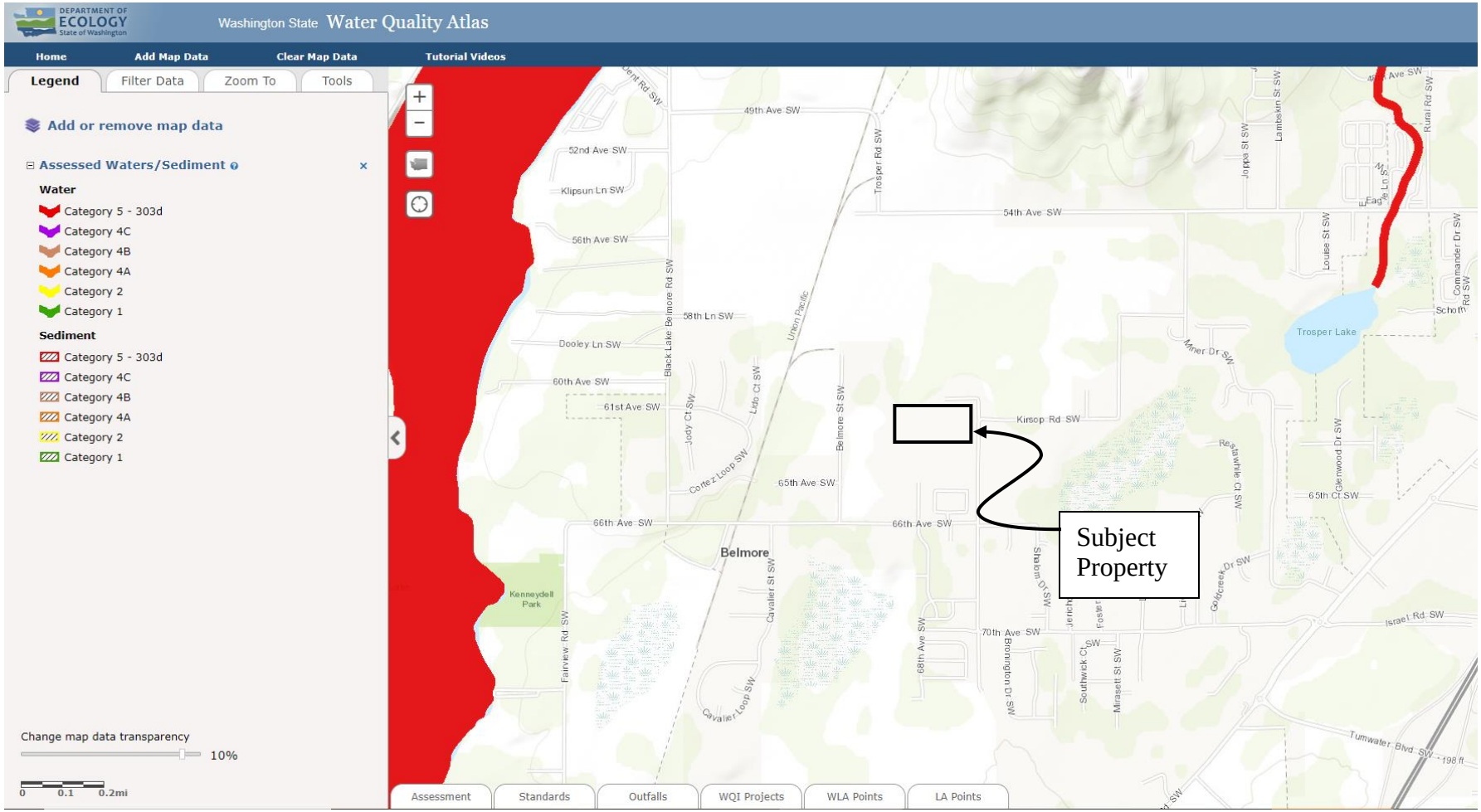
Database


PHS on the Web
Quick Start Guide | User Guide | Feedback
Address, Place, WRIA, Cou
Oregon Spotted Frog (*Rana pretiosa*) breeding area
Freshwater Forested/ Shrub Wetland
Subject Property
Cutthroat (*Oncorhynchus clarkii*) and Rainbow trout (*Oncorhynchus mykiss*)
Big Brown Bat (*Eptesicus fuscus*) Townsend's Big-eared Bat (*Corynorhinus townsendii*) mapped in township
300ft

Appendix H

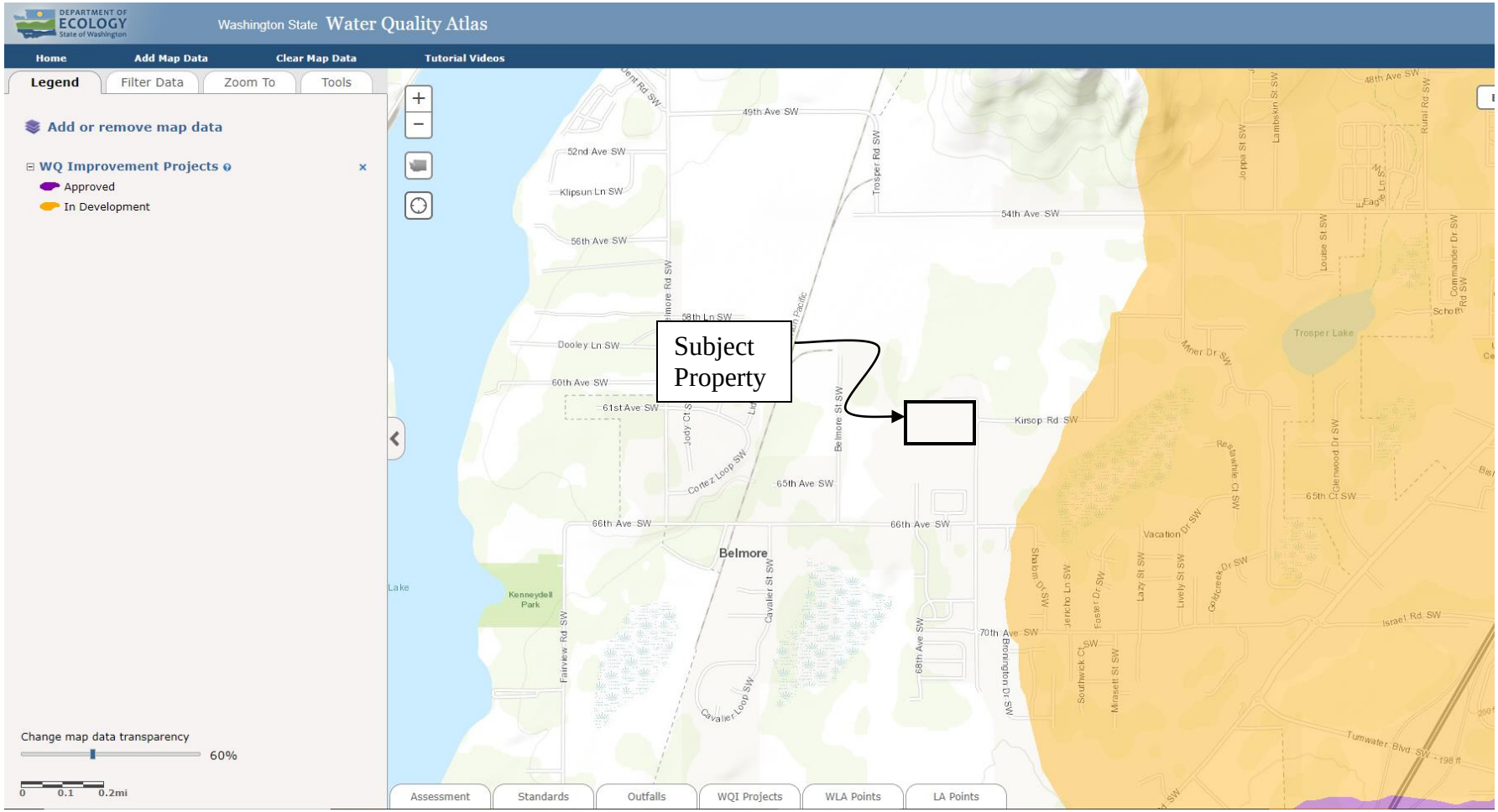
Clean Water Act

303(d) List


DEPARTMENT OF ECOLOGY State of Washington
Washington State Water Quality Atlas
Home
Add Map Data
Clear Map Data
Tutorial Videos
Legend
Filter Data
Zoom To
Tools
Add or remove map data
Assessed Waters/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
Change map data transparency
10%
0 0.1 0.2mi
Assessment
Standards
Outfalls
WQI Projects
WLA Points
LA Points
Subject Property
Belmore
Kirsop Rd SW
49th Ave SW
52nd Ave SW
54th Ave SW
56th Ave SW
58th Ln SW
60th Ave SW
61st Ave SW
65th Ave SW
66th Ave SW
70th Ave SW
Trosper Rd SW
Black Lake Belmore Rd SW
Union Pacific
Belmore St SW
Cavalier St SW
Fairview Rd SW
Kennedell Park
Trosper Lake
Israel Rd SW
Tumwater Blvd SW

Appendix I

Total Maximum Daily Load (TMDL)


DEPARTMENT OF ECOLOGY State of Washington
Washington State Water Quality Atlas
Home
Add Map Data
Clear Map Data
Tutorial Videos
Legend
Filter Data
Zoom To
Tools
Add or remove map data
WQ Improvement Projects
Approved
In Development
Change map data transparency
60%
0 0.1 0.2mi
Subject Property
49th Ave SW
52nd Ave SW
Klipsun Ln SW
56th Ave SW
58th Ln SW
Dooley Ln SW
60th Ave SW
61st Ave SW
Cortez Loop SW
65th Ave SW
66th Ave SW
Belmore
Kenneydell Park
Fairview Rd SW
Cavalier St SW
Cavalier Loop SW
68th Ave SW
70th Ave SW
Trosper Rd SW
Belmore St SW
Kirsop Rd SW
54th Ave SW
Trosper Lake
Vacation Dr SW
Israel Rd SW
Tumwater Blvd SW
Assessment
Standards
Outfalls
WQI Projects
WLA Points
LA Points

Appendix J

Datasheets

Item 2a.

