



ANACORTES PLANNING COMMISSION

July 20, 2022

AGENDA

6:00 PM

A. Roll Call

B. Minutes

- 1) Draft Minutes of 07/13/2022 will be provided at a later date

C. Correspondence

D. New Business

E. Old Business

- 1) Critical Areas Regulation Amendments to address Riparian (Stream) Corridors and Riparian Management Zones(Buffers)

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Planning Commission Agenda Bill

Meeting Date: July 20, 2022

Agenda Item: E.1.

Subject: Critical Areas Regulation Amendments to address Riparian (Stream) Corridors and Riparian Management Zones(Buffers)

Staff Contact: DON MEASAMER

Approved for Submittal to Commission by

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LIBBY GRAGE

Grace Pollard

DON MEASAMER

Action Type

Discussion

Summary Statement: As a result of the Growth Management Hearings Board findings, the City is required to address Best Available Science (BAS) in determining stream buffers within city limits. Previously, buffers for streams were 50 feet from each side of the stream. The best Available Science report was updated by GeoEngineers on June 29, 2022, included in the PC packet. Staff proposes that streams be addressed as Riparian Corridors, which consist of the Riparian Water Course and The Riparian Management Zone, using City of Seattle regulations as a guideline. For development proposed within a Riparian Corridor, the draft regulations would require a critical areas report to determine function and value of the existing Riparian Management Zone (RMZ) and the proposed RMZ based on WDFW Site Potential Tree Height, in no case less than 100 feet. Section 19.70.330.B.3. Standards are proposed for limited development on platted lots prior to the adoption of the draft regulations within the RPZ which could reduce the RPZ to 50 feet with improvements to storm water quality and the applicant carries out a restoration plan with monitoring. Small project waivers include rockeries, fences, and utilities when meeting the criteria listed in Section 19.70.330.C.8. Maps with Riparian Watercourses (streams) are included in the packet. Several are not named only numbered as they have not currently been named.

Background: Proposed amendments to Critical area regulations to address the Growth Management Board findings regarding best available science for Riparian Corridors (Streams)

Previous Action: Adoption of Amended Critical Area Regulations by City Council via Ordinance 3064, July 2021

Competing Viewpoints Considered: NA

Recommended Motion: NA

Alternative Actions: NA

Attachments (listed in order presented):

1. Critical Areas AMC Chapter 19.70 Riparian Corridors

2. Figures 1 thru 14 combined_revised 061322
3. Ordinance 4025 Critical Areas Amendments Riparian Corridors
4. Revised City of Anacortes_Stream Buffer BAS Review and Buffer Recommendations Report
5. RMZ SEPA DNS
6. SEPAChecklist-RMZs

Chapter 19.70

CRITICAL AREAS

Sections:

Introduction – General Provisions

- 19.70.010 Purpose.
- 19.70.015 Applicability.
- 19.70.020 Identification, classification, and rating of critical areas.
- 19.70.025 Protection of critical areas.
- 19.70.030 Project evaluation.
- 19.70.035 Critical areas review.
- 19.70.040 Exempt activities.
- 19.70.045 Permitted alterations.
- 19.70.050 Reasonable use exception and critical area variance.

Article I. Critical Areas Review Procedures

- 19.70.110 Critical area identification form.
- 19.70.115 Critical area report.
- 19.70.120 Application requirements.
- 19.70.125 Mitigation requirements.
- 19.70.130 Mitigation plan requirements.
- 19.70.135 Title notification.
- 19.70.140 Field marking.
- 19.70.145 Construction plan review, monitoring, and inspection.
- 19.70.150 Financial guarantee requirements.
- 19.70.165 Unauthorized critical area alterations.
- 19.70.170 Final decision and appeals.

Article II. Wetlands

- 19.70.210 Description and purpose.
- 19.70.215 Designation and rating.
- 19.70.220 Mapping and delineation.
- 19.70.225 General development standards.
- 19.70.230 Specific wetland category development standards.
- 19.70.235 Required buffer areas.
- 19.70.240 Critical area report additional requirements.
- 19.70.245 Compensatory mitigation performance standards and requirements.

Article III. Fish and Wildlife Habitat Conservation Areas

- 19.70.310 Description and purpose.
- 19.70.315 Designation.
- 19.70.320 Mapping.
- 19.70.325 General development standards for all FWHCAs.
- 19.70.330 Specific standards for streams. Riparian Corridors
- 19.70.335 Specific standards for other FWHCAs.
- 19.70.340 Stormwater management facilities.
- 19.70.350 Critical area report additional requirements.
- 19.70.355 Mitigation performance standards and requirements.

Definitions

Introduction – General Provisions

19.70.010 Purpose.

- A. The purpose of this chapter is to designate critical areas and to establish standards for the protection of their functions and values, in compliance with the provisions of the Washington State Growth Management Act of 1990 (Chapter [36.70A](#) RCW), and consistent with the goals and policies of the Anacortes comprehensive plan.
- B. By identifying and regulating development and alterations to critical areas and their buffers, this chapter seeks to accomplish the following goals:
1. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, or flooding;
 2. Protect, maintain and restore healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including, but not limited to, ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;
 3. Direct activities not dependent on critical area resources to less environmentally sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas;
 4. Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas;

5. Alert owners, potential purchasers, real estate agents, appraisers, lenders, builders, developers and other members of the public to natural conditions that pose a hazard or may otherwise limit development;
6. Serve as a basis for exercise of the city's substantive authority under the State Environmental Policy Act (SEPA).

C. The regulations of this chapter are intended to protect critical areas in accordance with the Growth Management Act, through the application of best available science, as determined according to WAC [365-195-900](#) through [365-195-925](#), and in consultation with state and federal agencies and other qualified professionals.

D. This chapter is intended to be administered with limited flexibility and attention to site-specific characteristics. It is not the intent of this chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property, or to prevent the provision of public facilities and services necessary to support existing development and that planned for by the community without decreasing current service levels below minimum standards.

E. The city's enactment or enforcement of this chapter must not be construed for the benefit of any individual person or group of persons other than the general public. (Ord. 3064 § 2 (Att. A), 2021)

19.70.015 Applicability.

A. Unless explicitly exempted, the provisions of this chapter apply to all land uses, development activity, and all structures and facilities within the city of Anacortes that are within the critical area, within the maximum buffer distance of, or likely to affect the functions and values of, one or more critical areas.

B. *Relationship to Other Regulations.*

1. Shorelines of the state and shorelands as defined in RCW [90.58.030](#), and critical areas occurring within the jurisdiction of shorelines of the state and shorelands ("shoreline jurisdiction"), are regulated and protected through the Anacortes shoreline master program (AMC Chapter [19.72](#)), as amended. Activities occurring within shoreline jurisdiction are reviewed through the shoreline permit review and issuance process; a separate critical areas permit is not required. The shoreline master program incorporates by reference portions of this chapter; however, certain provisions of this chapter that are not consistent with the Shoreline Management Act, Chapter [90.85](#) RCW and supporting Washington Administrative Code chapters do not apply in shoreline jurisdiction.
2. These critical areas regulations apply in addition to zoning and other regulations adopted by the city. Notwithstanding AMC [19.12.040\(E\)](#), in the event of any conflict between these regulations and any other regulations of the city, the regulations apply that provide greater protection to the critical areas' functions and values, as determined by the Director.

3. When any provision of this chapter or any existing easement, covenant, or deed restriction conflicts with this chapter, that which provides more protection to the critical areas applies.
4. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, or local regulations and permit requirements that may be required. The applicant is responsible for complying with other agency requirements, apart from the process established in this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.020 Identification, classification, and rating of critical areas.

A. *Critical Areas Maps.* The general locations of many critical areas in Anacortes are displayed on the city of Anacortes' critical areas maps. The maps are used to alert the public of the potential location of critical areas in Anacortes. As new environmental information related to critical areas becomes available, the city is authorized to make changes as necessary to the critical areas maps. The city Geographic Information Systems office must maintain an interactive, publicly available online map containing the location of known and potential critical areas and must make PDF maps available to the public upon request.

B. *Actual Site Conditions.* Regardless of whether a critical area is shown on the critical areas map, the actual presence or absence of the features defined in this code as critical areas will govern. Prior to acting on any development permit the city may require an applicant to submit technical information to indicate whether critical areas actually exist on or adjacent to the applicant's site based on the definitions of critical areas in this code. This will be administered as a critical area identification form (AMC [19.70.110](#)) included with appropriate permit forms.

C. *Classification and Rating.* To promote consistent application of the standards and requirements of this chapter, critical areas within the city will be rated or classified using best available science according to their characteristics, function and value, and/or their sensitivity to disturbance.

1. Classification of critical areas will be determined by the city using the following tools:
 - a. Application of the criteria contained in these regulations;
 - b. Consideration of the critical area reports submitted by qualified professionals in connection with applications subject to these regulations; and
 - c. Review of maps and other resources adopted pursuant to this chapter.
2. Rating categories will not change due to illegal modifications. If the development proposal site contains or is within a critical area suspected of illegal modifications the rating will be based on pre-modification conditions of the critical area. Abatement of the unauthorized modification will be required prior to authorization of the current development proposal being processed for the subject site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.025 Protection of critical areas.

- A. Critical areas and their required buffers may not be altered except as allowed by this chapter.
- B. Any action taken pursuant to this chapter must result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science.
- C. All actions and development must be designed and constructed in accordance with mitigation sequencing per AMC [19.70.125](#) to achieve no net loss of critical area functions and values.
- D. Applicants must first demonstrate an actual inability to avoid or reduce impacts before restoration and compensation of impacts will be allowed.
- E. No activity or use may be allowed that results in a net loss of the functions or value of critical areas.
- F. Any individual critical area adjoined by another type of critical area must have the buffer and meet the requirements that provide the most protection to the critical areas involved.
- G. Violations of this chapter are subject to AMC Title [20](#), Civil Enforcement and Penalties. Where a violation occurs within a suspected protected critical area or as depicted on city mapping, the property owner must provide an appropriate critical area report to determine impacts. The report may be subject to third party review at the property owner's expense. (Ord. 3064 § 2 (Att. A), 2021)

19.70.030 Project evaluation.

- A. As part of the review, the city will:
 - 1. Verify the information submitted by the applicant;
 - 2. Evaluate the project area and vicinity for critical areas;
 - 3. Determine whether the proposed project is likely to impact the functions or values of critical areas; and
 - 4. Determine if the proposed project adequately addresses the impacts and avoids impacts to the critical area associated with the project.
- B. If the proposed project is within, adjacent to, or is likely to impact a critical area, the city will:
 - 1. Require a critical area report from the applicant that has been prepared by a qualified professional, to be reviewed and evaluated;

2. Determine whether the development proposal conforms to the purposes and performance standards of this chapter, including the criteria in AMC [19.70.035](#), Critical areas review;
3. Assess the potential impacts to the critical area and determine if they can be avoided or minimized; and
4. Determine if any mitigation proposed by the applicant is sufficient to protect the functions and values of the critical area and public health, safety, and welfare concerns consistent with the goals, purposes, objectives, and requirements of this chapter.

C. The city may require third party review of any critical area report, at the expense of the applicant. (Ord. 3064 § 2 (Att. A), 2021)

19.70.035 Critical areas review.

A. *When Required.* A proposal to modify any critical area and/or required buffer including, but not limited to, clearing, grading, draining, removal or alteration of vegetation, construction of structures, utilities and related infrastructure, must require a critical area permit unless it qualifies as an exemption, as provided in AMC [19.70.040](#). Except that, for within shoreline jurisdiction, administration of this chapter shall be through the shoreline master program and appropriate shoreline permit administration process.

B. *Best Management Practices.* All activities, including those allowed without critical areas review, must be conducted using the best management practices appropriate for that activity that result in the least amount of impact to the critical areas. Best management practices must be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The use of best management practices is required to ensure that the activity does not result in degradation to the critical area. Appropriate BMP sources include Ecology's Construction Storm Water General Permit and NRCS Conservation Practices. Any incidental damage to, or alteration of, a critical area and/or buffer must be restored, rehabilitated, or replaced at the responsible party's expense.

C. *Modifications to Existing Nonconforming Structures and Uses.* In these provisions the burden of proof is on the applicant to bring evidence in support of their position. Existing structures, activities, and uses that were established legally but do not meet the current critical area, buffer, or buffer setback requirements may continue in accordance with AMC [19.49.040](#), and may be modified as follows:

1. Routine maintenance and repairs;
2. Structural modifications or additions that do not intensify the nonconformity of the structure or increase the area of hardscape lying within the critical area or buffer. The Director may require an updated critical area report to confirm location of buffers and that the addition is located entirely outside the critical area or buffer;

3. Vertical additions above the ground floor that do not encroach further into the critical area or buffer beyond the existing exterior walls, except that critical areas review is required for additions in landslide hazard areas or buffers;
 4. Restoration or replacement of a structure that is damaged by fire, natural disaster or other calamity when:
 - a. A complete application for reconstruction or replacement is submitted within one year of the damage; and
 - b. The restoration or replacement is made to conform to the current critical areas regulations, or if such regulations cannot be physically met without reducing the size of the building, the restoration or replacement may not intensify any nonconformity that existed prior to the damage;
 - c. Except that critical areas review is required for restoration and replacement in landslide hazard areas or buffers;
 5. *State Ferry Terminal*. The existing developed footprint, except for infill between the toll booth area in the lowest parking lot, hillside walking paths, and a hillside side slope along the western side of the main terminal parking lot, and including all associated parking, at the Washington State Ferry terminal facility. Redevelopment may occur within the existing footprint only, provided there is no net loss of ecological function and value in the adjacent buffer areas for Cannery Pond and Ship Harbor Interpretive Preserve wetlands.
- D. *Demolition*. Demolition of structures located within critical areas or their buffers is permitted, excluding demolition of structures necessary to support or stabilize landslide hazard areas, and will be subject to approval of a stormwater pollution prevention plan consistent with the adopted stormwater management manual and clearing limits that will adequately protect the critical area. (Ord. 3064 § 2 (Att. A), 2021)

19.70.040 Exempt activities.

- A. *General Requirements for All Exempt Activities*. Activities listed in this section are exempt from the rest of the provisions of this chapter only if they meet the specific terms of this section.
- B. To be exempt from this chapter does not give permission to degrade a critical area or buffer or to ignore risk from natural hazards. All exempt activities must use reasonable methods to avoid potential impacts to critical areas and buffers. In every case, disturbance to the critical area must be minimized through best management practices and the use of low-impact equipment.
- C. Any incidental damage to, or alteration of, a critical area or buffer that is not a necessary outcome of the exempted activity must be restored, rehabilitated, or replaced at the responsible party's expense.