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

Project/Site: Kirsop (Wetand A) City/County: Thurston County Sampling Date: 19 Sept 2019

Applicant/Owner: Jeff Pantier State: WA Sampling Point: TP-1

Investigator(s): Curtis Wambach Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐ Hydric Soil Present? Yes ☒ No ☐ Wetland Hydrology Present? Yes ☒ No ☐	**Is the Sampled Area within a Wetland?** Yes ☒ No ☐

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. I			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 12')			
1. Vine maple (Acer circinatum)	100	Y	FAC
2. Salmonberry (Rubus spectabilis)	20	N	FAC
3.			
4.			
5.			
	120 = Total Cover		
Herb Stratum (Plot size: 6')			
1. Skunk cabbage (Lysichiton americanus)	60	Y	OBL
2. Lady fern (Athyrium filix-femina)	30	Y	FACW
3. False lily of the valley (Maianthemum dilatatum	15	N	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 60	x 1 = 60
FACW species 30	x 2 = 60
FAC species 135	x 3 = 405
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 225 (A)	525 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☒ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes ☒ No ☐**

Remarks:

Item 2a.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/1						Sandy silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil 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 Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0

Water Table Present? Yes ☒ No ☐ Depth (inches): Surface

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:

Item 2a.

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

Project/Site: Kirsop (Upland A) City/County: Thurston County Sampling Date: 19 Sept 2019

Applicant/Owner: Jeff Pantier State: WA Sampling Point: TP-2

Investigator(s): Curtis Wambach Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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

Are Vegetation no, Soil no, or Hydrology no significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation no, Soil no, or Hydrology no naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes ☐ No ☒ Hydric Soil Present? Yes ☐ No ☒ Wetland Hydrology Present? Yes ☐ No ☒	**Is the Sampled Area within a Wetland?** Yes ☐ No ☒

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Bigleaf maple (Acer macrophyllum)	60	Y	FACU
2. Red alder (Alnus rubra)	30	Y	FAC
3. Western redcedar (Thuja plicata)	20	N	FAC
4. English holly (Ilex aquilifolium)	20	N	FACU
	130	= Total Cover	
Sapling/Shrub Stratum (Plot size: 12')			
1. Vine maple (Acer circinatum)	10	Y	FAC
2. Osoberry (Oelmaria cerasiformis)	10	Y	FACU
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: 6')			
1. Trailing blackberry (Rubus ursinus)	100	Y	FACU
2. Sword fern (Polystichum munitum)	40	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	140	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 60	x 3 = 180
FACU species 230	x 4 = 920
UPL species _____	x 5 = _____
Column Totals: 290 (A)	1100 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

- ☐ Rapid Test for Hydrophytic Vegetation
- ☐ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

Item 2a.

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2						Sandy silt	
6-20	10YR 3/3						Sandy silt	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type:_____

Depth (inches):_____

Hydric Soil 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 Stressed Plants (D1) (**LRR A**)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ☐ No ☒ 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: none

Remarks:

Appendix K

Wetland Rating Forms

Item 2a. name or number

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland A Date of site visit: 19-Sep-19

Rated by Curtis Wambach Trained by Ecology? ☑ Yes ☐ No Date of training Continual

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 Google Earth

OVERALL WETLAND CATEGORY III (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
X **Category III** - Total score = 16 - 19
_____ **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	M	M	H	
Landscape Potential	M	M	L	
Value	L	M	H	**Total**
Score Based on Ratings	5	6	7	**18**

Score for each function based on three ratings (*order of ratings is not important*)

9 = H, H, H
8 = H, H, M
7 = H, H, L
7 = H, M, M
6 = H, M, L
6 = M, M, M
5 = H, L, L
5 = M, M, L
4 = M, L, L
3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	

name or number

Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	**X**

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	Figure 5
Hydroperiods	D 1.4, H 1.2	Figure 5
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	Figure 5
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	Figure 6
Map of the contributing basin	D 4.3, D 5.3	Figure 7
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	Figure 8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Appendix H
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	Appendix I

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 (*can be added to another figure*)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (*can be added to another figure*)	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 (*can be added to another figure*)	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 (*can be added to another figure*)	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	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	

Item 2a. name or number

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated.
If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☑ NO - go to 4 ☐ **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
☐ The wetland is on a slope (*slope can be very gradual*),
☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
☐ The water leaves the wetland **without being impounded.**

☑ NO - go to 5 ☐ **YES** - The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☑ 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*

☐ 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.*

NOTES and FIELD OBSERVATIONS:

name or number

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*).	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0		5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0		2
Total for D 1	Add the points in the boxes above	**9**

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?		0

Item 2a. name or number

	Yes = 1 No = 0	0
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	0
Total for D 3	Add the points in the boxes above	**0**

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	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	0
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*		
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	3
☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
☐ The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*		
☐ 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	5
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** ☑ **6 - 11 = M** ☐ **0 - 5 = L** *Record the rating on the first page*

D 5.0. Does the landscape have the potential to support hydrologic function of the site?		
D 5.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0
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	**1**

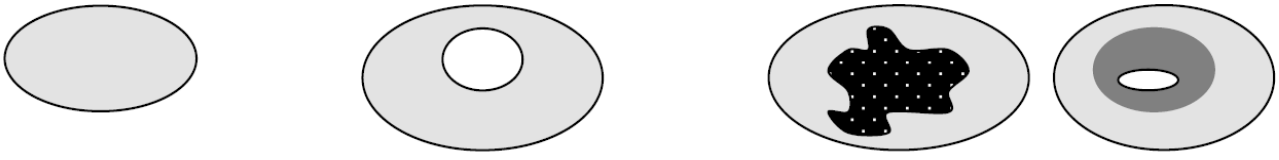
Rating of Landscape Potential If score is: ☐ **3 = H** ☑ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

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		
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	1

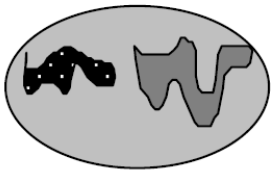
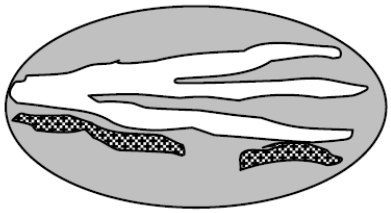
☐ ● Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
☐ Flooding from groundwater is an issue in the sub-basin.	points = 1	
☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why	points = 0	
☐ There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	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*

Item 2a. name or number

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	4
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ☑ Permanently flooded or inundated — 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 types present: points = 0 ☑ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake Fringe wetland** — **2 points** ☐ **Freshwater tidal wetland** — **2 points**	3
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*** If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	2
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.* 	3

name or number

None = 0 points	**Low** = 1 point	**Moderate** = 2 points	
All three diagrams in this row are **HIGH** = 3 points			

Item 2a. name or number

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☑ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☑ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☑ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by* ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	5
Total for H 1 Add the points in the boxes above	**17**

Rating of Site Potential If Score is: ☑ **15 - 18 = H** ☐ **7 - 14 = M** ☐ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 1 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 1% 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	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 11 % undisturbed habitat + (31 % moderate & low intensity land uses / 2) = 26.5% 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	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated*. Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page)	

☑ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☑ It is mapped as a location for an individual WDFW priority species ☑ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		2
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	

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.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.*	Category
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes - Go to **SC 1.1** ☐No = **Not an estuarine wetland**	
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? ☐ Yes = **Category I** ☐ No - Go to **SC 1.2**	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ 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 *Spartina* , see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. ☐ Yes = **Category I** ☐ No = **Category II**	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☐ Yes - Go to **SC 2.2** ☐No - Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value ☐ Yes = **Category I** ☐ No = **Not WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - **Contact WNHP/WDNR and to SC 2.4** ☐ No = **Not WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not WHCV**	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions*** . 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? ☐ Yes - Go to **SC 3.3** ☐ No - Go to **SC 3.2** 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? ☐ Yes - Go to **SC 3.3** ☐ No = **Is not a bog** 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?

☐ Yes = **Is a Category I bog** ☐ No - Go to **SC 3.4**

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.

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?

☐ Yes = **Is a Category I bog** ☐ No = **Is not a bog**

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☐No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☐No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

name or number

Category of wetland based on Special Characteristics If you answered No for all types, enter “Not Applicable” on Summary Form	

Item 2a. name or number

RATING SUMMARY – Western Washington

Name of wetland (or ID #): Wetland B Date of site visit: 19-Sep-19

Rated by Curtis Wambach Trained by Ecology? ☑ Yes ☐ No Date of training Continual

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 Google Earth

OVERALL WETLAND CATEGORY III (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
X **Category IV** - Total score = 9 - 15

FUNCTION	Improving Water Quality	Hydrologic	Habitat	
	List appropriate rating (H, M, L)			
Site Potential	M	L	L	
Landscape Potential	M	M	L	
Value	L	M	M	**Total**
Score Based on Ratings	5	5	4	**14**

Score for each function based on three ratings (*order of ratings is not important*)

9 = H, H, H
8 = H, H, M
7 = H, H, L
7 = H, M, M
6 = H, M, L
6 = M, M, M
5 = H, L, L
5 = M, M, L
4 = M, L, L
3 = L, L, L

2. Category based on SPECIAL CHARACTERISTICS of wetland

CHARACTERISTIC	Category
Estuarine	
Wetland of High Conservation Value	
Bog	

name or number

Mature Forest	
Old Growth Forest	
Coastal Lagoon	
Interdunal	
None of the above	**X**

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	Figure 5
Hydroperiods	D 1.4, H 1.2	Figure 5
Location of outlet (*can be added to map of hydroperiods*)	D 1.1, D 4.1	Figure 5
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	D 2.2, D 5.2	Figure 6
Map of the contributing basin	D 4.3, D 5.3	Figure 7
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	Figure 8
Screen capture of map of 303(d) listed waters in basin (from Ecology website)	D 3.1, D 3.2	Appendix H
Screen capture of list of TMDLs for WRIA in which unit is found (from web)	D 3.3	Appendix I

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 (*can be added to another figure*)	R 2.4	
Plant cover of trees, shrubs, and herbaceous plants	R 1.2, R 4.2	
Width of unit vs. width of stream (*can be added to another figure*)	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 (*can be added to another figure*)	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 (*can be added to another figure*)	S 4.1	
Boundary of area within 150 ft of the wetland (*can be added to another figure*)	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	

Item 2a. name or number

HGM Classification of Wetland in Western Washington

For questions 1 -7, the criteria described must apply to the entire unit being rated.
If hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1 - 7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides except during floods?

☑ NO - go to 2 ☐ **YES** - the wetland class is **Tidal Fringe** - go to 1.1

1.1 Is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)?

☐ **NO - Saltwater Tidal Fringe (Estuarine)** ☐ **YES - Freshwater Tidal Fringe**
*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is an **Estuarine** wetland and is not scored. This method **cannot** be used to score functions for estuarine wetlands.*

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it.
Groundwater and surface water runoff are NOT sources of water to the unit.

☑ NO - go to 3 ☐ **YES** - The wetland class is **Flats**
*If your wetland can be classified as a Flats wetland, use the form for **Depressional** wetlands.*

3. Does the entire wetland unit **meet all** of the following criteria?
☐ The vegetated part of the wetland is on the shores of a body of permanent open water (without any plants on the surface at any time of the year) at least 20 ac (8 ha) in size;
☐ At least 30% of the open water area is deeper than 6.6 ft (2 m).

☑ NO - go to 4 ☐ **YES** - The wetland class is **Lake Fringe** (Lacustrine Fringe)

4. Does the entire wetland unit **meet all** of the following criteria?
☐ The wetland is on a slope (*slope can be very gradual*),
☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
☐ The water leaves the wetland **without being impounded.**

☑ NO - go to 5 ☐ **YES** - The wetland class is **Slope**

NOTE: Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3 ft diameter and less than 1 ft deep).

5. Does the entire wetland unit **meet all** of the following criteria?
☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river,

☐ The overbank flooding occurs at least once every 2 years.

☑ 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*

☐ 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.*

NOTES and FIELD OBSERVATIONS:

name or number

DEPRESSIONAL AND FLATS WETLANDS

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

D 1.0. Does the site have the potential to improve water quality?		
D 1.1. Characteristics of surface water outflows from the wetland: Wetland is a depression or flat depression (QUESTION 7 on key) with no surface water leaving it (no outlet). points = 3 Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet. points = 2 ☐ Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing points = 1 ☐ Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch. points = 1		2
D 1.2. The soil 2 in below the surface (or duff layer) is true clay or true organic (*use NRCS definitions*).	Yes = 4 No = 0	0
D 1.3. Characteristics and distribution of persistent plants (Emergent, Scrub-shrub, and/or Forested Cowardin classes): Wetland has persistent, ungrazed, plants > 95% of area points = 5 Wetland has persistent, ungrazed, plants > ½ of area points = 3 Wetland has persistent, ungrazed plants > $^1/_{10}$ of area points = 1 Wetland has persistent, ungrazed plants < $^1/_{10}$ of area points = 0		5
D 1.4. Characteristics of seasonal ponding or inundation: *This is the area that is ponded for at least 2 months. See description in manual.* Area seasonally ponded is > ½ total area of wetland points = 4 Area seasonally ponded is > ¼ total area of wetland points = 2 Area seasonally ponded is < ¼ total area of wetland points = 0		4
Total for D 1	Add the points in the boxes above	**11**

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

D 2.0. Does the landscape have the potential to support the water quality function of the site?		
D 2.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 2.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate pollutants?	Yes = 1 No = 0	1
D 2.3. Are there septic systems within 250 ft of the wetland?	Yes = 1 No = 0	1
D 2.4. Are there other sources of pollutants coming into the wetland that are not listed in questions D 2.1 - D 2.3? Source	Yes = 1 No = 0	0
Total for D 2	Add the points in the boxes above	**2**

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

D 3.0. Is the water quality improvement provided by the site valuable to society?		
D 3.1. Does the wetland discharge directly (i.e., within 1 mi) to a stream, river, lake, or marine water that is on the 303(d) list?	Yes = 1 No = 0	0
D 3.2. Is the wetland in a basin or sub-basin where an aquatic resource is on the 303(d) list?		0

Item 2a. name or number

	Yes = 1 No = 0	0
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	0
Total for D 3	Add the points in the boxes above	**0**

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	
Wetland has an intermittently flowing stream or ditch, OR highly constricted permanently flowing outlet	points = 2	0
Wetland is a flat depression (QUESTION 7 on key), whose outlet is a permanently flowing ditch	points = 1	
Wetland has an unconstricted, or slightly constricted, surface outlet that is permanently flowing	points = 0	
D 4.2. Depth of storage during wet periods: *Estimate the height of ponding above the bottom of the outlet. For wetlands with no outlet, measure from the surface of permanent water or if dry, the deepest part.*		
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	3
☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet	points = 3	
☐ The wetland is a "headwater" wetland	points = 3	
Wetland is flat but has small depressions on the surface that trap water	points = 1	
Marks of ponding less than 0.5 ft (6 in)	points = 0	
D 4.3. Contribution of the wetland to storage in the watershed: *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.*		
☐ 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	0
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	**3**

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

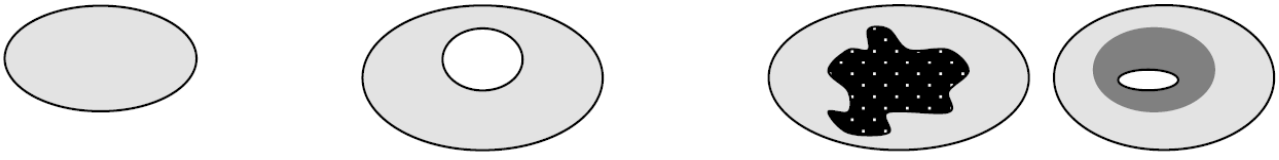
D 5.0. Does the landscape have the potential to support hydrologic function of the site?		
D 5.1. Does the wetland unit receive stormwater discharges?	Yes = 1 No = 0	0
D 5.2. Is > 10% of the area within 150 ft of the wetland in land uses that generate excess runoff?	Yes = 1 No = 0	0
D 5.3. Is more than 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	**1**

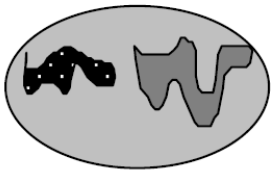
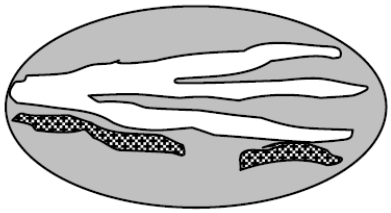
Rating of Landscape Potential If score is: ☐ **3 = H** ☑ **1 or 2 = M** ☐ **0 = L** *Record the rating on the first page*

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		
• Flooding occurs in a sub-basin that is immediately down-gradient of unit.	points = 2	1

☐ ● Surface flooding problems are in a sub-basin farther down-gradient.	points = 1	
☐ Flooding from groundwater is an issue in the sub-basin.	points = 1	
☐ The existing or potential outflow from the wetland is so constrained by human or natural conditions that the water stored by the wetland cannot reach areas that flood. Explain why	points = 0	
☐ There are no problems with flooding downstream of the wetland.	points = 0	
D 6.2. Has the site been identified as important for flood storage or flood conveyance in a regional flood control plan?	Yes = 2 No = 0	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?	
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	0
H 1.2. Hydroperiods Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ ac to count (*see text for descriptions of hydroperiods*). ☐ Permanently flooded or inundated — 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 types present: points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ **Lake Fringe wetland** — **2 points** ☐ **Freshwater tidal wetland** — **2 points**	0
H 1.3. Richness of plant species Count the number of plant species in the wetland that cover at least 10 ft^2. *Different patches of the same species can be combined to meet the size threshold and you do not have to name the species.* ***Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle*** If you counted: > 19 species — points = 2 5 - 19 species — points = 1 < 5 species — points = 0	1
H 1.4. Interspersion of habitats Decide from the diagrams below whether interspersion among Cowardin plants classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, moderate, low, or none. *If you have four or more plant classes or three classes and open water, the rating is always high.* 	0

None = 0 points	**Low** = 1 point	**Moderate** = 2 points	
All three diagrams in this row are **HIGH** = 3 points			

H 1.5. Special habitat features: Check the habitat features that are present in the wetland. *The number of checks is the number of points.* ☑ Large, downed, woody debris within the wetland (> 4 in diameter and 6 ft long) ☑ Standing snags (dbh > 4 in) within the wetland ☐ Undercut banks are present for at least 6.6 ft (2 m) **and/or** overhanging plants extends at least 3.3 ft (1 m) over a stream (or ditch) in, or contiguous with the wetland, for at least 33 ft (10 m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (> 30 degree slope) OR signs of recent beaver activity are present (*cut shrubs or trees that have not yet weathered where wood is exposed*) ☑ At least ¼ ac of thin-stemmed persistent plants or woody branches are present in areas that are permanently or seasonally inundated (*structures for egg-laying by* ☐ Invasive plants cover less than 25% of the wetland area in every stratum of plants (*see H 1.1 for list of strata*)	3
Total for H 1 Add the points in the boxes above	**4**