D. This chapter may not exempt an activity from the provisions of other city permits such as clearing and grading for vegetation removal and ground disturbing activities, or agency permit requirements such as Washington Department of Fish and Wildlife hydraulic permit, or Army Corps of Engineers regulatory requirements.

E. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence that the activity meets the precise description of the exemption.

F. Table 19.70.040(A) describes activities that must meet the precise description to be allowed without following a critical area process. Activities are divided into the categories of permitted in the critical area and permitted in the buffer, marked by a yes or no in the appropriate column.

Table 19.70.040(A) Exempt Activities

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
Emergencies. Alterations in response to emergencies which threaten the public health, safety, and welfare or which pose an imminent risk of damage to private property, and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this chapter, if the following requirements are met: a. Only the minimum intervention necessary to reduce the risk to public health, safety, or welfare and/or the imminent risk of damage to private property may be authorized by this exemption. b. The alteration undertaken must be reported to the Director no later than 30 days after the alteration has occurred. Once notified, the Director must confirm that an emergency existed and determine what, if any, additional applications and/or measures are required of the property owner to protect the critical area(s) consistent with the provisions of this chapter, and to repair any damage to a pre-existing resource. c. After the emergency, the person or agency undertaking the action must fully fund and conduct necessary site evaluations and critical area reports, mitigation plans, and restoration for any impacts to the critical area and buffers resulting from the emergency action. The person or agency undertaking the action must meet the review procedures contained herein. Mitigation activities must be initiated within one year of the date of the emergency or as directed by the Department. d. If the Director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, or any required mitigation, the Director may take action to enforce this chapter consistent with AMC Titles 19 and 20.	Yes	Yes
Yard and garden activities. Maintenance or repair activities including, but not limited to, cutting, mowing, weeding, hand removal of noxious and invasive species, harvesting and replanting of garden crops, pruning and planting of noninvasive ornamental vegetation or indigenous native species to maintain the general condition and extent of such areas; provided, that such maintenance or repair activities are limited to legally existing landscaping improvements and do not further expand into critical areas or associated buffers, do not alter topography, do not destroy or clear native vegetation, do not remove non-hazard trees in the buffer or critical area, and do not diminish water	No	Yes

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
quality or quantity. a. Native growth protection areas, mitigation sites, or other areas protected via permit conditions, conservation easements or similar restrictive covenants (as defined in AMC 19.70.135) are not covered by this exemption. b. If an activity has ceased for one year or more any future use of such land, building or structure must thereafter be in conformity with this chapter and the zone in which it is located.		
Site Investigation. Minimal site investigative work and studies necessary for preparing land use applications, including, but not limited to, surveys, soil logs and borings, percolation tests, water quality studies, scientific research, wildlife studies, and similar tests and investigations; provided, that such activities do not require clearing, fill, construction of new roads, or heavy equipment, and only minimal amounts of excavation and disturbed areas must be immediately restored.	Yes	Yes
Outdoor Recreation Activities. Outdoor recreation activities that do not involve modifying the land or vegetation, and that will not adversely affect the functions and values of critical areas.	Yes	Yes
EXEMPTIONS that require a letter of exemption be obtained from the Director prior to construction or initiation of activities. Subject to conditions by the Director to ensure compliance with this chapter.	Critical Area	Buffer
Utility Operation, Maintenance, Repair, or Replacement. Public water, electric, and natural gas distribution, public stormwater and sewer collection, cable communications, telephone, utility and related activities undertaken pursuant to city-approved best management practices, and best available science with regard to protection of threatened and endangered species, as follows: a. Normal and routine maintenance or repair of existing utility structures or rights-of-way; when the activity does not involve the expansion of facilities or improvements into a previously unimproved portion of critical areas or required buffers; b. Replacement, operation, repair, modification, installation or construction in an improved city road right-of-way or city-authorized private roadway of all electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of 55,000 volts or less; to include relocation only when required by the city of Anacortes, which approves the new location of the facilities; c. Relocation of public sewer or stormwater local collection, public water local distribution, natural gas, cable communication or telephone facilities, lines, pipes, mains, equipment or appurtenances, only when required by the city of Anacortes, which approves the new location of the facilities; d. Replacement, operation, repair, modification, relocation, installation or construction of public sewer or stormwater local collection, public water local distribution, natural gas, cable communication, or telephone facilities, lines, pipes, mains, equipment or appurtenances when such facilities are located within an improved public right-of-way or city-authorized private roadway;	Yes	Yes

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
e. Repair and maintenance of existing private connections to public utilities and private stormwater management facilities; f. Regular maintenance of stormwater facilities that are within a segment of a regulated stream, such as conveyance ditches/swales within the right-of-way or within public drainage easements.		
Transportation Infrastructure Operation, Maintenance, Repair, or Replacement. Maintenance, operation, repair, modification, or replacement of publicly improved roadways or city-authorized private roadways, including the road prism and associated stormwater management systems; as long as any such alteration does not involve expansion of roadways or related improvements into previously unimproved rights-of-way or portions of rights-of-way, and does not alter a critical area or required buffer, or watercourse, such as culverts or bridges, or result in the transport of sediment or increased stormwater. Retention and replanting of native vegetation must occur whenever possible along the right-of-way improvement and resulting disturbance.	Yes	Yes
Recreation Areas Operation, Maintenance, Repair, or Replacement. Maintenance, operation, repair, modification, or replacement of existing trails, and existing facilities within publicly improved recreation areas, such as the Anacortes Community Forest Lands and public parks, may be performed subject to the following:	Yes	Yes
a. The activity does not involve the expansion of facilities and disturbance to adjacent areas is minimized and disturbed areas must be immediately restored; b. Work is conducted using best management practices; c. Flow and circulation patterns and biological characteristics are not impaired and adverse impacts are minimized; d. Where trail relocation is the least impactful method of repair, trail relocation further away from the critical area is not to be considered a new trail but is included in the exemption for operation, maintenance, repair, or replacement.		
Vegetation Management, including:	Yes	Yes
1. Removal of noxious weeds or invasive vegetation, as identified by the Washington State or Skagit County Noxious Weed Control Board, in a wetland buffer, stream buffer, other fish and wildlife habitat conservation areas and buffers, is allowed when:		
a. Undertaken with hand labor, including handheld mechanical tools, and integrated pest management; b. Plants that appear on the Washington State or Skagit County Noxious Weed Control Board lists must be handled and disposed of in accordance with the best management practices appropriate to that species and approved by the city when permit review is applicable; c. Areas cleared by removal of noxious and/or invasive plant species must be revegetated with site-appropriate native species at natural densities and the site must be stabilized against erosion in accordance with the stormwater manual adopted by the city; d. All work performed is above the ordinary high water mark and above the top of a stream bank; and		

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
e. The following limits may not be exceeded: Within city-owned property, no more than 3,000 square feet of soil may be exposed at any one time; and within private property, not more than 500 square feet of area may be cleared, as calculated cumulatively, over one year, without a permit and critical area report prepared by a qualified professional.		
2. Vegetation management consistent with a previously approved critical area mitigation, restoration, remediation, or enhancement plan that requires ongoing maintenance and vegetation management beyond final inspection and the required monitoring period for the permitted project.		
3. Hazard Trees.		
a. The felling of hazard trees may be permitted when necessary to:		
i. Control fire; or ii. Halt the spread of disease or damaging insects consistent with Chapter 76.09 RCW; iii. Avoid a threat to existing structures, above-ground utility lines or other facilities; or iv. Remove an actual threat to life or property from slope instability that would be caused by toppling.		
b. Unless there is an emergency pursuant to emergency exemptions above, the landowner must first obtain prior written approval from the Department. A tree risk assessment prepared by an ISA certified arborist must be submitted by the applicant to the Department that includes the following information:		
i. Identification of the tree(s) proposed to be removed; ii. A conclusion that the condition constitutes an actual threat to life or property; iii. An assessment of whether a portion of the tree suitable for a snag for wildlife habitat may be safely retained; iv. If a tree to be removed provides priority habitat, such as an eagle perch or occupied nest, a description of timing and methods of removal that will minimize and mitigate impacts; v. If a tree to be removed is located within a landslide hazard area or buffer, an evaluation of potential impacts on slope stability must be completed by a qualified professional, including recommendations for replanting and other measures to avoid adverse impacts to slope stability.		
c. All work must be done using handheld implements only, unless the property owner requests and the Director approves otherwise in writing. d. Any removed tree or vegetation must be replaced in-kind, with similar or appropriate native species, within one year in accordance with an approved restoration plan including species, size, and maintenance plan.		
Clearing, grading, and the construction of fences and arbors are allowed within the required 10-foot stream setback for a piped stream segment if no other critical area or buffer is present.	No	Yes

(Ord. 3064 § 2 (Att. A), 2021)

19.70.045 Permitted alterations.

A. *Applicability.* An applicant may seek an alteration of a critical area and/or critical area buffer through a permitted alteration when application of the standards in this chapter would result in the denial of all reasonable and economically viable use of the property and the proposed development meets the specific terms of this section.

B. *General Requirements.* The actions in the permitted alteration table below must be considered permitted alterations, unless as otherwise specified under AMC [19.70.230](#), Specific wetland category development standards, and provided they are consistent with the general standards for mitigation sequencing and other applicable requirements established in this chapter.

C. *Review Process.*

1. A critical area permit must be required for all permitted alterations. Requests for such permits must be reviewed using the procedures outlined in AMC Chapter [19.20](#), Table 19.20.030-1, Review classification and process matrix. No permit must be issued unless it can be shown that the proposed development is fully consistent with the requirements of this chapter.
2. In addition to other project-related documents, all permitted alterations must require a critical area assessment report per AMC [19.70.115](#), Critical area report, to evaluate the permitted alteration. The report must include:
 - a. A description of the function and condition of the critical area and/or buffer that would be altered;
 - b. An analysis of the effect of the development proposal on the critical area and/or buffer;
 - c. A description of actions that can be taken to modify the development proposal to avoid or reduce the alteration of the critical area and/or buffer and a discussion of whether these modifications are practical and reasonable;
 - d. A mitigation plan as required by this chapter.
3. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence in support of the application and upon which any decision has to be made on the application.
4. *Public Comment.* Consistent with AMC [19.20.030](#), Types of review, the city must ensure the opportunity for public comment, including that from appropriate federal, state, and tribal natural resource agencies, to ensure the use of best available science before deciding on approval.

D. *Decision Criteria.* A permit for alterations of a critical area and/or buffer width requirements of this chapter may only be issued if the applicant demonstrates that all of the following criteria are met:

1. Special circumstances applicable to the subject property, including size, shape, or topography, and the strict application of this chapter is found to deprive the subject property of rights and privileges enjoyed by other properties in the vicinity; provided, however, that the fact that those surrounding properties have been developed under regulations in force prior to the adoption of this chapter may not be the sole basis for granting approval;
2. The issuance of a variance to zoning requirements (setback, height, coverage, etc.) by itself will not provide sufficient relief to avoid the need for a permitted alteration to the critical area and/or buffer and other requirements for the critical areas regulated by this chapter;
3. Mitigation sequencing per AMC [19.70.125\(A\)](#), Mitigation Sequencing, has been applied;
4. The proposed alteration is supported by best available science; and
5. The proposed alteration allows for development of the subject parcel with the least impact on critical areas while providing a reasonable use of the property.

E. Conditions may be required. In granting any approval, conditions and safeguards may be prescribed as are necessary to secure adequate protection of critical areas from adverse impacts, protect adjacent property, and ensure conformity with this chapter.

F. Table 19.70.045 describes activities that must meet the precise description to be allowed following the prescribed critical area process. Activities are divided into the categories of permitted in the critical area and permitted in the buffer, marked by a yes or no in the appropriate column.

Table 19.70.045 Permitted Activities

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
Buffer Modifications, including: increased buffer width, buffer averaging, and buffer alterations as described specifically in this chapter.	No	Yes
Public Services. To protect wetlands, streams, wildlife habitat and other sensitive critical areas while allowing services when the strict application of the standards in this chapter would otherwise unreasonably prohibit the provision of public services and amenities.	Yes	Yes
1. “Public services” include, but are not limited to, water supply, sewer and stormwater management facility; electric power, telecommunication and natural gas lines; and public road and multimodal transportation corridors (e.g., the Tommy Thompson Trail and Guemes Channel Trail).		
2. Public services may be allowed to alter critical areas and buffers when:		
a. Mitigation sequencing per AMC 19.70.125(A) has been applied;		

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
b. The application of the critical areas regulations would unreasonably restrict the ability to provide public services; c. There is no other practical alternative to the proposed development with less impact on the critical area; d. The proposed development does not create a health or safety hazard on or off the development site, and must not be detrimental to the properties or improvements in the vicinity; e. Where feasible, development is located on existing road grades, utility corridors, or previously disturbed areas; f. Designs for crossings, boardwalks, bridges, and culverts are consistent with Washington Department of Fish and Wildlife and National Marine Fisheries Service best available science for the protection of fish and wildlife habitat. These structures shall not interfere with fish passage, the flow and circulation of water, or other wetland or stream riparian corridors processes, and shall be located at a 90-degree angle, or as close as possible thereto, to the stream, wetland, or buffer. In streams with salmonid habitat, bridges, bottomless culverts, or other alternatives that will allow for fish passage are required. Bridge piers or abutments may not be placed within wetlands, streams, or stream banks unless there is no feasible alternative; g. Construction of crossings will occur during work windows and time limits established by state and federal agencies with jurisdiction to decrease impacts to protected species; h. Any alterations permitted to the critical area and buffer are mitigated in accordance with AMC 19.70.125, Mitigation requirements, and relevant mitigation standards for the impacted critical areas(s) type; i. The proposal is consistent with the Anacortes comprehensive plan and other applicable regulations.		
3. Conditions Authorized. Conditions may be established as necessary to mitigate impacts to critical areas and to conform to the standards required in this chapter. 4. It will be a condition of any alteration granted a public agency and services exception that only the portion of the alteration that must be located in a critical area may be so located.		
Conservation, Restoration, and Fish Habitat Enhancement Projects. Conservation or restoration activities aimed at protecting or enhancing the soil, water, vegetation, or wildlife; including voluntary fish, wildlife, and wetland restoration or enhancement activities not required as project mitigation that have been approved by the U.S. Fish and Wildlife Service, the Washington State Department of Ecology, Washington State Department of Fish and Wildlife, or other appropriate local, state, federal, or tribal jurisdiction and/or that meet the criteria of RCW 77.55.181(1) and that are reviewed and approved according to the provisions of RCW 77.55.181. A biological evaluation report is required to determine whether the proposal would conserve, preserve, or enhance critical area functions in the long term to minimize temporary environmental impacts.	Yes	Yes
Chemical Applications. The application of herbicides, pesticides, organic or	Yes	Yes

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
mineral-derived fertilizers, or other hazardous substances, if necessary for the control of nuisance weeds and algae; except that their use will be restricted in accordance with the State Department of Ecology and State Department of Fish and Wildlife Management recommendations, and regulations of the State Department of Agriculture and the U.S. Environmental Protection Agency.		
Recreational Areas/Facilities. Low impact activities which are consistent with the purpose and function of the critical area buffer (not to include the ACFL) and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the critical area. 1. Limited public park or public recreational access including trails, viewing platforms, fishing access (no wider than six feet), and foot bridges; provided, that all of the following are satisfied: a. The area/facility is part of a public park that is dependent on its location for recreational function; and b. The area/facility is limited to the minimum necessary to accomplish the recreational function; and c. The removal of trees and native vegetation is minimized; and d. The balance of the development is consistent with other requirements of this chapter; and e. The project is identified in the Anacortes comprehensive plan or parks master plan. 2. Private pedestrian walkways and public trails must meet the following standards: a. The trail is generally parallel to the perimeter of the critical area; b. The trail is located in the outer 25 percent of the buffer area and is designed to avoid removal of trees and native vegetation; c. The trail does not exceed six feet in width, and is limited to native soils or pervious surfaces. Raised boardwalks utilizing nontreated pilings may be acceptable; and d. The trail may be subject to closure during critical spawning, migration or breeding time periods of sensitive species that are present. 3. Informational Signs. Construction and placement of informational signs or educational demonstration facilities no more than nine square feet surface area and four feet high, as long as there is no permanent infringement on hydrology or stream flow and nontreated wood is used; 4. Limited excavating and filling necessary for the repair and maintenance of piers, walkways, observation decks, wildlife management shelters, boathouses, and other similar water related structures, provided they are built on pilings to allow unobstructed flow of water and preserve the natural contour of the critical area.	No	Yes
Single-Family Residences and Normal Appurtenances. New single-family dwellings on existing legal lots may intrude into critical areas or their buffers when all of the	Yes	Yes

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
following conditions are met:		
1. It is demonstrated that it is not feasible to avoid the critical area or buffer through avoidance or buffer averaging, or reconfiguration of lots in the same ownership at the date of adoption of this chapter, and the development is the minimum necessary to achieve reasonable use of the lot as determined by the decision-maker; and 2. Alteration of critical areas and their buffers including all clearing, grading, structures, and appurtenances, has not and will not exceed cumulatively 2,800 square feet of disturbance; and 3. This action does not allow critical areas or their buffers to be converted to lawn or residential landscaping beyond a minimal area needed to maintain an approved structure; and 4. Mitigation sequencing provided in this chapter under AMC 19.70.125 is applied and the proposal includes on-site mitigation to the extent feasible as determined by the critical area report. 5. Normal appurtenances included in this provision include garages, decks, and walkways incidental to residential living and that do not constitute a special privilege.		
Anacortes Community Forest Lands. Given the unique qualities of the community forest, all properties designated as ACFL have been nominated as a regulated critical area. Any and all new uses and development of new facilities within the ACFL must meet the requirements of the conservation easements/deed restrictions of the land, Anacortes comprehensive plan, The ACFL comprehensive plan, this chapter, and AMC Chapter 8.10 , Parks and the Anacortes Community Forest Lands.	Yes	Yes
Critical Area Aquifer Recharge Areas. All regulated activities listed under AMC 19.70.515 , Applicability and hazardous materials questionnaire.	Yes	Yes

(Ord. 3064 § 2 (Att. A), 2021)

19.70.050 Reasonable use exception and critical area variance.

A. *Applicability.* If the application of this chapter would result in denial of all reasonable and economically viable use of a property, and if such reasonable and economically viable use of the property cannot be obtained by consideration of a permitted alteration pursuant to AMC [19.70.045](#), then a landowner may seek a reasonable use exception from the standards of this chapter. Reasonable use exceptions are considered a critical area variance and are intended as a last resort and only when a variance can meet the requirements of this chapter.

B. *General Requirements.* Reasonable use is a legal concept articulated by federal and state courts in regulatory takings cases. Within the context of these cases and for the purposes of this title, reasonable use means uses allowed by the underlying zoning designation and subdivision of property is not allowed. When no

possible alternative exists, a reasonable use exception must be considered a critical area variance, provided they are consistent with the general standards for variances under AMC [19.38.040](#) and other applicable requirements established in this chapter.

C. Procedures for Review.

1. A variance permit must be required for all reasonable use exceptions. Requests for such permits must be reviewed using the procedures applicable to Type 3 Hearing Examiner decisions outlined in chapter AMC [19.20.030](#). A permit may not be issued unless it can be shown that the proposed development is fully consistent with the variance approval criteria enumerated in AMC [19.38.040](#) (variance criteria) as well as all of the requirements of this chapter.
2. In addition to other project related documents, all critical area variances must require a critical area assessment report per AMC [19.70.115](#) to evaluate the proposed disturbance. The report must include:
 - a. A description of the function and condition of the critical area and/or buffer that would be altered;
 - b. An analysis of the effect of the development proposal on the critical area and/or buffer;
 - c. A description of actions that can be taken to modify the development proposal to avoid or reduce the alteration of the critical area and/or buffer and a discussion of whether these modifications are practical and reasonable;
 - d. A mitigation plan as required by this chapter.
3. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence in support of the application and upon which any decision has to be made on the application.
4. *Public Comment.* Consistent with AMC [19.20.030](#) the city must ensure the opportunity for public comment, including that from appropriate federal, state, and tribal natural resource agencies, to ensure the use of best available science before a decision is made.

D. Variance Criteria. A reasonable use exception may be granted only if the applicant demonstrates that all of the requested action is consistent with all of the variance approval criteria as set forth:

1. The application of this chapter would deny all reasonable economic use of the property and that there is no reasonable economically viable use with a lesser impact on the critical area than that proposed; and
2. Special conditions and circumstances exist that are peculiar to the land, the lot, or something inherent in the land, and that are not applicable to other lands subject to the provisions of this chapter; and
3. The inability of the applicant to derive reasonable use of the property is not the result of actions by the current or previous owner in subdividing the property or adjusting a boundary line, thereby creating the undevelopable condition, after the effective date of the ordinance codified in this chapter; and

4. Any proposed modification to a critical area will be evaluated through consideration of a critical area report and mitigation plan prepared by a qualified professional pursuant to the requirements of this chapter, and will be the minimum necessary to allow reasonable and economically viable use of the property. The critical area report and mitigation plan must be prepared utilizing best available science; and
5. Mitigation sequencing per AMC [19.70.125\(A\)](#) has been applied, and the proposal mitigates impacts on the critical area to the maximum extent possible, while still allowing reasonable use of the lot; and
6. The proposed development does not pose a threat to adjacent property or to the public health and safety; and
7. The applicant has demonstrated that the criteria in AMC [19.38.040](#) (variance criteria) are met; and
8. Granting the variance requested will not confer on the applicant any special privilege that is denied by this chapter to other lands, structures, or buildings under similar circumstances; and
9. The granting of the variance is consistent with the general purpose and intent of the Anacortes comprehensive plan, and planning policies.

E. *Conditions.* Conditions of approval may be included as part of the decision, including modifications to the size and placement of structures and facilities to minimize impacts to critical areas and associated buffers and mitigation requirements that ensure that all impacts are mitigated to the maximum extent feasible utilizing best available science.

F. *Variances – Geologically Hazardous Areas.* A variance must not authorize development within a geologically hazardous area or required setback or buffer from a geologically hazardous area unless a qualified professional has determined the development will not pose a threat to public safety or property. (Ord. 3064 § 2 (Att. A), 2021)

Article I. Critical Areas Review Procedures

19.70.110 Critical area identification form.

Prior to the city's consideration of any proposed activity found not to be exempt under AMC [19.70.040](#), the applicant must submit to the Department a completed form identifying suspected critical areas on, and within 300 feet, of the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.115 Critical area report.

A. *Report Required.* When the Director determines a proposed development is within, abutting, or is likely to adversely affect a critical area or buffer pursuant to the provisions of this chapter, the Director may require a critical areas assessment report that is prepared by a qualified professional. The assessment of critical areas and analysis of impacts must be commensurate with the value or sensitivity of a particular critical area and relative to the scale and potential impacts of the proposed activity. This provision is not intended to expand or limit an applicant's other obligations under WAC [197-11-100](#).

B. *Third Party Review of Critical Area Reports.* The Director may require, at the applicant's expense, a third party review of a critical area report by a qualified professional under contract with or employed by the city in any of the following circumstances:

1. The project requires a critical area permit, or critical area variance; or
2. Third party review is specifically required by the provisions of this chapter for the critical area(s) or critical area buffer(s) potentially being impacted; or
3. When the Director determines that such services are necessary to demonstrate compliance with the standards and guidelines of this chapter or other appropriate regulations.

C. *Critical Area Report Types or Sections.* Critical area report requirements may be met in stages through multiple reports or combined in one report. A critical area report must include one or more of the following sections or report types unless exempted by the Director based on the extent of the potential critical area impacts. The scope and location of the proposed project will determine which report(s) alone or combined are sufficient to meet the critical area report requirements for potentially impacted critical area type(s). The typical sequence of required sections or reports that will fulfill the requirements of this section include:

1. *Reconnaissance.* The existence, general location, and type of critical areas on, adjacent to, or likely to be impacted by activities on a project site. Determination of whether the project will adversely impact or be at risk from the potential critical areas based on maximum potential buffers for the particular critical area type. Possible application of exemptions should also be addressed;
2. *Delineation.* The extent, boundaries, rating or classification, and applicable standard buffers of critical areas where the project area could potentially impact the critical area or its buffer including an assessment of the characteristics of or functions and values of the critical area and buffers identified;
3. *Analysis.* The proposal and impact assessment report documenting the potential project impacts to the critical area and buffers including a discussion of the efforts taken to avoid, minimize, and reduce potential impacts to those areas per AMC [19.70.125\(A\)](#);
4. *Mitigation.* The measures that prevent or compensate for the potential impacts of the project designed to meet the requirements of this chapter, AMC [19.70.130](#), Mitigation plan requirements, and the standards for the specific critical areas impacted. Mitigation includes, but is not limited to, adjustments to required

buffer sizes, best practices to minimize impacts, and critical area or buffer enhancement, restoration, or preservation plans. Mitigation plans include but are not limited to habitat management plans, revegetation or replanting plans, and restoration plans;

5. *Maintenance and Monitoring.* The goals of the mitigation proposed, performance standards for success, monitoring methods and reporting schedule, and contingency actions. Maintenance and monitoring plans must be consistent with the mitigation performance standards and requirements of this chapter, including the specific mitigation plan requirements outlined in each critical area type section.