Rating of Site Potential If Score is: ☐ **15 - 18 = H** ☐ **7 - 14 = M** ☑ **0 - 6 = L** *Record the rating on the first page*

H 2.0. Does the landscape have the potential to support the habitat function of the site?	
H 2.1 Accessible habitat (include *only habitat that directly abuts wetland unit*). *Calculate:* 1 % undisturbed habitat + (0 % moderate & low intensity land uses / 2) = 1% 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	0
H 2.2. Undisturbed habitat in 1 km Polygon around the wetland. *Calculate:* 11 % undisturbed habitat + (31 % moderate & low intensity land uses / 2) = 26.5% 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	1
H 2.3 Land use intensity in 1 km Polygon: If > 50% of 1 km Polygon is high intensity land use points = (-2) ≤ 50% of 1km Polygon is high intensity points = 0	-2
Total for H 2 Add the points in the boxes above	**-1**

Rating of Landscape Potential If Score is: ☐ **4 - 6 = H** ☐ **1 - 3 = M** ☑ **< 1 = L** *Record the rating on the first page*

H 3.0. Is the habitat provided by the site valuable to society?	
H 3.1. Does the site provide habitat for species valued in laws, regulations, or policies? *Choose only the highest score that applies to the wetland being rated*. Site meets ANY of the following criteria: points = 2 ☐ It has 3 or more priority habitats within 100 m (see next page)	

☐ It provides habitat for Threatened or Endangered species (any plant or animal on the state or federal lists) ☐ It is mapped as a location for an individual WDFW priority species ☐ It is a Wetland of High Conservation Value as determined by the Department of Natural Resources ☐ It has been categorized as an important habitat site in a local or regional comprehensive plan, in a Shoreline Master Plan, or in a watershed plan		1
Site has 1 or 2 priority habitats (listed on next page) with in 100m	points = 1	
Site does not meet any of the criteria above	points = 0	

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.

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Wetland Type *Check off any criteria that apply to the wetland. List the category when the appropriate criteria are met.*	Category
SC 1.0. Estuarine Wetlands Does the wetland meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt ☐ Yes - Go to **SC 1.1** ☐No = **Not an estuarine wetland**	
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? ☐ Yes = **Category I** ☐ No - Go to **SC 1.2**	
SC 1.2. Is the wetland unit at least 1 ac in size and meets at least two of the following three conditions? ☐ 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 *Spartina* , see page 25) ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland has at least two of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. ☐ Yes = **Category I** ☐ No = **Category II**	
SC 2.0. Wetlands of High Conservation Value (WHCV) SC 2.1. Has the WA Department of Natural Resources updated their website to include the list of Wetlands of High Conservation Value? ☐ Yes - Go to **SC 2.2** ☐No - Go to **SC 2.3** SC 2.2. Is the wetland listed on the WDNR database as a Wetland of High Conservation Value ☐ Yes = **Category I** ☐ No = **Not WHCV** SC 2.3. Is the wetland in a Section/Township/Range that contains a Natural Heritage wetland? http://www1.dnr.wa.gov/nhp/refdesk/datasearch/wnhpwetlands.pdf ☐ Yes - **Contact WNHP/WDNR and to SC 2.4** ☐ No = **Not WHCV** SC 2.4. Has WDNR identified the wetland within the S/T/R as a Wetland of High Conservation Value and listed it on their website? ☐ Yes = **Category I** ☐ No = **Not WHCV**	
SC 3.0. Bogs Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below.* ***If you answer YES you will still need to rate the wetland based on its functions*** . 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? ☐ Yes - Go to **SC 3.3** ☐ No - Go to **SC 3.2** 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? ☐ Yes - Go to **SC 3.3** ☐ No = **Is not a bog** 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? ☐ Yes = **Is a Category I bog** ☐ No - Go to **SC 3.4** **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.	
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? ☐ Yes = **Is a Category I bog** ☐ No = **Is not a bog**	

SC 4.0. Forested Wetlands

Does the wetland have at least 1 contiguous acre of forest that meets one of these criteria for the WA Department of Fish and Wildlife's forests as priority habitats? ***If you answer YES you will still need to rate the wetland based on its functions.***

☐ **Old-growth forests** (west of Cascade crest): Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/ac (20 trees/ha) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 in (81 cm) or more.

☐ **Mature forests** (west of the Cascade Crest): Stands where the largest trees are 80-200 years old OR the species that make up the canopy have an average diameter (dbh) exceeding 21 in (53 cm).

☐ Yes = **Category I** ☐No = **Not a forested wetland for this section**

SC 5.0. Wetlands in Coastal Lagoons

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains ponded water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

☐ Yes - Go to **SC 5.1** ☐No = **Not a wetland in a coastal lagoon**

SC 5.1. Does the wetland meet all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of aggressive, opportunistic plant species (see list of species on p. 100).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than $^{1}/_{10}$ ac (4350 ft^2)

☐ Yes = **Category I** ☐ No = **Category II**

SC 6.0. Interdunal Wetlands

Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)? ***If you answer yes you will still need to rate the wetland based on its habitat functions.***

In practical terms that means the following geographic areas:

☐ Long Beach Peninsula: Lands west of SR 103

☐ Grayland-Westport: Lands west of SR 105

☐ Ocean Shores-Copalis: Lands west of SR 115 and SR 109

☐ Yes - Go to **SC 6.1** ☐No = **Not an interdunal wetland for rating**

SC 6.1. Is the wetland 1 ac or larger and scores an 8 or 9 for the habitat functions on the form (rates H,H,H or H,H,M for the three aspects of function)?

☐ Yes = **Category I** ☐ No - Go to **SC 6.2**

SC 6.2. Is the wetland 1 ac or larger, or is it in a mosaic of wetlands that is 1 ac or larger?

☐ Yes = **Category II** ☐ No - Go to **SC 6.3**

SC 6.3. Is the unit between 0.1 and 1 ac, or is it in a mosaic of wetlands that is between 0.1 and 1 ac?

☐ Yes = **Category III** ☐ No = **Category IV**

name or number

Category of wetland based on Special Characteristics If you answered No for all types, enter “Not Applicable” on Summary Form	

EnviroVector
1441 West Bay Drive, Suite 301
Olympia, WA 98502

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www.envirovector.com

30 October 2020

Rob Rice

Reference: Kirsop Rd (#79900002400)
Subject: Mazama Pocket Gopher Screening to Satisfy City of Tumwater Permitting Requirements

Dear Rob Rice:

At your request, EnviroVector has prepared to satisfy City of Tumwater requirements for Mazama pocket gopher screenings on the 10.68-acre subject property located at 6139 Kirsop Rd SW, City of Tumwater, WA, 98512 (#79900002400) (**Figure 1**).

1.0 INTRODUCTION

The Mazama pocket gopher is a Federally Threatened species protected under the Endangered Species Act and the City of Tumwater Code. Mazama pocket gopher screenings were performed by a qualified biologist certified by the US Fish and Wildlife Service (USFWS) for the purpose of satisfying the City of Tumwater (July 2018) Mazama Pocket Gopher Screening Protocol (**Appendix E**).

The City of Tumwater has determined that a Mazama pocket gopher screening is necessary to comply with City of Tumwater Code and the Endangered Species Act.

2.0 METHODOLOGY

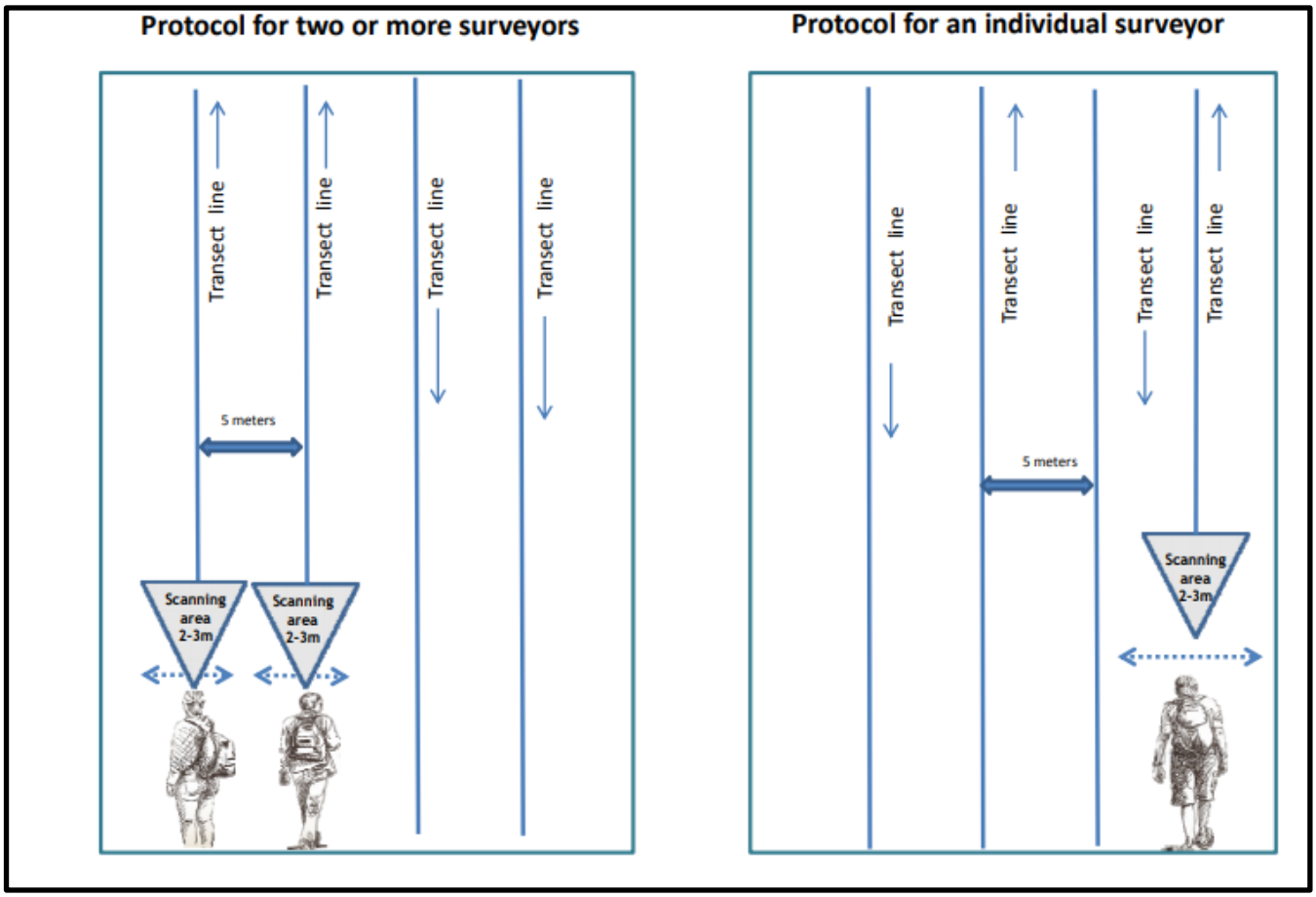
The Mazama pocket gopher screening was performed on 19 September 2020 and 30 October 2020 per City of Tumwater recommendations for two (2) site visits in compliance with the City of Tumwater (July 2018) Mazama Pocket Gopher Screening Protocol (**Appendix E**). The screening was performed within the USFWS prescribed survey window (June 1 through October 31).

In compliance with the USFWS and City of Tumwater (2018) Mazama Pocket Gopher Screening Protocols:

- The study has occurred during the prescribed work window of June 1 to October 31.
- A qualified biologist performed the screenings that has been trained and certified by the USFWS.
- The entire property was evaluated, not just the project footprint.
- The site was visited two (2) times at least 30 days apart.
- Data was recorded on datasheets and provided in **Appendix F**.
- The areas of the property covered under the screening survey is illustrated in **Figure 2**.
- The ground was easily visible.

The site evaluation was conducted utilizing USFWS recommended protocol for one (1) surveyor (**Insert 1**). The search pattern had been performed along five (5) meter transects, including brushy and treed areas, examined for any evidence of mounding activity created by the Mazama pocket gopher.

Insert 1. Transect Illustrations



The detailed field methodology is in compliance with the USFWS Site Inspection Protocol and Procedures: Mazama Pocket Gopher as follows:

1. The survey crew orients themselves with the layout of the property using aerial maps and strategizes their route for walking through the property.
2. Start GPS to record survey route.
3. Walk the survey transects methodically, slowly walking a straight line and scanning an area approximately 2-3 meters to the left and right as you walk, looking for mounds. Transects should be no more than five (5) meters apart when conducted by a single individual.
4. If the survey is performed by a team, walk together in parallel lines approximately 5 meters apart while you are scanning left to right for mounds.
5. At each mound found, stop and identify it as a MPG or mole mound. If it is a MPG mound, identify it as a singular mound or a group (3 mounds or more) on a data sheet to be submitted to the City.
6. Record all positive MPG mounds, likely MPG mounds, and MPG mound groups in a GPS unit that provides a date, time, georeferenced point, and other required information in County GPS data instruction for each MPG mound. Submit GPS data in a form acceptable to the City.
7. Photograph all MPG mounds or MPG mound groups. At a minimum, photograph MPG mounds or MPG mound groups representative of MPG detections on site.
8. Photos of mounds should include one that has identifiable landscape features for reference. In order to accurately depict the presence of gopher activity on a specific property, the following series of photos should be submitted to the City:
    a. At least one up-close photo to depict mound characteristics
    b. At least one photo depicting groups of mounds as a whole (when groups are encountered).
    c. At least one photo depicting gopher mounds with recognizable landscape features in the background, at each location where mounds are detected on a property
    d. Photos can be taken with the GPS unit or a separate, camera, preferably a camera with locational features (latitude, longitude)
    e. Photo point description or noteworthy landscape or other features to aid in relocation. Additional photos to be considered
    f. The approximate building footprint location from at least two cardinal directions.
    g. Landscape photos to depict habitat type and in some cases to indicate why not all portions of a property require gopher screening.
9. Describe and/or quantify what portion and proportion of the property was screened, and record your survey route and any MPG mounds found on either an aerial or parcel map.
10. If MPG mounds are observed on a site, that day's survey effort should continue until the entire site is screened and all mounds present identified, but additional site visits are not required.

Soils known to be associated with the Mazama pocket gopher are listed in **Insert 2**.

Insert 2. Mazama pocket gopher soils

Table 1. Soils known to be associated with Mazama pocket gopher occupancy.

Mazama Pocket Gopher Preference	Soil Type
More Preferred (formerly High and Medium Preference Soils)	Nisqually loamy fine sand, 0 to 3 percent slopes Nisqually loamy fine sand, 3 to 15 percent slopes Spanaway-Nisqually complex, 2 to 10 percent slopes Cagey loamy sand Indianola loamy sand, 0 to 3 percent slopes Spanaway gravelly sandy loam, 0 to 3 percent slopes Spanaway gravelly sandy loam, 3 to 15% slopes
Less Preferred (formerly Low Preference Soils)	Alderwood gravelly sandy loam, 0 to 3 percent slopes Alderwood gravelly sandy loam, 3 to 15 percent slopes Everett very gravelly sandy loam, 0 to 3 percent slopes Everett very gravelly sandy loam, 3 to 15 percent slopes Indianola loamy sand, 3 to 15 percent slopes Kapowsin silt loam, 3 to 15 percent slopes McKenna gravelly silt loam, 0 to 5 percent slopes Norma fine sandy loam Norma silt loam Spana gravelly loam Spanaway stony sandy loam, 0 to 3 percent slopes Spanaway stony sandy loam, 3 to 15 percent slopes Yelm fine sandy loam, 0 to 3 percent slopes Yelm fine sandy loam, 3 to 15 percent slopes

3.0 BACKGROUND INFORMATION

3.1 Thurston County Geodata Soils

Three (3) soil types are mapped on the subject property by Thurston County Geodata (**Appendix B & C; Table 1**). Two (2) soil types mapped on the subject property are preferred gopher soils, Indianola loamy sand 0-3% slopes (More preferred) and Nisqually loamy fine sand 0-3% slopes (more preferred).

Table 1. Summary of Soil Preference

Soil Unit	Gopher Soil	Preference	Comments
Indianola loamy sand, 0-3% slopes	Yes	More preferred	Located in the northwestern portion of the subject property
Nisqually loamy fine sand, 0-3% slopes	Yes	More preferred	Located in the southeastern portion of the subject property
Mukilteo muck	No	N/a	Northwestern corner of the subject property

3.2 WDFW PHS Database

No Mazama pocket gopher occurrence have been identified on or within six hundred (600) feet of the subject property by the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database (**Appendix D**).

4.0 FIELD RESULTS

4.1 Mazama Pocket Gopher Site Evaluation

No mounds characteristic of that created by the Mazama pocket gopher have been identified on the subject property during the 19 September 2020 or 30 October 2020 site screenings. The majority of the site consists of heavily grazed livestock pasture and paddocks (**Figure 2**; **Appendix A, Photos 1-8 & 15-20**). Neighboring properties consist of forested areas, wetlands, high intensity single-family residences, utility corridor, and rural residential. Conical-shaped mole mounds with central, vertical tunnels to the surface have been identified on the subject property (**Appendix A, Photos 7, 8, 9-13, & 21-24**). Some mounds are old and flattened.

Mounds created by the Mazama pocket gopher: 1) are crescent or oddly-shaped, 2) contain a plugged tunnel opening that extends diagonally underground from the mound edge, 3) exhibit a fine texture, and are 4) typically in a scattered distribution.

Mole mounds have centrally-located tunnel entrances that extend vertically below the surface, blocky texture, an in-line distribution pattern, and have a conical shape.

Table 2. Summary of Results

Site Visit	Date of Visit	Gopher Occurrence Observed	Comments
1st	19 September 2020	No	No mounds characteristic of that created by the Mazama pocket gopher have been identified on the subject property
2nd	30 October 2020	No	

4.2 Mazama Pocket Gopher Habitat Evaluation

Marginal potential Mazama pocket gopher habitat occurs on the subject property and in the vicinity. While the majority of the subject property is mapped as "More preferred" gopher soils, there are large wetland areas mapped north of the property by the WDFW PHS database.

5.0 CONCLUSION

This Mazama pocket gopher summary report was prepared to satisfy the City of Tumwater Mazama pocket gopher screening requirements and to comply with the City of Tumwater (July 2018) Mazama Pocket Gopher Screening Protocol.

The entire subject property was evaluated for the Mazama pocket gopher on 19 September 2020 and 30 October 2020 in accordance with the City of Tumwater (July 2018) Mazama Pocket Gopher Screening Protocol. The site evaluation was performed within the prescribed survey window (June 1 through October 31).

The subject property primarily contains soils listed by the WDFW as "more preferred" by the Mazama pocket gopher.

No mounds characteristic of the Mazama pocket gopher have been identified on the subject property. Marginal potential habitat occurs on the subject property.

If you have any questions or require further services, you can contact me at (360) 790-1559.