D. *Minimum Report Requirements.* At a minimum, critical area reports must contain the following information:

1. The names and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
2. A description of the proposal, proposal location including address and parcel number(s), and a vicinity map for the project;
3. Identification and characterization of all critical areas, water bodies, shorelines, and buffers on or within 300 feet of the proposed project area. The Director may require critical area and buffer dimensions be accurately surveyed, depending on the scope of the project;
4. Documentation of any fieldwork performed on the site, including field data sheets, for delineations, rating system forms, baseline hydrologic data, site photos, etc.;
5. A statement specifying the accuracy of the report and all assumptions made and relied upon;
6. A description of methodologies used to conduct the critical areas investigation, including references;
7. A scaled drawing of critical areas and buffers identified in the report including buffers for off-site critical areas that extend onto the project site.

E. *Existing Reports.* Critical areas assessment reports must generally be valid for a period of five years. Unless otherwise provided, a critical area report may incorporate, be supplemented by, or composed of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Director. At the discretion of the Director, reports previously compiled or submitted as part of a proposal for a development may be used as a critical area report to the extent that the requirements of this section and the requirements for each specific critical area type are met. Supplemental critical area report(s) may be required to provide information or analysis to address changes to the project scope, potential impacts to or changes to applicable regulations that have been made subsequent to existing, valid critical area reports, or other circumstances.

F. *Modifications to Report Requirements.* The applicant may consult with the Director, prior to or during preparation of the critical area report, to obtain approval of modifications to the required contents of the report

where, in the judgement of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

1. In some cases, such as when it is determined that no specific critical area is present, a full report may not be necessary to determine compliance with the critical area regulations, and in those cases a letter or reconnaissance-only report may be required.
2. *Limitations to Study Area.* The Director may limit the required geographic area of the critical area report as appropriate if:
 - a. The applicant, with assistance from the city of Anacortes, cannot obtain permission to access properties adjacent to the project area; or
 - b. The proposed activity will affect only a limited part of the project site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.120 Application requirements.

A. A complete application for a permitted alteration permit or reasonable use exception/variance permit must include the following information and materials on a form provided by the Director. For the purpose of this section, a complete application includes:

1. The name and contact information of the applicant;
2. Adequate information to determine compliance with the requirements of the critical area regulations, including a critical area report, impact and hazard assessment, and mitigation requirements specific to each critical area type, as indicated in the corresponding sections of this chapter;
3. Identification of the development permit(s) requested and all other local, state, and/or federal critical area-related permits required for the project;
4. Site plan, a scaled drawing of the development proposal including:
 - a. Property and project site boundaries;
 - b. An accurate depiction of all critical areas, including off-site critical areas and buffers that extend onto the project site; a desk survey is acceptable when access to the adjacent property has been denied;
 - c. The development proposal, including grading and clearing limits and areas of proposed impacts to critical areas and/or buffers (include square footage estimates);

- d. A scaled depiction and description of the proposed stormwater pollution prevention plan consistent with the adopted stormwater manual, for the development and consideration of impacts to critical areas due to drainage alterations;
- e. An assessment of probable impacts to the critical areas resulting from the proposed development of the site based upon identified findings;
- f. A description of reasonable efforts made to apply mitigation sequencing pursuant to AMC [19.70.125](#), Mitigation requirements, to avoid, minimize, and mitigate impacts to critical areas; and
- g. Plans for mitigation required to offset any critical areas impacts, in accordance with AMC [19.70.130](#), Mitigation plan requirements, and the corresponding mitigation performance standards sections of this chapter, including a discussion of the applicable development standards and cost estimates for determination of financial guarantee requirements.

B. *Additional Requirements.* The Director may require additional information to be included in the critical areas permit submittal when determined to be necessary to the review of the proposed activity in accordance with this chapter. Additional information that may be required includes, but is not limited to:

- 1. Historical data, including original and subsequent mapping, historical aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;
- 2. Grading and stormwater management plans; and
- 3. Information specific to the type, location, and nature of the critical area. (Ord. 3064 § 2 (Att. A), 2021)

19.70.125 Mitigation requirements.

Mitigation must be sufficient to restore impacted functions and values, or compensate for the impacted functions and values, of the critical area and to prevent risk from a hazard posed to a critical area by the proposed activity. Mitigation must not be implemented until after the decision-maker has provided approval of a critical area report that includes a mitigation plan.

A. *Mitigation Sequencing.* This section applies to mitigation required with all critical areas reviews, approvals, and enforcement pursuant to this chapter. This section is supplemented with specific measures under parts for particular critical area types. Mitigation for specific development proposals may include a combination of the measures below and must be designed and constructed in accordance with the provisions of this section. Before impacting any critical areas, an applicant must demonstrate that the following actions have been taken in the following sequential order:

- 1. Avoiding the impact altogether by not taking a certain action or parts of actions;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment or by restoring or stabilizing the critical area through natural, engineering, or other methods;
4. Reducing or eliminating the impacts or hazard over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring, measuring and reporting the impact to the decision-maker and taking appropriate corrective measures.

B. Applicants must first demonstrate an inability to avoid or reduce impacts before the use of actions to mitigate potential impacts will be allowed. No activity or use may be allowed that results in a net loss of the functions or values of a critical area.

C. *Type, Location and Timing of Mitigation.* Unless it is demonstrated that higher levels of ecological functioning or greater reduction of hazard risk would result from an alternative approach or as otherwise allowed in this chapter, mitigation for adverse impacts must be based on best available science and must be in-kind, on site, and prior to the activities that will disturb the critical area. Mitigation measures that cannot be implemented prior to the critical area impacts must be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects must be timed to reduce impacts to existing fisheries, wildlife, and flora.

1. The decision-maker may authorize a one-time temporary delay in completing construction or installation of the mitigation when the applicant provides a written explanation from a qualified professional as to the rationale for the delay and satisfactory financial guarantee that the installation will occur. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay must not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay must not be injurious to the health, safety, or general welfare of the public.
2. *Alternative Mitigation Approaches.* If the applicant can demonstrate that off-site concurrent or advance mitigation would provide a higher level of ecological function or a greater reduction of hazard risk, off-site mitigation that occurs on Fidalgo Island will be considered by the decision-maker. (Ord. 3064 § 2 (Att. A), 2021)

19.70.130 Mitigation plan requirements.

When mitigation is required, the applicant must submit for approval by the city a mitigation plan as part of the critical area report. The mitigation plan must include:

A. *Environmental Goals and Objectives.* The mitigation plan must identify environmental goals and objectives of the mitigation proposed and including:

1. A description of the anticipated impacts to the critical areas, the mitigating actions proposed, and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives must be related to the functions and values of the impacted critical area; and
2. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed.

B. *Performance Standards.* The mitigation plan must include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained at the end of the required monitoring period and whether or not the requirements of this chapter have been met.

C. *Detailed Construction Plans.* In order to convey proposed construction techniques and anticipated final outcome, the mitigation plan must include written specifications, descriptions, and drawings of the mitigation proposed, including:

1. The proposed construction sequence, timing, and duration;
2. Best management practices including erosion and sediment control features to be implemented;
3. Site plans showing grading and excavation details, slope gradient, and final grade elevations with minimum two-foot contour intervals;
4. Cross-sectional drawings;
5. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and
6. Measures to protect and maintain plants until established.

D. *Monitoring Program and Contingency Plan.* A monitoring and contingency plan is required for all projects requiring mitigation.

1. The mitigation plan must include a monitoring program to be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program must determine if the original goals and objectives of the mitigation plan are being met.

2. A contingency plan must be established for indemnity in the event that the mitigation project is inadequate or fails. Contingency plans include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met. Corrective measures must be taken when the qualified professional indicates, in a monitoring report, that the contingency actions are needed to ensure project success by the end of the monitoring period. A performance and maintenance bond, or other acceptable financial guarantee, is required to ensure the applicant's compliance with the terms of the mitigation agreement consistent with AMC [19.70.150](#), Financial guarantee requirements.
3. Monitoring programs prepared to comply with this section must include the following requirements:
 - a. Best available scientific procedures must be used to establish the success or failure of the project. A protocol outlining the schedule for site monitoring (for example, monitoring must occur in years zero (as-built), one, three, and five after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met.
 - b. For vegetation determinations, permanent sampling points must be established.
 - c. The monitoring program must include measurable specific criteria, or performance standards, for evaluating whether or not the goals and objectives of the mitigation plan have been successfully attained.
 - d. A monitoring report must be submitted as needed to document milestones, successes, problems, and contingency actions of the mitigation project. Monitoring reports on the current status of the mitigation project must be submitted, consistent with subsection [\(D\)\(3\)\(e\)](#) of this section, to the city on the schedule identified in the monitoring plan, but not less than every other year. The reports are to be prepared by a qualified professional and reviewed by the city, or a qualified professional retained by the city, and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, as applicable.
 - e. Monitoring programs must be established for a period necessary to establish that performance standards have been met, but not for less than a minimum of five years without approval from the decision-maker. A longer monitoring period may be required depending on the mitigation goals.
 - f. If necessary, failures in the mitigation project must be corrected.
 - g. Dead or undesirable vegetation must be replaced with appropriate plantings.
 - h. Damage caused by erosion, settling, or other geomorphological processes must be repaired.
 - i. The mitigation project must be redesigned (if necessary) and the new design must be implemented and monitored, as in subsection [\(D\)\(3\)\(d\)](#) of this section.

j. Correction procedures must be approved by the decision-maker; the decision-maker may request review by a qualified professional.

k. If the mitigation goals are not obtained within the initial monitoring period, the applicant remains responsible for restoration of the impacted values and functions or hazard risk reduction until the mitigation goals agreed to in the mitigation plan are achieved.

E. *Monitoring Reports.* Monitoring reports must be submitted to the city consistent with the approved monitoring plan.

1. The as-built report, required prior to final inspection, must, at a minimum, include documentation of the following:

- a. Departures from the original approved plans;
- b. Construction supervision provided by the qualified professional;
- c. Approved project goals and performance standards;
- d. Baseline data for monitoring per the approved monitoring methods;
- e. Photos from established photo points; and
- f. A site plan showing final mitigation as constructed or installed, monitoring points, and photo points.

2. Subsequent monitoring reports must, at a minimum, include:

- a. Monitoring visit observations, documentation, and analysis of monitoring data collected;
- b. Photos from established photo points;
- c. Determination whether performance standards are being met; and
- d. Maintenance and/or contingency action recommendations to ensure success of the project at the end of the monitoring period.

3. The applicant is responsible for reimbursement of the cost of review of monitoring reports and site inspections during the monitoring period which are completed by the city or a qualified professional under contract with or employed by the city.

F. *Cost Estimates.* The mitigation plan must include cost estimates that will be used by the city to calculate the amounts of financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures must be posted in accordance with AMC [19.70.150](#), Financial guarantee requirements.

G. *Approved Mitigation Projects – Signature.* On completion of construction, an as-built report for any approved mitigation project must be prepared and signed off by the applicant’s qualified professional and approved by the city. Signature of the qualified professional on the required as-built report and approval by the Director indicates that the construction has been completed as planned. (Ord. 3064 § 2 (Att. A), 2021)

19.70.135 Title notification.

A. *Generally.* A critical area notice on title is required, as a condition of permit issuance or project approval, when a permit or development application is submitted for development on any property containing a critical area or buffer. The purpose is to inform subsequent purchasers of real property of the existence of critical areas.

1. The title notice requirement can be met through recording of a title notice on forms prepared by the city, establishment of a critical area tract, or recording of a native growth protection area easement, consistent with subsections (B) through (D) of this section, as applicable.
2. The following must be noted on all critical area title notice documents:
 - a. Identification of ownership and long-term maintenance responsibility of critical areas, buffers, and permanent field markings (e.g., fencing, signage);
 - b. Restrictions on development, vegetation removal, and application of hazardous substances (pesticides, herbicides, fertilizers) within the critical areas and buffers;
 - c. The right of the city to enforce the terms of the restrictions.

B. *Title Notice.* The title notice applicable to the property must be approved by the decision-maker and City Attorney for compliance with this provision and be filed by the property owner, at their expense, with the Skagit County Auditor’s Office. The title holder will have the right to challenge this notice and to have it extinguished if the critical area designation no longer applies. However, the titleholder is responsible for completing a critical area report, subject to approval by the decision-maker, before the notice on title can be extinguished. The title notice runs with the land.

C. *Critical Area Tract.* Subdivisions, short subdivisions, and binding site plans must establish a separate critical area tract as a permanent protective measure for wetlands, fish and wildlife habitat conservation areas, and geological hazard areas and their buffers. The plat or binding site plan for the project must note the long-term ownership/maintenance responsibility as well as clearly depict the critical area tract, including all of the subject critical area, any required buffer, and any additional lands included voluntarily as part of the project. Should the critical area tract include several types of critical areas, separate critical area tracts must be identified.

D. *Native Growth Protection Easements (NGPE)*. NGPE easements are required on a property where no subdivision, short subdivision, or binding site plan is proposed or required. Unless otherwise required in this chapter, NGPE easements must be recorded on title for all affected parcels prior to approval of a development application or building permit, when two or more dwelling units and/or nonresidential developments are proposed on one parcel, to delineate and protect critical areas and their buffers. The easement to be recorded must clearly depict the critical area(s), required buffer(s) and the limits of the NGPE easement. (Ord. 3064 § 2 (Att. A), 2021)

19.70.140 Field marking.

A. *Temporary Field Marking During Construction*. The outer perimeter of the critical area buffer and the clearing limits identified by an approved permit or authorization must be marked in the field with temporary “clearing limits” fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the Director prior to the commencement of permitted activities. This temporary marking and fencing must be maintained throughout construction and may not be removed until permanent fencing and/or signs, if required, are in place.