Sincerely,

Curtis Wambach, M.S.
Senior Biologist and Principal
EnviroVector

Figures

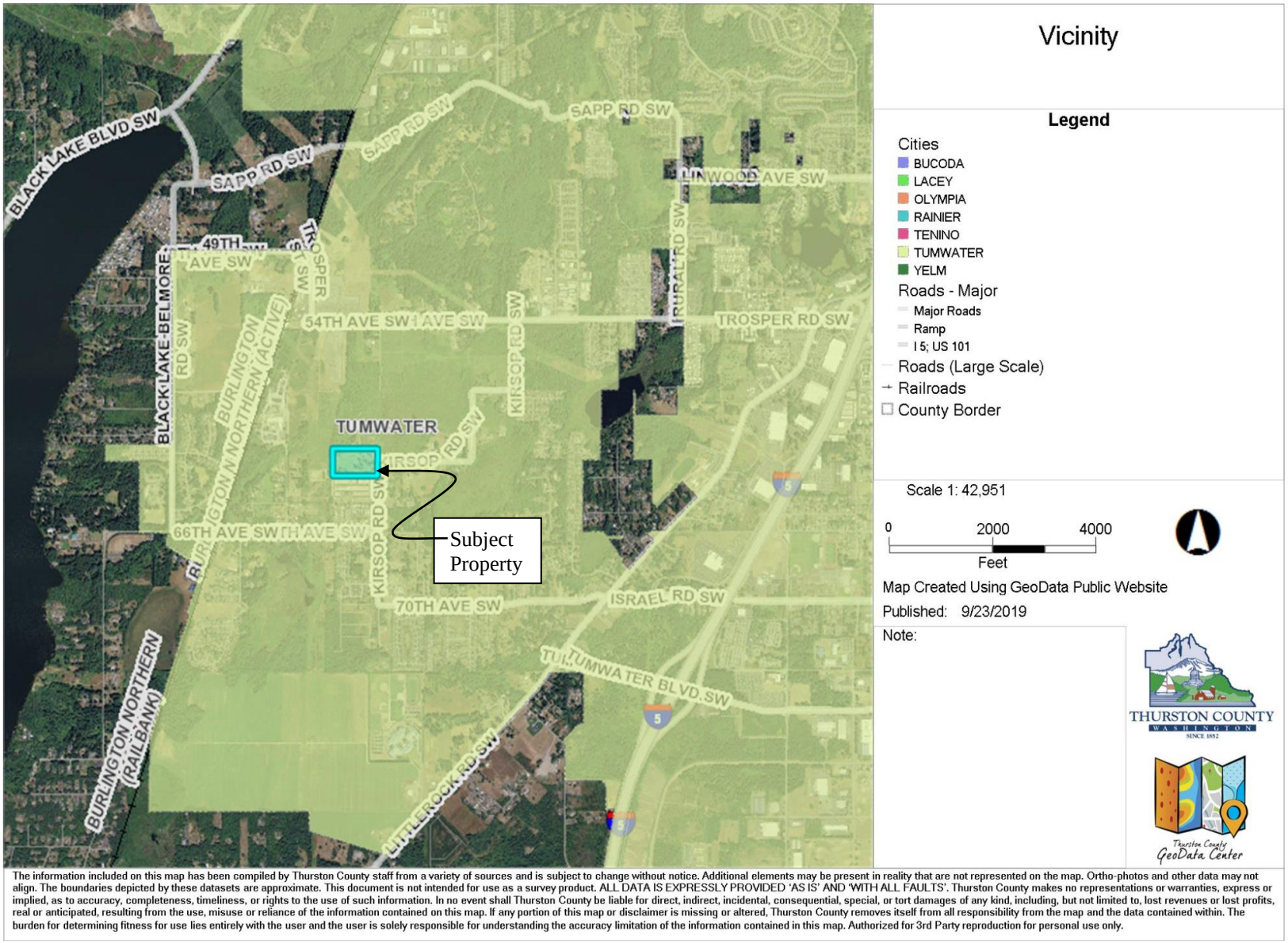


Figure 1 Vicinity Map

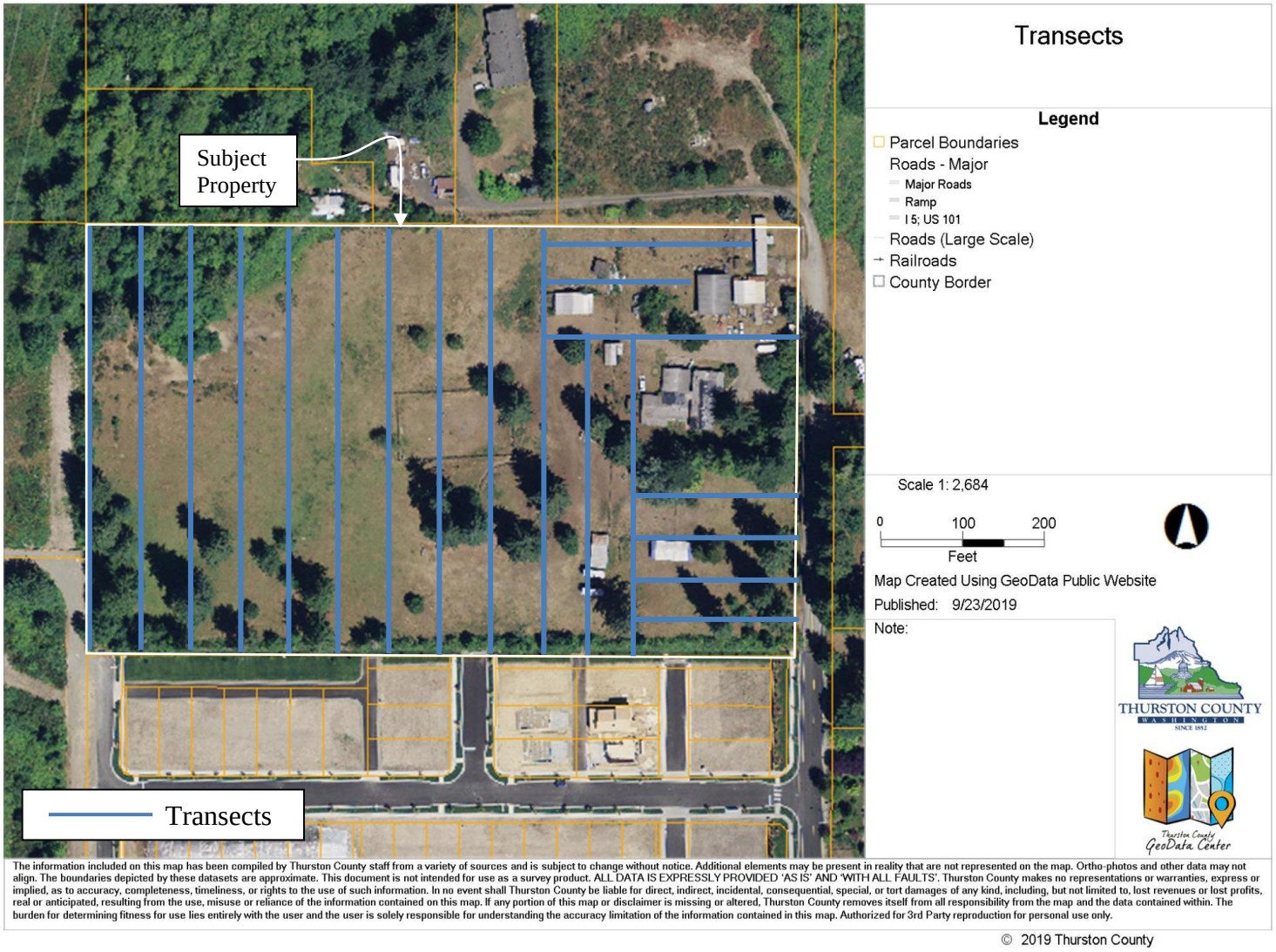


Figure 2 Subject Property

Appendix A

Photo Documentation

First Visit (29 October 2020)

Photo 1. Pastureland grazed by livestock

Photo 2. Short grazed grassland

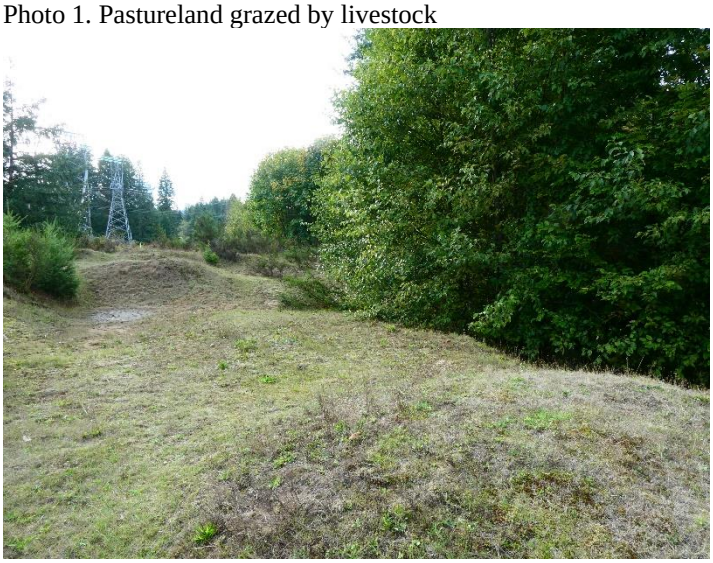


Photo 3. Short grass, no mounds

Photo 4. Short grass and bracken fern

Photo 5.

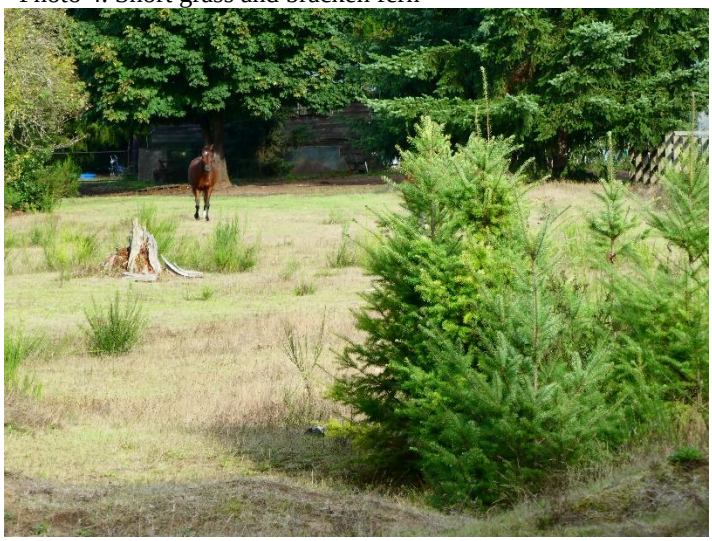


Photo 6. Mole mounds, blocky texture, conical in-line distribution

Photo 7. Mole mound, central tunnel, conical, blocky texture

Photo 8. Mole mounds, blocky texture, conical in-line distribution

Second Visit (30 October 2020)

Photo 9. Mole mound, conical, blocky texture

Photo 10. Mole mound, conical, blocky texture

Photo 11. Forested area adjacent to short grass area, no mounds

Photo 12. Mole mound, central tunnel, conical, blocky texture

Photo 13. Mole mound, conical, blocky texture

Photo 14. Mole mounds, in line distribution, blocky texture

Photo 15. Weathered mole mounds, in line distribution

Photo 16. Mole mound, conical, blocky texture

Photo 17. Weathered mole mounds, in line distribution

Photo 18. Mole mound, conical, blocky texture

Photo 19. Weathered mole mounds, in line distribution

Photo 20. Mole mound, conical, blocky texture

Photo 21. Weathered mole mounds, in line distribution

Photo 22. Mole mound, conical, blocky texture

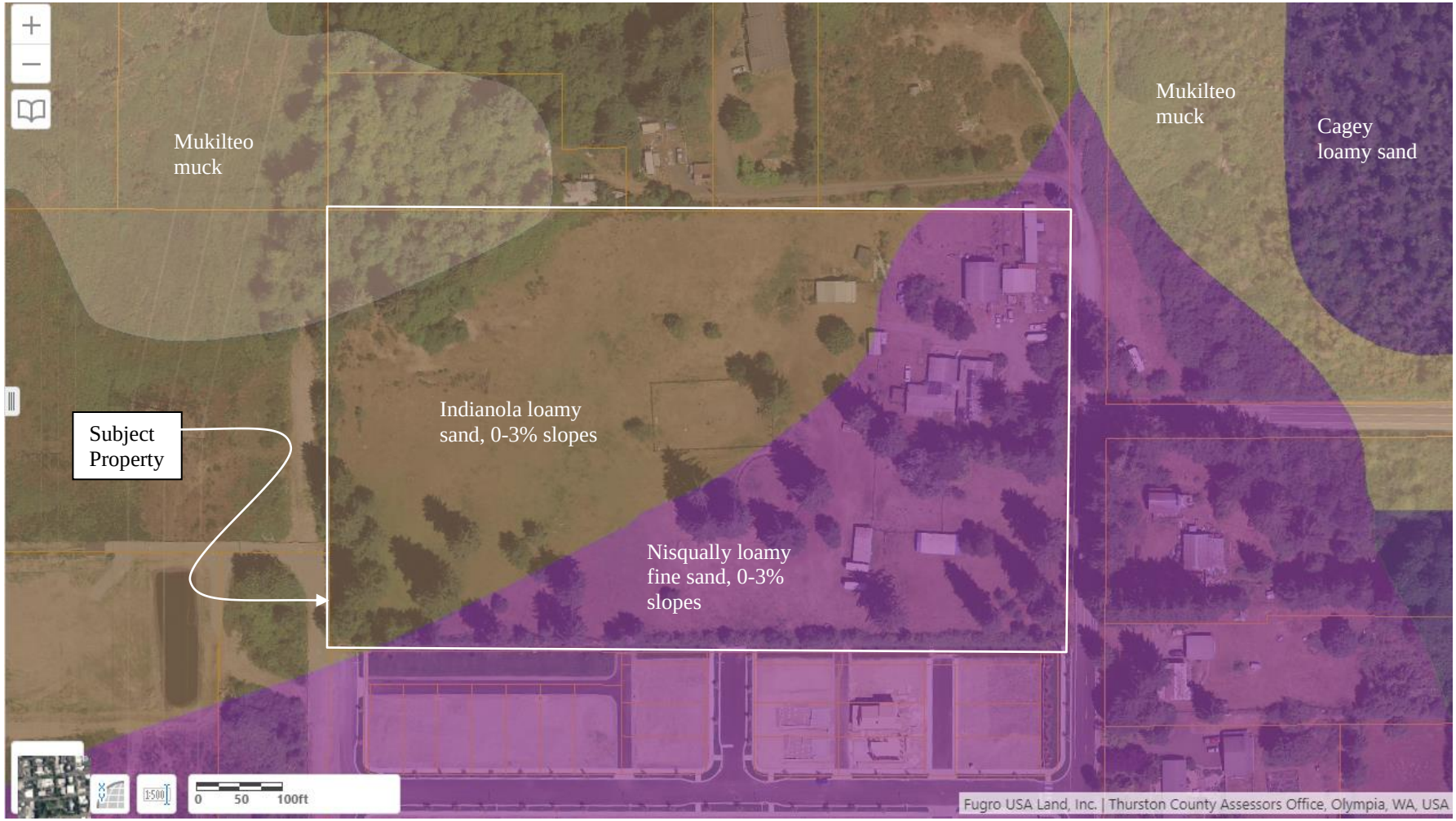
Photo 23. Weathered mole mounds, in line distribution

Photo 24. Mole mound, conical, blocky texture

Appendix B

Thurston County Geodata

Soils


Mukilteo muck
Mukilteo muck
Cagey loamy sand
Indianola loamy sand, 0-3% slopes
Subject Property
Nisqually loamy fine sand, 0-3% slopes
0 50 100ft
Fugro USA Land, Inc. | Thurston County Assessors Office, Olympia, WA, USA

Appendix C

Thurston County Geodata

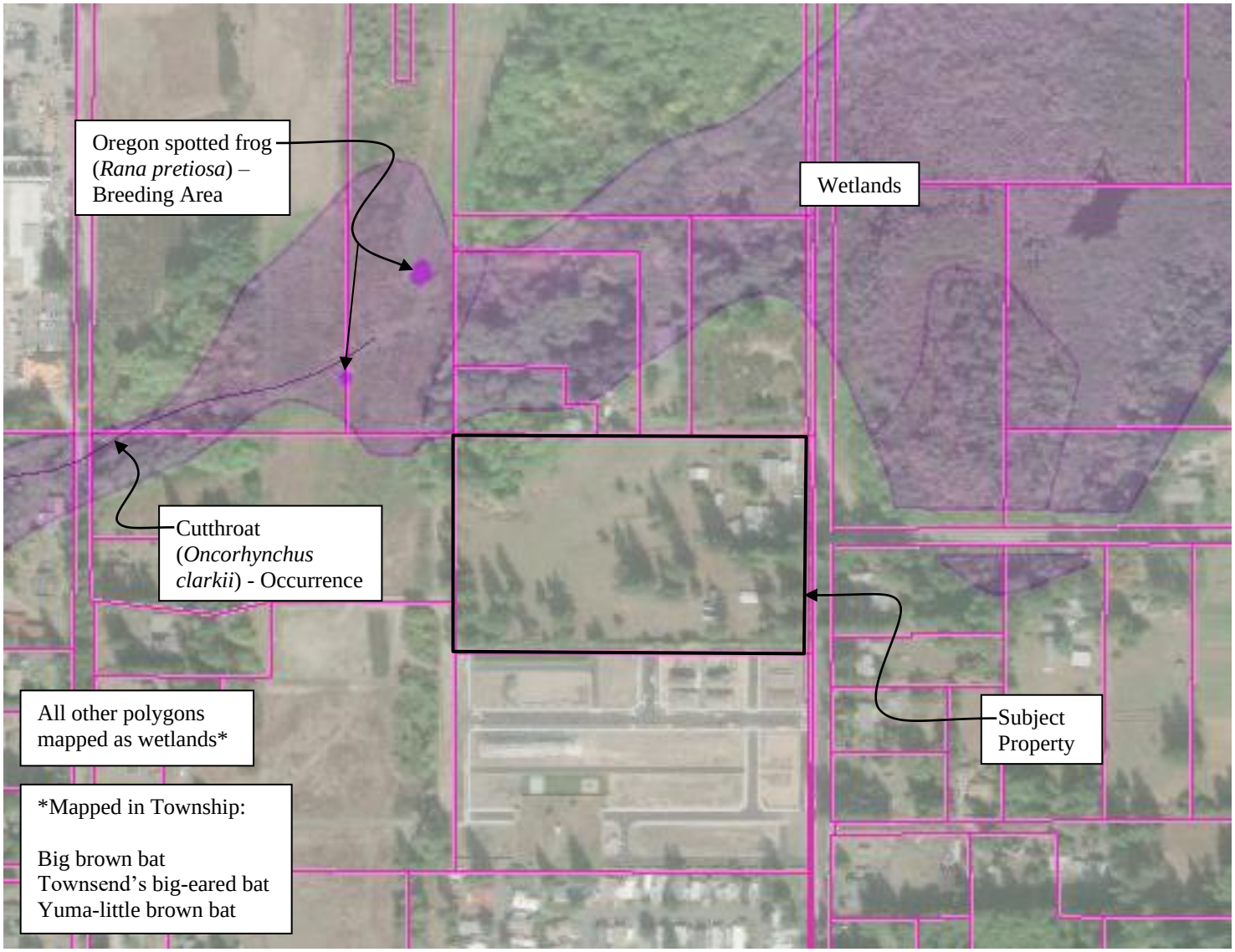
Gopher Indicator Soils


Subject Property
More Preferred
0 50 100ft
Fugro USA Land, Inc. | Thurston County Assessors Office, Olympia, WA, USA

Appendix D

WDFW

Priority Habitat Species (PHS)


Oregon spotted frog (*Rana pretiosa*) – Breeding Area
Wetlands
Cutthroat (*Oncorhynchus clarkii*) - Occurrence
Subject Property
All other polygons mapped as wetlands*
*Mapped in Township:
Big brown bat
Townsend's big-eared bat
Yuma-little brown bat

Appendix E

City of Tumwater

Mazama Pocket Gopher

Screening Protocol

COMMUNITY DEVELOPMENT DEPARTMENT

ADMINISTRATIVE DETERMINATION

TOPIC: Mazama Pocket Gopher Screening

APPROVED: _____ DATE: 7/25/18

Michael Matlock, AICP
Community Development Director

BACKGROUND: The Mazama Pocket Gopher (MPG) became a federally listed endangered species in April 2014. This memo addresses the City regulatory structure. The Endangered Species Act (ESA) is a separate regulatory structure from the Growth Management Act, the State statute the City does implement, so compliance with City regulations does not necessarily mean an applicant complies with the ESA. While the City routinely addresses questions from property owners on how to comply with its local development regulations, it does not do so with respect to the ESA.[1] ESA compliance is the property owner's responsibility.