B. *Permanent Field Marking*. The decision-maker may require installation of permanent signs, markers, and fencing along the outer perimeter of a critical area or its buffer when it is determined necessary to protect the critical areas’ functions and values. Permanent markings must be installed prior to final project approval or occupancy, as determined by the decision-maker.

1. *Signs*. All critical areas, tracts, easements, and dedications should be clearly marked on the site using permanent markings, as follows:

a. Signs must be placed at least every 50 feet, with a minimum of one per lot, which include the following text, or similar, as approved by the decision-maker:

City of Anacortes Designated Critical Area. Activities, including clearing and grading, removal of vegetation, pruning, cutting of trees or shrubs, planting of nonnative species, and other alterations may be prohibited. Help protect and care for this area. Please contact the City of Anacortes with questions or concerns.

b. Signs must be made of an enamel-coated metal face and attached to a metal post or another nontreated material of equal durability.

2. *Fencing*. Permanent fencing should be designed so as not to interfere with species migration or wildlife movement, unless exclusion fencing is more pertinent, and constructed in a manner that minimizes impacts to the critical areas and buffers. Proposed fencing type and materials will be determined on a case-by-case basis and must be approved by the decision-maker prior to installation.

C. *Maintenance and Replacement.* It is the responsibility of the landowner, successors, or as otherwise assigned to maintain in perpetuity and replace, if necessary, all permanent fencing and field markings. (Ord. 3064 § 2 (Att. A), 2021)

19.70.145 Construction plan review, monitoring, and inspection.

A. The Director may require project building and construction plans be reviewed by a qualified professional for confirmation of consistency with the critical area report and recommendations prior to approval of construction plans.

B. The Director may require monitoring by a qualified professional during site alteration activities within, or adjacent to, critical areas or buffers, and/or a final inspection report by the qualified professional stating that construction has or has not implemented the design recommendations provided in the project critical area report, and evaluation of any deviation from the recommendations.

C. When the Director determines that such services are necessary to demonstrate compliance with the standards and guidelines of this chapter, they will be at the applicant's expense. (Ord. 3064 § 2 (Att. A), 2021)

19.70.150 Financial guarantee requirements.

When determined necessary by the Director, bonds, and other financial guarantees, and associated performance agreements or maintenance/defect/monitoring agreements are required for projects with required mitigation or restoration of impacts to critical areas or critical area buffers consistent with the following:

A. A performance agreement and bond, or other acceptable financial guarantees, are required from the applicant when mitigation required pursuant to a development proposal is not completed prior to final permit approval, such as final plat approval or final building inspection. The amount of the performance bond(s) must equal 125 percent of the cost of the mitigation project.

B. A performance agreement and bond, or other acceptable financial guarantees, are required from the applicant when restoration is required for remediation of a critical area violation. The amount of the performance bond(s) must equal 125 percent of the cost of the mitigation project.

C. A maintenance/defect/monitoring agreement and bond, or other acceptable financial guarantees, are required to ensure the applicant's compliance with the conditions of the approved mitigation plan pursuant to a development proposal or restoration plan for remediation of a violation. The amount of the maintenance bond(s) must equal 125 percent of the cost of the mitigation project in addition to the cost for monitoring for a minimum of five years. The monitoring portion of the financial guarantee may be reduced in proportion to

work successfully completed over the period of the bond. The bonding period must coincide with the monitoring period. (Ord. 3064 § 2 (Att. A), 2021)

19.70.165 Unauthorized critical area alterations.

A. When a critical area or its buffer has been altered in violation of this chapter, all work must stop and the critical area and buffer must be restored. The Director may issue a stop work order to cease all work, and order restoration measures at the owner's or other responsible party's expense to remediate the impacts of the violation of the provisions of this chapter. The city may take formal enforcement action under AMC Title [20](#), Civil Enforcement and Penalties, to ensure the violation is abated.

B. *Requirement for Restoration Plan.*

1. All work must remain stopped until a restoration plan is provided by the responsible party and approved by the city. Such a plan must be prepared by a qualified professional using the best available science and must describe how the actions proposed meet the minimum requirements described in subsection [\(C\)](#) of this section.
2. The Director may, at the responsible party's expense, seek expert advice, including but not limited to third party review by a qualified professional under contract with or employed by the city, in determining if the plan meets the minimum performance standards for restoration.
3. Submittal, review, and approval of required restoration plans for remediation of violations of this chapter must be completed through a site development permit application process, either after the fact for regulated activities, or as a restoration permit for activities not allowed under these provisions.

C. *Minimum Performance Standards for Restoration.*

1. For alterations to critical aquifer recharge areas, wetlands, and fish and wildlife habitat conservation areas, the following minimum performance standards must be met for the restoration:
 - a. The pre-violation function and values of the affected critical areas and buffers must be restored, including but not limited to hydrologic, water quality and habitat functions;
 - b. The pre-violation soil types and configuration must be replicated;
 - c. The critical area and buffers must be replanted with a native vegetation community that reproduces the structure, species content and condition of the pre-violation vegetation community. Based on the historical or pre-violation vegetation community, native plant species must be replaced at minimum of a five-to-one ratio or installed at a density of five-feet-on-center unless approved by the decision-maker. The pre-violation functions and values should be replicated at the location of the alteration; and

d. Information demonstrating compliance with the requirements in AMC [19.70.130](#), Mitigation plan requirements, and the applicable mitigation sections for the affected type(s) of critical area(s) and their buffer(s) must be submitted to the decision-maker with a complete site development permit application.

e. These standards may be modified by the decision-maker when it can be demonstrated that greater functional and habitat values can be obtained.

2. For alterations to special flood hazard and geologically hazardous areas, the following minimum performance standards must be met for the restoration of a critical area:

- a. The hazard must be reduced to a level equal to, or less than, the pre-violation hazard;
- b. Any risk of personal injury resulting from the alteration must be eliminated or minimized; and
- c. The hazard area and buffers must be replanted with native vegetation sufficient to minimize the hazard.
- d. These standards may be modified by the decision-maker if the violator can demonstrate that greater safety can be obtained.

D. *Site Investigation.* The Director is authorized to take such actions as are necessary to enforce this chapter. The Director (or Director's authorized representative) must present proper credentials and obtain permission before entering onto private property.

E. *Penalties.* Any responsible party violating the provisions of this chapter may be subject to applicable penalties per AMC Title [20](#), Civil Enforcement and Penalties, plus the following:

1. A square footage cost of \$3.00 per square foot of impacted critical area buffer; and a square footage cost of \$15.00 per square foot of impacted critical area; and
2. A per-tree penalty in the amount of \$3,000 per nonsignificant tree and \$9,000 per significant tree, for trees removed, or otherwise damaged, within a critical area or buffer in violation of the provisions of this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.170 Final decision and appeals.

A. *Completion of the Critical Area Review.* The city's determination regarding critical areas pursuant to this chapter is final concurrent with the final decision to approve, condition, or deny the underlying permit for the development proposal or other activity involved.

B. *Appeals*. Any decision to approve, condition, or deny a development activity proposal or other activity based on the requirements of this chapter may be appealed according to, and as part of, the appeal procedure for the underlying permit or approval involved. (Ord. 3064 § 2 (Att. A), 2021)

Article II. Wetlands

19.70.210 Description and purpose.

It is the purpose of this chapter to protect the functions and values of wetlands, which serve many important ecological and environmental functions and help to protect public health, safety, and welfare by providing flood storage and conveyance, and erosion control, while also providing fish and wildlife habitat, recreation, water quality protection, water storage, education, scientific research opportunities and other public benefits. (Ord. 3064 § 2 (Att. A), 2021)

19.70.215 Designation and rating.

A. *Designation*. All areas meeting the definition of a wetland and the wetland identification criteria pursuant to this chapter, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.

B. *Rating*. Wetlands must be rated by a qualified professional according to the Washington State Department of Ecology Wetland Rating System for Western Washington – 2014 Update (Ecology Publication No. 14-06-029, October 2014), or as revised. Wetland rating categories will be applied as the wetland exists on the date of adoption of the rating system by the city, as the wetland naturally changes in accordance with permitted activities.

1. *Category I*. Category I wetlands are those that represent unique or rare wetland types, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime, or provide a high level of functions. The following types of wetlands are Category I:

- a. Relatively undisturbed estuarine wetlands larger than one acre;
- b. Wetlands of high conservation value identified by scientists of the Washington Natural Heritage Program/Department of Natural Resources (DNR);
- c. Bogs;

- d. Mature forested wetlands larger than one acre;
- e. Wetlands in coastal lagoons; and
- f. Wetlands that perform many functions well and have a total score of 23 points or more in the wetland rating.

2. *Category II.* Category II wetlands are those wetlands that are difficult, though not impossible, to replace, and provide high levels of some functions. The following types of wetlands are Category II:

- a. Estuarine wetlands smaller than one acre or disturbed estuarine wetlands larger than one acre;
- b. Wetlands with a moderately high level of functions and a total score of 20 to 22 points in the wetland rating;
- c. Wetlands in coastal lagoons that are relatively undisturbed and equal to or smaller than one-tenth acre (4,350 square feet).

3. *Category III.* Category III wetlands are those with a moderate level of functions, generally have been disturbed in some ways, can often be adequately replaced with a well-planned mitigation project, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. The following types of wetlands are Category III:

- a. Wetlands with a moderate level of functions with a total score of 16 to 19 points in the wetland rating.

4. *Category IV.* Category IV wetlands have the lowest levels of functions and are often heavily disturbed, with a total score of 15 points or less in the wetland rating. The functions provided by Category IV wetlands are generally easier to replace, and in some cases can be improved. However, experience has shown that replacement of functions cannot be guaranteed in any specific case. These wetlands may provide some important functions that need to be protected.

C. *Illegal Modifications.* When a violation occurs wetland rating categories do not change due to illegal modifications or alterations. A wetland's category must be based on the pre-violation condition of the wetland. (Ord. 3064 § 2 (Att. A), 2021)

19.70.220 Mapping and delineation.

A. *Mapping.* The approximate location and extent of potential wetlands are shown in the wetland data layer maintained in the city of Anacortes geographic information system (GIS). In addition, the following maps and inventories, that depict areas of hydric soils and potential wetland areas, are hereby adopted by reference as amended:

1. Soils maps produced by the U.S. Department of Agriculture, National Resources Conservation Service; and
2. The National Wetlands Inventory, produced by the U.S. Fish and Wildlife Service.

B. *Reference Only.* The maps and resources cited above are to be used as a guide for the Department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

C. *Identification and Delineation.* Identification of wetlands and delineation of their boundaries pursuant to this chapter must be done in accordance with the adopted federal wetland delineation manual and applicable regional supplements per WAC [173-22-035](#). The exact location of a wetland's boundary must be determined through the performance of a field investigation by a qualified professional. Evidence documenting the results of the boundary survey, including evidence of a lack of wetland indicators if no wetlands are identified, must be submitted to the city. (Ord. 3064 § 2 (Att. A), 2021)

19.70.225 General development standards.

A. All development activities and uses are prohibited in wetlands and wetland buffers, unless administered through the permit procedures above, and the performance standards described herein, and only when it is demonstrated that the activity will not result in a loss of the functions and values of the wetland through the application of mitigation sequencing in AMC [19.70.125](#), Mitigation requirements.

B. *Exemptions.* Exemptions to this chapter are listed in the provisions established in AMC [19.70.050](#), Exempt activities.

C. *Subdivisions.* The subdivision and/or short subdivision of land in wetlands and associated buffers are subject to the following:

1. Land that is located wholly within a wetland and/or its buffer may not be subdivided; and
2. Land that is located partially within a wetland and/or its buffer may be subdivided; provided each lot will meet all zoning standards in AMC Chapter [19.42](#) without encroaching into the wetland or buffer.
(Ord. 3064 § 2 (Att. A), 2021)

19.70.230 Specific wetland category development standards.

A. *Category I Wetlands.* Development activities and uses that result in alteration of Category I wetlands and their associated buffers are prohibited, unless the denial will prevent all reasonable economic use of the property. The development may be permitted through a critical area variance if it is determined to be the

minimum impact possible and a reasonable use as prescribed in AMC [19.70.050](#), Reasonable use exception and critical area variance.

B. *Category II, III and IV Wetlands*. Development activities that result in alteration of Category II, III or IV wetlands may be permitted upon demonstration, through a critical area report meeting the requirements of this chapter, that:

1. Mitigation sequencing has been applied per AMC [19.70.125\(A\)](#);
2. The proposed alteration will not degrade the quantitative and qualitative functioning of the wetland, or that any degradation can be adequately mitigated to protect or compensate for the wetland functions that are lost;
3. *Small, Hydrologically Isolated Category IV Wetlands (Less Than 1,000 Square Feet)*. The decision-maker may allow small, hydrologically isolated Category IV wetlands to be exempt from the requirement to avoid impacts (AMC [19.70.125\(A\)\(1\)](#), Mitigation requirements) and allow alteration of such wetlands if all of the following conditions are met:
 - a. The remaining mitigation sequencing actions of AMC [19.70.125\(A\)\(2\)](#) through [19.70.125\(A\)\(6\)](#) are followed;
 - b. The wetland is less than 1,000 square feet in area;
 - c. The wetland does not have unique characteristics that would be difficult to replace through standard compensatory mitigation practices;
 - d. The wetland is a low-quality Category IV wetland with a habitat score of less than five points in the adopted rating system;
 - e. The wetland does not provide significant suitable breeding habitat for native amphibian species. Suitable breeding habitat may be indicated by adequate stable and seasonal inundation that is persistent from February to at least through April and presence of thin-stemmed emergent vegetation and/or clean water;
 - f. The wetland does not contain habitat identified as essential for local populations of priority species identified by the Washington Department of Fish and Wildlife or species of local importance which are regulated as fish and wildlife habitat conservation areas in Part 3 FWHCA;
 - g. The wetland is not associated with shorelines of the state or their associated buffers;
 - h. The wetland is not associated with riparian areas or buffers;
 - i. The wetland is not part of a wetland mosaic; and

j. A mitigation plan to replace lost wetland functions and values is developed, approved, and implemented consistent with AMC [19.70.130](#), Mitigation plan requirements.

k. In order to verify that the wetland meets these exemption conditions, a critical area report for wetlands meeting the requirements in this chapter must be submitted;

4. *Small, Hydrologically Isolated Category IV Wetlands (Less Than 1,000 Square Feet)*. Wetlands less than 1,000 square feet that meet the criteria in subsection [\(B\)\(3\)](#) of this section and that do not contain federally listed species or their critical habitat are exempt from the buffer provisions contained in this chapter. In order to verify that the wetland meets this exemption, a critical area report for wetlands meeting the requirements in this chapter must be submitted. (Ord. 3064 § 2 (Att. A), 2021)

19.70.235 Required buffer areas.

A. *Buffer Requirements*. Wetland buffers must be established to protect the integrity, functions and values of the wetland. The standard buffer widths in Tables 19.70.235(B), 19.70.235(C) and 19.70.235(D) have been established in accordance with the best available science. The buffer widths must be determined based on the category of wetland, surrounding land use intensity, and the habitat score as assigned by a qualified wetland professional using the most up-to-date version of the Washington State Wetland Rating System for Western Washington.

1. *Measurement of Wetland Buffers*. All buffers must be measured horizontally from the edge of the wetland boundary as surveyed in the field. The width of the wetland buffer must be determined according to Tables 19.70.235(B), (C) and (D).

2. *Buffer Standards*. The buffer standards required by this chapter presume the existence of a dense vegetation community in the buffer adequate to protect the wetland functions and values. When a buffer lacks adequate vegetation, the decision-maker may increase the standard buffer, require buffer planting or other enhancements, and/or deny a proposal for buffer reduction or buffer averaging.

B. For the purposes of buffer determination below, land use intensity rating is as follows:

Table 19.70.235(A)

High Land Use Intensity	Land use that includes the following uses or activities: commercial, industrial, institutional, retail sales, nonresidential use in zones where the primary intent is residential, residential, high-intensity recreation (such as golf courses, ball fields), and hobby farms.
Moderate Land Use Intensity	Land use that includes the following uses or activities:

	moderate-intensity open space (parks, paved trails, and logging roads).
Low Land Use Intensity	Land use that includes the following uses or activities: forestry (cutting of trees only), low-intensity open space (such as outdoor recreation activities and natural resources preservation), unpaved trails.

C. There are three sets of buffer standards, based on these parameters:

1. Buffer widths for wetlands that have a high level of function for wildlife habitat as indicated by a habitat function score of eight or nine points on the wetland rating form:

Table 19.70.235(B)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	300	225	150
Category II	300	225	150
Category III	300	225	150
Category IV	50	40	25

2. Buffer widths for wetlands that have a moderate level of function for wildlife habitat as indicated by a habitat function score of six or seven points on the wetland rating form:

Table 19.70.235(C)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	150	110	75
Category II	150	110	75
Category III	150	110	75
Category IV	50	40	25

3. Buffer widths for wetlands that have a low level of function for wildlife habitat as indicated by a habitat function score of three to five points on the wetland rating form:

Table 19.70.235(D)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	100	75	50
Category II	100	75	50
Category III	80	60	40
Category IV	50	40	25

D. *Reducing Buffer Widths.*

1. For wetlands that score six points or more for habitat function, buffer widths for high intensity may be reduced to moderate intensity if both of the following criteria are met:
 - a. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other relatively undisturbed area, as defined in the 2014 wetland rating system, or any other priority habitat as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW web site at: <http://wdfw.wa.gov/hab/phshabs.htm>.
 - b. The corridor must be protected for the entire distance between the wetland and the relatively undisturbed area or priority habitat by some type of legal protection such as a conservation easement. Presence or absence of a nearby habitat must be confirmed by a qualified biologist.
2. The measures in Table 19.70.235(E) are implemented, where applicable, to minimize the impacts of the adjacent land uses.
3. For wetlands that score three to five habitat points, only the measures in Table 19.70.250(E) are required for the use of moderate intensity buffer widths.
4. If an applicant chooses not to apply the mitigation measures in Table 19.70.250(E), or is unable to provide a protected corridor where available, then high intensity buffer widths must be used.

Table 19.70.235(E)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland

Disturbance	Required Measures to Minimize Impacts
	• If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 feet of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use low intensity development techniques (for more information refer to the stormwater manual)
Change in water regime (increase or decrease in the frequency, duration, timing, extent, depth or variability of water in a wetland)	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust

E. *Increasing Buffer Widths.* Buffer widths may be increased, on a case-by-case basis, as determined by the decision-maker. This determination must be supported by appropriate documentation showing that it is necessary to protect wetland functions and values. Documentation must include, but is not limited to, any of the following:

1. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored, or documented priority species or habitats, or the wetland is essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or

2. The adjacent land has slopes greater than 15 percent and is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
3. The adjacent land has minimal vegetative cover on slopes greater than 30 percent. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to protect the wetland functions and values, development and implementation of a wetland buffer restoration/enhancement plan in accordance with AMC [19.70.245](#), Compensatory mitigation performance standards and requirements, may be substituted.

F. *Averaging Buffer Widths*. The decision-maker may allow averaging of wetland buffer widths on a case-by-case basis when the critical area report demonstrates that the following criteria are met:

1. There is not a feasible alternative to the site design that could be accomplished without buffer averaging;
2. The buffer averaging improves the functions or values of the wetland, either through preservation of total buffer area or enhancement of buffer areas including the creation of connectivity and corridors;
3. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;
4. The wetland contains variation in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrow buffer in other places;
5. The buffer width at its narrowest point is not reduced to less than 75 percent of the standard width, for Category I and II. For Category III and Category IV is no less than 75 percent ~~unless for the purpose of creating connectivity and corridors, in which case no less than 50 percent.~~

G. *Measurement of Wetland Buffers*. All buffers must be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as a compensation for approved wetland alterations must be the same as the buffer required for the category of the created, restored, or enhanced wetland.

H. *Buffers on Mitigation Sites*. Buffer widths must be applied to mitigation sites consistent with the wetland ratings and buffer requirements of this chapter for subsequent development proposals based on expected category of the wetland once the mitigation actions are taken. Only fully vegetated buffers with predominantly native plants will be included in the new buffer area. Lawns, walkways, driveways, and other mowed or paved areas will not count towards the required buffer calculations.

I. *Buffer Maintenance*. Except as otherwise specified or allowed in accordance with this chapter, wetland buffers must be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive nonnative weeds is required for the duration of the mitigation bond.

J. *Buffer Impacts*. When buffer impacts occur, compensatory mitigation must be provided at a minimum ratio of one-to-one for the area impacted. The mitigation must occur on the same site when feasible or within the same wetland system preferably. The mitigation must ensure that the wetland functions and values are not diminished due to the buffer impacts.

K. *Stormwater Management Facilities*. Stormwater management facilities may be allowed in Category III and IV wetland buffers if they meet all of the criteria identified below:

1. The wetland is classified as a Category III or a Category IV wetland with a habitat score of three to five points or less; and
2. There will be “no net loss” of functions and values of the wetlands; and
3. The wetland does not contain a breeding population of any native amphibian species; and
4. The hydrologic functions of the wetland can be improved as outlined in questions 3, 4, and 5 of Chart 4 and questions 2, 3, and 4 of Chart 5 in the “Guide for Selecting Mitigation Sites Using a Watershed Approach” (available here: <http://www.ecy.wa.gov/biblio/0906032.html>); or the wetland is part of a priority restoration plan that achieves restoration goals identified in a shoreline master program or other local or regional watershed plan; and
5. The wetland lies in the natural routing of the runoff, and the discharge follows the natural routing; and
6. All regulations regarding stormwater and wetland management are followed, including but not limited to local and state wetland and stormwater codes, manuals, and permits; and
7. Modifications will require permits. Existing functions and values that are lost would have to be compensated/replaced through an approved mitigation plan.

L. *Setbacks From Buffers*. Buildings, structures, paving, and other hard surfacing must be set back a minimum distance of 10 feet from the edge of the wetland buffer, or edge of the wetland if no buffer is required, unless otherwise determined by the decision-maker that a smaller distance would meet the intent of this subsection. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer. The following may be allowed in the building setback from the buffer if they do not cause damage to the critical root zone of trees in the buffer:

1. Landscaping;
2. Uncovered decks, roof eaves and overhangs, unroofed stairways and steps;
3. Pervious ground surfaces, such as driveways, patios, and parking may be allowed; provided, that it is engineered as a permeable pavement system as defined in this chapter. Such improvements may be subject to the requirements in AMC Chapter [19.76](#), Stormwater.

M. *Functionally Separated and Isolated Buffers*. Consistent with the definition of “buffer” in this chapter, areas that are functionally isolated and physically separated from a wetland due to existing, legally established roadways, railroads or other legally established structures or paved areas eight feet or more in width that occur between the area in question and the wetland must be considered physically isolated and functionally separated buffer. Once determined by the Director, based on a submitted critical area report, to be a physically separated and functionally isolated wetland buffer, development proposals are allowed in these areas. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021)

19.70.240 Critical area report additional requirements.

A. *Additional Report Contents for Wetlands*. In addition to the minimum report contents required per AMC [19.70.115](#), Critical area reports, wetland reports must also include:

1. For each wetland identified on site and off site within 300 feet of the project site provide: the wetland rating, including a description of and score for each function, per wetland ratings (AMC [19.70.215](#)) required buffers (AMC [19.70.235](#)); hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlets/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site;
2. A discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project;
3. A description of the proposed actions, including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives, including a no-development alternative;
4. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development;
5. A description of reasonable efforts made to apply mitigation sequencing pursuant to AMC [19.70.125](#), Mitigation requirements, to avoid, minimize, and mitigate impacts to critical areas and a discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity;
6. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions; and

7. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.

B. *Additional Information.* When appropriate due to the proposed impacts or the project area conditions, the Director may also require the critical area report to include:

1. A request for consultation with the Washington State Department of Fish and Wildlife (DFW), Washington State Department of Ecology (Ecology), local Native American tribes, and/or other appropriate agency;
2. Copies of the Joint Aquatic Resource Permit Application (JARPA) and related approvals, such as a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW), when applicable to the project; and
3. Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.245 Compensatory mitigation performance standards and requirements.

A. *Compensatory Mitigation Plan.* When a project involves wetland and/or buffer impacts, a compensatory mitigation plan must be included as part of the required critical area report. Compensatory wetland mitigation plans must meet the minimum requirements of AMC [19.70.125](#), Mitigation requirements, and demonstrate compliance with AMC [19.70.130](#), Mitigation plan requirements. Full guidance can be found in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised). The mitigation plan must meet the following additional standards:

1. Description of the existing wetland and buffer areas proposed to be impacted. Include acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding land uses, and functions. Also describe impacts in terms of acreage by Cowardin classification, hydrogeomorphic classification, and wetland rating, based on wetland ratings (AMC [19.70.215\(B\)](#));
2. Description of the compensatory mitigation site, including location and rationale for selection. Include an assessment of existing conditions: acreage (or square footage) of wetlands and uplands, water regime, sources of water, vegetation, soils, landscape position, surrounding land uses, and functions. Estimate future conditions in this location if the compensation actions are not undertaken (i.e., how would this site progress through natural succession);
3. A description of the proposed actions for compensation of wetland and upland areas affected by the project. Include overall goals of the proposed mitigation, including a description of the targeted functions, hydrogeomorphic classification, categories of wetlands, and mitigation ratios applied (if ratio approach used);

4. A description of the proposed mitigation construction activities, construction/installation notes, and timing of activities;
5. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands);
6. Proof of establishment of notice on title for the wetlands and buffers on the project site, including the compensatory mitigation areas; and
7. The scaled plan sheets for the compensatory mitigation must contain, at a minimum:
 - a. An accurate depiction of the existing wetland and buffers, proposed areas of wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions;
 - b. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be impacted and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation;
 - c. Surface and subsurface hydrologic conditions, including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions;
 - d. Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes;
 - e. Required wetland buffers for existing wetlands and proposed compensation areas. Also, identify any zones where buffers are proposed to be reduced or enlarged outside of the standards identified in this chapter;
 - f. A plant schedule for the compensation area, including all species by proposed community type and water regime, size and type of plant material to be installed, spacing of plants, typical clustering patterns, typical plant installation details and notes, total number of each species by community type, timing of installation; and
 - g. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring plan, contingency plan, and maintenance schedule, and actions. Standards for success must be established based on the performance standards identified and the functions and values being mitigated based on the guidance in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised).