FINDINGS: In implementing the City's critical areas ordinance (CAO), and based on analysis prepared by qualified professionals, staff have found that projects in certain areas and with certain features lack gopher habitat, so do not require CAO review by a qualified professional. While the CAO governs these issues, the below summarizes what staff have found to date.

DETERMINATION: Based on the findings above, Tumwater summarizes assessment findings for MPG presence as follows:

1. **Geographic** – Due to lack of habitat, no properties in the City north of Trosper Road have required CAO review.
2. **Vegetative Cover** – Project Sites, parcels, or portions of these sites with 30% or greater forested cover have not required CAO review, although where there are adjacent unforested and undeveloped lots exceeding 7,600 square feet (SF) in area, CAO review may be needed.
3. **Project Use Level** –
   a. Single-family, manufactured homes, and duplexes for lots 7,600 SF or less
      1) New or additions to single-family, manufactured homes, and duplexes – CAO review has typically not been required on existing lots 7,600 SF

[1] For land owners seeking guidance on ESA compliance, while the City cannot assist, see USFWS Memorandum, Guidance on Trigger for an Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act Where Occupied Habitat or Potentially Occupied Habitat is Being Modified, issued April 26, 2018.

or less in size. Unforested and undeveloped lots exceeding 7,600 SF may require CAO review.

2) Developed lots surrounded by existing development (homes, streets, storm ponds, sidewalks, etc.) that are of a similar size have not required CAO review. This would not exclude sites on the periphery areas where adjacent lands are not developed at an urban density level.

3) Single-family lots vested under RCW 58.17 and/or TMC 15.44.040 will likely not require CAO review.

b. Commercial/Industrial/Institutional

1) New or additions to buildings proposed in areas with 30% or greater forested coverage, existing impervious surfaces or significantly disturbed pervious areas (i.e. evidence of compacted gravel, formal landscape areas or other scenarios that would exclude the proposed developed area as being defined as habitat) have typically not required CAO review.

4. **Approved United States Fish and Wildlife Service (USFWS) Avoidance/Mitigation Strategy** – Any projects that have consulted with USFWS and have a documented avoidance/mitigation strategy that is acceptable to USFWS can typically proceed with normal permitting.

5. **Site Screening** – Properties may be screened by a qualified professional. Alternately, USFWS may screen properties by arrangement between the property owner and USFWS. At least two screenings, no less than 30 days apart, between June 1 and October 31, are consistent with best available science to determine the presence or absence of MPG.

PRIOR GUIDANCE: This Administrative Determination supersedes and replaces the City's prior Administrative Determination on Mazama Pocket Gopher Screening Protocol dated October 31, 2017.

APPEAL: This code determination shall become effective on the above date. Any person affected by this determination may appeal this decision to the Tumwater Hearing Examiner pursuant to Chapter 18.62 of the Tumwater Municipal Code.

Appendix F

Datasheets

Sample Mazama Pocket Gopher Screening Field Form

Site Visit Date: 19 Sept 2020

If 2nd or 3rd site visit, date(s) of previous visits:_____

Site Information	**Parcel #:** 79900002400 **Site/Landowner:** Rob Rice **Mapped soil types [close-up soil map with site outlined is attached ___]** **More preferred:** Indianola loamy sand, 0-3% slopes, Nisqually loamy fine sand, 0-3% slopes **Less preferred:**__ **Within 600' of known MPG occurrence? Yes (distance in ft) _____ No____** **[Copy that includes date of info. retrieval is attached ____]**	
How were the data collected? (circle the method for each)	**Transect: (GPS) Aerial** **Mounds: (GPS) Aerial** **What portion of MPG mounds observed were recorded in GPS or drawn on map? None (All) Most Some** **Notes:** No mounds were recorded	
Field team names: (Note who filled out form and others conducting screening)	Kari Gordon, Julie Lewis,	
Others onsite (name/affiliation)		
Site visit # (CIRCLE all that apply) **Request mowing to enable screening of all or a portion of the site?**	**(1st) 2nd 3rd** **Unable to screen** **Yes No N/A** **Date last mowed:_____**	**Notes:**
Do onsite conditions throughout the entire parcel preclude the need for MPG surveys? **(CIRCLE and DESCRIBE)**	**Yes (No)** **Dense woody cover (trees/shrubs) that appears to preclude any MPG use** **Impervious Compacted Graveled Flooded Slope** **Other_____** **Notes:**	
Describe ground visibility for mound detection: (CIRCLE and DESCRIBE)	**Poor Fair (Good) Notes:**	

Sample Mazama Pocket Gopher Screening Field Form

<table>
<tr><td rowspan="2">Quantify or describe amount of MPG mounds and approx. # of mounds or groups of mounds
(specify whether count is individual mounds or groups)</td><td>MPG Mounds</td><td>Indeterminate</td><td>Mole Mounds</td></tr>
<tr><td>0</td><td></td><td>50</td></tr>
<tr><td></td><td colspan="3">No MPG mounds observed (CIRCLE)</td></tr>
<tr><td>Does woody vegetation onsite match aerial photo?

(CIRCLE and DESCRIBE)</td><td colspan="3">(Yes) No – describe differences and show on parcel map/aerial:</td></tr>
<tr><td>What portion of the property was screened?

(CIRCLE and DESCRIBE)</td><td colspan="3">(All) Part - describe and show on parcel map/aerial:</td></tr>
<tr><td>Notes</td><td colspan="3"></td></tr>
<tr><td>Team reviewed and agreed to data recorded on form?

(CIRCLE, and EXPLAIN if “No”)</td><td colspan="3">(Yes) No Reviewed by: ____ ____ ____ _____ _____

Notes:</td></tr>
</table>

Sample Mazama Pocket Gopher Screening Field Form

Site Visit Date: 19 Sept 2020

If 2nd or 3rd site visit, date(s) of previous visits: 30 Oct 2020

Site Information	**Parcel #:** 79900002400 **Site/Landowner:** Rob Rice **Mapped soil types [close-up soil map with site outlined is attached ___]** **More preferred:** Indianola loamy sand, 0-3% slopes, Nisqually loamy fine sand, 0-3% slopes **Less preferred:** **Within 600' of known MPG occurrence? Yes (distance in ft) _____ No____** **[Copy that includes date of info. retrieval is attached ____]**	
How were the data collected? (circle the method for each)	**Transect: (GPS) Aerial** **Mounds: (GPS) Aerial** **What portion of MPG mounds observed were recorded in GPS or drawn on map? None (All) Most Some** **Notes:** 1 mound was recorded	
Field team names: (Note who filled out form and others conducting screening)	Julie Lewis, Todd Sliger	
Others onsite (name/affiliation)		
Site visit # (CIRCLE all that apply) **Request mowing to enable screening of all or a portion of the site?**	**1st (2nd) 3rd** **Unable to screen** **Yes No N/A** **Date last mowed:_____**	**Notes:**
Do onsite conditions throughout the entire parcel preclude the need for MPG surveys? **(CIRCLE and DESCRIBE)**	**Yes (No)** **Dense woody cover (trees/shrubs) that appears to preclude any MPG use** **Impervious Compacted Graveled Flooded Slope** **Other_____** **Notes:**	
Describe ground visibility for mound detection: (CIRCLE and DESCRIBE)	**Poor Fair (Good) Notes:**	

Sample Mazama Pocket Gopher Screening Field Form

<table>
<tr><td rowspan="2">Quantify or describe amount of MPG mounds and approx. # of mounds or groups of mounds
(specify whether count is individual mounds or groups)</td><td>MPG Mounds</td><td>Indeterminate</td><td>Mole Mounds</td></tr>
<tr><td>0</td><td></td><td>65</td></tr>
<tr><td></td><td colspan="3">No MPG mounds observed (CIRCLE)</td></tr>
<tr><td>Does woody vegetation onsite match aerial photo?

(CIRCLE and DESCRIBE)</td><td colspan="3">(Yes) No – describe differences and show on parcel map/aerial:</td></tr>
<tr><td>What portion of the property was screened?

(CIRCLE and DESCRIBE)</td><td colspan="3">(All) Part - describe and show on parcel map/aerial:</td></tr>
<tr><td>Notes</td><td colspan="3"></td></tr>
<tr><td>Team reviewed and agreed to data recorded on form?

(CIRCLE, and EXPLAIN if “No”)</td><td colspan="3">(Yes) No Reviewed by: ____ ____ ____ _____ _____

Notes:</td></tr>
</table>