B. *Requirements for Compensatory Mitigation.*

1. Compensatory mitigation for alterations to wetlands may be used only for impacts that cannot be avoided or minimized, except as otherwise exempted in AMC [19.70.230](#), Specific wetland category development standards, and must achieve equivalent or greater biologic functions. Compensatory mitigation plans must be consistent with Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised).
2. Mitigation ratios must be consistent with subsection [\(J\)](#) of this section.
3. Mitigation requirements may also be determined using the credit/debit tool described in “Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report March 2012” (Ecology Publication No. 10-06-011, March 2012, or as revised) consistent with subsection [\(H\)](#) of this section.

C. *Compensating for Lost or Impacted Wetland Functions.* Compensatory mitigation must address the functions and values affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions and values. The goal for the compensatory mitigation must be to provide similar wetland functions and values as those lost, except when either:

1. The lost wetland provides minimal functions and values, and the proposed compensatory mitigation action(s) will provide equal or greater functions and values or will provide functions and values shown to be limited within a watershed through a formal Washington State watershed assessment plan or protocol; or
2. Out-of-kind replacement of wetland type or functions and values will best meet watershed goals formally identified by the city, such as replacement of historically diminished wetland types.

D. *Preference of Mitigation Actions.* Methods to achieve compensation for wetland functions and values must be approached in the following order of preference:

1. *Restoration.* The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland. Restoration of wetlands includes reestablishment and rehabilitation.
 - a. *Reestablishment.* Returning natural or historic functions to a former wetland. Reestablishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.
 - b. *Rehabilitation.* Repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

2. *Creation.* Creation (establishment) of wetlands on disturbed upland sites, such as those with vegetative cover consisting primarily of nonnative species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.
3. *Enhancement.* Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions and values lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.
4. *Preservation.* Preservation of high-quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of one-to-one acreage replacement is provided by reestablishment or creation. Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:
 - a. Proposed wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA-listed species;
 - b. There is no net loss of habitat functions within the watershed or basin;
 - c. Mitigation ratios for preservation as the sole means of mitigation must generally start at 20-to-one. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost;
 - d. The impact area is small (generally less than one-half acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland); and
 - e. All preservation sites must include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.
5. *Wetland Bank or Advanced Wetland Mitigation.* For future use since no current banks have a service area in Anacortes.

E. *Type and Location of Compensatory Mitigation.* Unless it is demonstrated that a higher level of ecological functioning would result from an alternative mitigation approach, compensatory mitigation for ecological functions should be either in-kind and on site, or in-kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions must be conducted within the same sub-basin or on the site of the alteration, except when the following apply:

1. The conditions in subsection (B) of this section are met.
2. There are no reasonable opportunities on site or within the sub-basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-basin do

not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include:

- a. Anticipated replacement ratios for wetland mitigation;
- b. Buffer conditions and proposed widths;
- c. Available water to maintain anticipated hydrogeomorphic classes of wetlands when restored;
- d. Proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);
- e. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland;
- f. Off-site locations must be in the same sub-basin, unless watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the city and strongly justify location of mitigation at another site; and
- g. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing, seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

F. *Wetland Mitigation Banks*. Credits from a wetland mitigation bank certified under Chapter [173-700](#) WAC may be used to compensate for impacts located within the service area specified in the mitigation bank instrument, if:

1. The proposal would provide appropriate compensation for the proposed impacts;
2. The impact site is located in the service area of the bank;
3. The proposed use of credits is consistent with the terms and conditions of the certified mitigation bank instrument; and
4. Replacement ratios using bank credits are consistent with replacement ratios specified in the certified mitigation bank instrument.

G. *In-Lieu Fee Mitigation*. Credits from an approved in-lieu fee (ILF) program may be used when all of the following apply:

1. The decision-maker determines that it would provide environmentally appropriate compensation for the proposed impacts.
2. The proposed use of credits is consistent with the terms and conditions of the approved ILF program instrument.
3. Projects using ILF credits must have debits associated with the proposed impacts calculated by the applicant's qualified wetland professional using the credit assessment method specified in the approved instrument for the ILF program.
4. The impacts are located within the service area specified in the approved ILF instrument.

H. *Permittee-Responsible Mitigation*. This type of mitigation is defined in [33 CFR 332](#) as “an aquatic resource restoration, establishment, enhancement and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.” The permittee performs the mitigation either before the project impact occurs and before any project impact permit is issued (advance permittee-responsible mitigation) or at the same time as the project impact is occurring after the project impact permit is issued (concurrent permittee-responsible mitigation). The permittee is ultimately responsible for implementation and success of the mitigation. For advance mitigation, the permittee generates mitigation credits that may be used to compensate for future wetland or buffer impacts. Only the permittee may use the advance mitigation credits. Permittee-responsible mitigation may occur at the site of the permitted impacts or at an off-site location within the same watershed. Permittee-responsible mitigation must be used only if the applicant's qualified wetland professional demonstrates to the decision-maker's satisfaction that the proposed approach is ecologically preferable to use of a bank or ILF program, consistent with the criteria in this section.

I. *Alternative Mitigation Plan*. The decision-maker may approve an alternative wetland mitigation plan that is based on best available science. Proposed alternative mitigation plans must provide an equivalent or better level of protection of wetland functions and values than would be provided by the strict application of this chapter.

1. The following will be considered in the approval of an alternative mitigation plan:
 - a. The plan uses a watershed approach consistent with [Selecting Wetland Mitigation Sites Using a Watershed Approach \(Western Washington\)](#) (Ecology Publication No. 09-06-032, Olympia, WA, December 2009).
 - b. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual small habitat areas.

- c. Mitigation according to subsection (D) of this section is not feasible due to site constraints including but not limited to parcel size, stream type, wetland category, or geologically hazardous areas.
- d. There is a clear potential for success of the proposed compensation at the identified site.
- e. The plan must contain clear and measurable standards for achieving compliance with the specific provisions of the plan, consistent with AMC [19.70.130](#), Mitigation plan requirements.
- f. The plan must be reviewed and approved as part of the overall approval of the proposed use.
- g. A wetland of a different type may be justified based on regional needs or functions and values; the replacement ratios may not be reduced or eliminated unless the reduction results in a preferred environmental alternative.
- h. Mitigation guarantees must meet the minimum requirements as outlined in AMC [19.70.150](#), Financial guarantee requirements.
- i. Qualified professionals in each of the critical areas addressed must prepare the plan.
- j. The city may consult with agencies with expertise and jurisdiction over the critical areas during the review to assist with analysis and identification of appropriate performance measures that adequately safeguard critical areas.

J. *Wetland Mitigation Ratios.* The ratios below are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

Table 19.70.245 Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation Only	Re-Est or Creation (R/C) and Rehab (RH)	Re-Est or Creation (R/C) and Enhancement (E)	Enhancement Only
Category I Mature Forested	6:1	12:1	1:1 R/C & 10:1 RH	1:1 R/C & 20:1 E	24:1
Category I –	4:1	8:1	1:1 R/C &	1:1 R/C &	16:1

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation Only	Re-Est or Creation (R/C) and Rehab (RH)	Re-Est or Creation (R/C) and Enhancement (E)	Enhancement Only
based on score for functions			6:1 RH	12:1 E	
Category I Natural Heritage Site	Not allowed	6:1 Rehabilitation of a Natural Heritage Site	Not allowed	Not allowed	Case-by-case
Category I Bog	Not allowed	6:1 Rehabilitation of a bog	Not allowed	Not allowed	Case-by-case
Category I Estuarine	Case-by-case	6:1 Rehabilitation of an estuarine wetland	Case-by-case	Case-by-case	Case-by-case
Category II	3:1	6:1	1:1 R/C & 4:1 RH	1:1 R/C & 8:1 E	12:1
Category III	2:1	4:1	1:1 R/C & 2:1 RH	1:1 R/C & 4:1 E	8:1
Category IV	1.5:1	3:1	1:1 R/C & 1:1 RH	1:1 R/C & 2:1 E	6:1

K. *Buffer Mitigation Ratios.* Impacts to buffers must be mitigated at a one-to-one ratio. Compensatory buffer mitigation must replace those buffer functions lost from development.

L. *Mitigation Performance Standards.* Wetland mitigation plans must be consistent with AMC [19.70.125](#), Mitigation requirements, and AMC [19.70.130](#), Mitigation plan requirements, and Wetland Mitigation in Washington State, Part 1: Agency Policies and Guidance (Version 1, Ecology Publication No. 06-06-011a), or as amended, and best available science.

M. *Minimum Standards.* The design standards in this section must be incorporated into mitigation plans submitted to the city for impacts to wetlands and/or wetland buffers. The following standards apply to any mitigation proposed within Category I, II, III and IV wetlands and their buffers. Modifications to these design standards consistent with the guidance in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised) may be considered for approval by the decision-maker as alternatives to the following standards:

1. Plants native to the region (not introduced, nonnative or exotic species) must be used.
2. Plant species selection must be consistent with the existing or projected hydrologic regime, including base water levels and stormwater event fluctuations.
3. Plant species selection must be consistent with the site environmental conditions such as slope, aspect, soils and exposure to sun, wind and rain.
4. Plants should be commercially available or available from local sources.
5. Native plant species high in food and cover value for fish and wildlife should be prioritized, as appropriate for the site.
6. Plant selection must be approved by a qualified professional.
7. The following standards apply to wetland design and construction:
 - a. For wetland creation sites, preliminary investigations of existing hydrology at the site must be completed to confirm that the site has adequate source hydrology (e.g., high groundwater, precipitation or riverine flooding) to support wetland conditions.
 - b. Water depth in areas of seasonal or occasional inundation must not exceed three feet (0.914 meters), unless the proposed mitigation is compensating for impacts to unvegetated/open water areas.
 - c. If creating or rehabilitating a slope wetland, the grade or slope within the wetland must not exceed six percent, unless otherwise approved by the decision-maker.
 - d. Slopes within the wetland contributing basin and the buffer zone must not be steeper than three-to-one (horizontal to vertical).
 - e. The wetland (excluding the buffer area) should not contain more than 20 percent unvegetated/open water areas as measured at the seasonal high water mark, unless the mitigation is compensating for vegetated.
 - f. Site soils must be free of contamination and/or hazardous materials, and must have adequate organic content and porosity to support the proposed native plant community.
 - g. Planting densities and placement of plants should be determined by a qualified professional and shown on the design plans.
8. The planting plan must be approved by the city.
9. Stockpiling soil and construction materials should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with city clearing and grading standards, unless otherwise approved by the city.

10. Planting instructions must be submitted which describe placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock.
11. Controlled release fertilizer (if required) must be used in upland areas only (buffers and other nonwetland areas) and must be installed into the planting hole only at the time of planting. No fertilizer must be applied to the ground surface.
12. An irrigation system must be installed or watering afforded by trucks or hoses to provide water for installed plants and seeded areas to supplement rainfall to ensure that plants receive approximately one-half inch of water per week during the dry season of the first two years after plant installation.
13. All construction specifications and methods must be approved by a qualified professional and the city.
14. Construction management provided must be provided by a qualified professional. Ongoing work on site must be inspected by the city. (Ord. 3064 § 2 (Att. A), 2021)

Article III. Fish and Wildlife Habitat Conservation Areas

19.70.310 Description and purpose.

A. Fish and wildlife habitat conservation areas are lands managed for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. In addition to their intrinsic value, certain species of fish and wildlife represent important historic, cultural, recreational and economic resources.

B. It is the purpose of this chapter to protect fish and wildlife populations and their associated habitats and provide special consideration to conservation or protection measures necessary to preserve or enhance anadromous species. (Ord. 3064 § 2 (Att. A), 2021)

19.70.315 Designation.

A. Fish and wildlife habitat conservation areas (FWHCAs) are designated as follows:

1. Critical saltwater habitats, which include all kelp beds, eelgrass beds, spawning and holding areas for forage fish, such as herring, smelt and sand lance; subsistence, commercial and recreational shellfish

beds; mudflats, intertidal habitats with vascular plants, and areas with which priority species have a primary association;

2. Naturally occurring ponds under 20 acres with submerged aquatic beds that provide fish or wildlife habitat as further defined in WAC [365-190-130\(4\)\(e\)](#);

3. **Riparian Corridors as defined in AMC 19.70.330 and** Waters of the state, including streams as classified in WAC [222-16-030](#), including but not limited to Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March's Run;

4. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

5. Areas with which anadromous fish species have a primary association;

6. State natural area preserves, natural resource conservation areas, and state wildlife areas as established by Washington State Department of Natural Resources;

7. Areas of rare plant species and high-quality ecosystems as identified by the Washington State Department of Natural Resources through the Natural Heritage Program in Chapter [79.70](#) RCW;

8. State priority habitats and areas associated with state priority species defined and listed by the State Department of Fish and Wildlife in the Priority Habitats and Species List, Updated January 2019. Priority habitats and species known to be identified and mapped by WDFW

(<http://apps.wdfw.wa.gov/phsontheweb/>) in Anacortes include, but may not be limited to, the following:

- a. Biodiversity areas;
- b. Bald eagle habitat protected pursuant to the Federal Bald and Golden Eagle Protection Act;
- c. Chinook/fall chinook salmon;
- d. Coho salmon;
- e. Great blue heron nest sites and breeding areas;
- f. Osprey nest sites;
- g. Peregrine falcon nest sites and breeding areas;
- h. Purple martin breeding areas;
- i. Resident coastal cutthroat trout;
- j. Winter steelhead trout;
- k. Water fowl concentrations.

9. The following habitats and species of local importance have been designated by the city:
 - a. The Anacortes Community Forestlands.
 - b. The March Point Heronry.
 - c. The one and one-half acre “Park Reserve” at Cap Sante bounded by Third Street, East Park Drive, and Curtis Drive.
 - d. Ship Harbor Wetland.
 - e. Cannery Pond Wetland.
 - f. Category II wetlands within the watersheds of Little Cranberry Lake, Whistle Lake, and Hearth Lake and with seasonal surface water connections.
 - g. Smiley’s Bottom Wetland.

B. In addition to the FWHCAs identified in subsection [\(A\)\(9\)](#) of this section, additional habitats and species of local importance may be designated by the city using the following process:

1. *Designation Process.* The city may consider nominations for habitat areas and species to be designated as locally important on an annual basis as part of the annual comprehensive plan and development regulation update process, based on the following criteria:
 - a. Local populations of native species that are in danger of extirpation based on existing trends, likely to become endangered, or are vulnerable or declining;
 - b. The habitat represents either a high-quality native habitat, or the habitat has a high potential to recover to a suitable condition and which is of limited availability, is highly vulnerable to alteration, or provides landscape connectivity which contributes to the integrity of the surrounding landscape;
 - c. The species or habitat has recreation, commercial, game, tribal, or other intrinsic value;
 - d. Long-term persistence of a species is dependent on protection, maintenance, and/or restoration of the nominated habitat;
 - e. Protection by other county, state, or federal policies, laws, regulations, or nonregulatory tools is not adequate to prevent degradation of the species or habitat; and
 - f. Without protection, there is a likelihood that the species or habitat will be diminished.
2. The nomination must indicate whether specific habitat features are to be protected (for example, nest sites, breeding areas, and nurseries) or whether the habitat or ecosystem is being nominated in its entirety.

3. The nomination may include management strategies for the species or habitats, which must be supported by best available science. Where restoration of habitat is proposed, a specific plan for restoration must be provided.

C. All areas within the city meeting one or more of these criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.320 Mapping.

A. *Mapping.* The approximate location and extent of some FWHCAs are shown in the data layers maintained in the city of Anacortes geographic information system (GIS). In addition, the following maps and inventories are hereby adopted by reference, as amended:

1. [Washington Department of Fish and Wildlife Priority Habitat and Species maps](#);
2. Washington Department of Natural Resources, [Official Water Type Reference maps](#);
3. Washington Department of Natural Resources [Puget Sound Intertidal Habitat Inventory maps](#);
4. Washington Department of Natural Resources [Shore Zone inventory](#);
5. Washington Department of Natural Resources [Natural Heritage Program mapping data](#);
6. Washington Department of Health Annual [Inventory of Shellfish Harvest Areas](#);
7. Anadromous and resident fish distribution maps contained in the habitat limiting factors reports published by the Washington Conservation Commission and others;
8. Washington Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps; and
9. NOAA Northwest Region Critical Habitat Mapper or equivalent source:
<http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>.

B. *Reference Only.* The maps and resources cited above are to be used as a guide for the city of Anacortes Planning, Community and Economic Development Department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation. (Ord. 3064 § 2 (Att. A), 2021)

19.70.325 General development standards for all FWHCAs.

A. All new development activities and uses are prohibited from habitat conservation areas and their buffers **or Riparian Management Zones (RMZs) defined in AMC 19.70.330.B.1** except in accordance with this chapter unless within shoreline jurisdiction and hereby regulated by AMC Chapter [19.72](#), Shorelines. Alterations of FWHCAs or their buffers **RMZs** is prohibited except as otherwise allowed by this chapter and may occur only if the proposed alteration of the habitat and any associated mitigation proposed does not degrade the functions and values of the habitat.

B. *Exemptions.* Exemptions to this chapter are listed in the provisions established in AMC [19.70.040](#), Exempt activities.

C. *Approvals and the Best Available Science.* Any approval of alterations or impacts to an FWHCA area must be supported by the best available science as described in the required critical area report.

D. *Approvals of Activities May Be Conditioned.* The decision-maker may condition approvals of activities allowed within or adjacent to a fish and wildlife habitat conservation area as necessary to minimize or mitigate any potential adverse impacts. Conditions will be based on the best available science and may include, but are not limited to, the following:

1. Establishment of buffers/**RMZs** ;
2. Preservation of important vegetation and/or habitat features such as snags and downed wood specific to the priority wildlife species in the fish and wildlife habitat conservation area;
3. Limitation of access to the habitat area, including fencing to deter unauthorized access;
4. Seasonal restriction of construction activities;
5. Establishment of a duration and timetable for periodic review of mitigation activities; and
6. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

E. *Seasonal Restrictions.* When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers/**RMZs** may be required and activities may be further restricted during the specified season.

F. *Subdivisions.* The subdivision and short subdivision of land in FWHCAs and associated buffers/**RMZs** is subject to the following:

1. Land that is located wholly within an FWHCA or its buffer/**RMZs** may not be subdivided;

2. Land that is located partially within an FWHCA may be subdivided only if an accessible and contiguous portion of each new lot that meets the minimum lot size requirements for the zone is located outside of the FWHCA and its buffer/RMZ;
3. Access roads and utilities serving a proposed subdivision may be permitted within the FWHCA and associated buffers/RMZ only if the applicant's qualified professional(s) demonstrate, and the decision-maker determines, that no other feasible alternative exists, all unavoidable impacts are fully mitigated, and the use is consistent with this chapter;
4. This subsection does not authorize new access roads and utilities in FWHCAs and associated buffers/RMZs for existing subdivisions.

G. *Nonindigenous Species*. No plant, wildlife, or fish species not indigenous to Fidalgo Island may be introduced to an FWHCA unless authorized by a state or federal permit approval. (Ord. 3064 § 2 (Att. A), 2021)

19.70.330 Specific standards for streams— Riparian Corridors.

A. *Typing*. Stream Riparian Watercourse types must be classified according to WAC [222-16-030](#). Stream classifications must include the following:

1. Type F streams watercourses are those that provide fish habitat;
2. Type Np streams— watercourses are perennial waters that do not contain fish habitat; and
3. Type Ns streams watercourses are seasonal waters that do not contain fish habitat, but are physically connected by an above-ground channel system to Type F or Np waters.
4. In the case that available information on stream watercourse typing is unclear, stream watercourse typing will be performed by a qualified professional, provided by the applicant, using a site visit, mapping, and all available information.

B. Riparian corridors

1. Riparian corridors, consist of the riparian watercourse and the riparian management zone. The riparian watercourse is the watercourse of Type S, F, Np, and Ns waters defined in WAC 222-16-030 and 222-16-031 that have fish or wildlife habitat. Pipes, culverts, flow control facilities, water quality facilities, and stormwater conveyances are not regulated as riparian watercourses. The Riparian Management Zone (RMZ) is the area within no less than 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark of the watercourse as surveyed in the field, or from the top of the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the ordinary high water mark shall be determined so as to include the entire stream feature. The riparian management zone may exceed 100 foot based on Section 19.70.330.B.3.

2. When a pipe or culvert connecting Type S, F, Np, and Ns waters per WAC 222-16-030 and 222-16-031 that have fish habitat downstream and upstream from the pipe or culvert is daylighted, the water formerly in the pipe or culvert will be regulated as a riparian watercourse, and the area adjacent to that watercourse will be regulated as a riparian management zone, as defined in subsection 19.70.330 B (1). This subsection 19.70.330 does not apply when the pipe or culvert is removed to provide a publicly owned facility designed primarily for water quality treatment, flow control, or stormwater conveyance.

3. Parcels proposed for development within a riparian corridor must provide a critical areas report prepared by a qualified professional describing the functions and values of the Riparian Management Zone (RMZ) and proposed RMZ based on the Washington Department of Fish and Wildlife (WDFW) Site Potential Tree Height (SPTH). In no case will the RMZ be less than 100 feet. WDFW Mapping tool:

<https://gispublic.dfw.wa.gov/arcgis/rest/services/SPTH/SitePotentialTreeHeightPublic/MapServer>

C. Development standards for parcels with riparian corridors

1. Application of standards and regulatory intent

a. The provisions of this subsection 19.70.330 apply to all development on parcels containing riparian corridors as defined in subsection 19.70.330.B (1).

b. It is the long term goal of the City to restore the City's riparian corridors and to protect salmon passage where scientifically justified. The City has determined that best available science supports protecting these riparian corridors as described in this section 19.70.330.

2. Riparian watercourse: Development is prohibited within or over the riparian watercourse, except as provided in this subsection 19.70.330 C. The Director may approve access over the riparian watercourse, if the applicant demonstrates that :

a. no other access is available;

b. the access is provided by a freestanding structure that maintains the natural channel and floodway of the riparian watercourse ;

c. the coverage of the riparian watercourse and disturbance of the riparian corridor and any other adjacent environmentally critical area or buffer are kept to a minimum; and

d. the material used to construct the access is durable and non-toxic to the maximum extent feasible. If using untreated wood is infeasible, wood treated with pentachlorophenol, creosote, chromate copper arsenate, or comparably toxic compounds is prohibited. Treated wood and other material shall be the least toxic and shall be applied and used according to National Oceanic and Atmospheric Administration Fisheries guidelines for using treated wood in or over aquatic environments.

e. In the riparian watercourse any action detrimental to habitat or actions affecting trees and vegetation, including but not limited to clearing or removal, is prohibited, except as provided in subsections 19.70.330. C. 2 (a).

3. Riparian Management Zone : The riparian management zone is defined in subsection 19.70.330.B.(1). Existing improved areas of public or private streets/driveways are excluded from the regulations for the riparian management zone.

a. Development is prohibited in the riparian management zone, except as follows:

1) To provide the minimum necessary access if no other access is available to development approved under subsections 19.70.330.C.2.(a) or 19.70.330.C.3.b.3.a.

2) Development allowed under subsections 19.70.330.C.3.c and 19.70.330.C.3.e.

3) On platted lots existing prior to adoption of Ordinance 4025 if the applicant demonstrates that:

a. The development is in the limited riparian development area, which is the area in the riparian management zone and more than 75 feet from the top of the riparian watercourse bank for Type F waters with anadromous fish present for any part of the year, more than 50 feet from the top of the riparian watercourse bank for Type F waters where anadromous fish are not present for any part of the year and more than 50 feet from the top of the riparian watercourse bank for Type Np and Ns waters;

b. The development complies with flow control and water quality requirements, regardless area of land disturbing activity or the size of the addition or replacement of impervious surface.
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c. Any development, including but not limited to coverage by impervious surface, does not exceed 35 percent of the total area of the limited riparian development area, and provided further that the maximum lot coverage does not exceed that allowed under Title 19, and except as provided in subsection 19.70.330.C.3.b.3.d.

d. When compliance with storm water flow control and water quality requirements is required solely based on subsection b , the director may approve a restoration plan in lieu of compliance with subsections 3b and 3c if the applicant demonstrates that the plan meets the following criteria:

i. The riparian watercourse and/or riparian management zone ecological function will be restored so that it prevents erosion, protects water quality, and provides diverse habitat: and

ii. The restoration results in greater protection of the riparian watercourse and riparian management zone than compliance with 3b and 3c.

4. In the riparian management zone any action detrimental to habitat and any action affecting trees and vegetation, including but not limited to clearing or removal, are prohibited, except as provided in subsection 19.70.330.C.3.b, 19.70.330.A.4.

5. The ecological functions of the riparian management corridor include tree and vegetation cover, preventing erosion and protecting water quality.

6. If the riparian management zone is degraded due to the lack of trees and vegetation, the presence of invasive or non-native species, and/or the presence of impervious surface or other

development, the applicant shall prepare and carry out a restoration plan that restores the ecological function of the riparian management zone to the extent commensurate with the impact of the development on the riparian management zone and according to mitigation standards pursuant to Section 19.70.125 and Section 19.70.130

7. If the development is authorized pursuant to 19.49.040 the Director shall require that the degraded portion of the riparian management area be restored by removing existing nonnative and invasive plant species, and replanting with native trees and vegetation, and providing a five-year monitoring and maintenance plan consistent with the requirements of Section 19.70.130.

8. Small project waiver

a. The Director may approve fences, rockeries, or similar features or temporary disturbance for installation of utility lines in a riparian management zone if no construction occurs over, in, or within 15 feet of a riparian watercourse or water body, and if the applicant demonstrates that the proposal meets the following criteria:

1) The feature is constructed on a lot that has been in existence as a legal building site consistent with Section 19.49.040 Non-Conforming Structures.

2) The feature:

i) Does not contain floor area;

ii) Does not remove trees or native vegetation;

iii) Does not block wildlife movement through the riparian management zone; and

iiii) Mitigates impacts to ecological functions.

b. The Director's decision requires:

i) The use of fencing with a highly durable protective barrier during the construction to protect the Riparian Management Zone.

ii) Mitigation pursuant to Section 19.70.125 and 19.70.130 to offset the area of both temporary and permanent development.

iii) Additional measures, as appropriate, to protect the remainder of the riparian corridor.

~~B. *Required Buffer Areas.* Protective riparian buffers must be required to preserve stream/riparian functions and values. The purpose of riparian buffers is to protect riparian functions that influence in-stream and near-stream habitat quality.~~

1. *Measurement of Stream Buffers.* Stream buffers are measured from the ordinary high water mark (OHWM), or the top of the bank if the OHWM cannot be determined. Buffers must be measured with rounded ends where streams enter or exit piped segments. Piped stream setbacks should be measured from the centerline of the pipe.

2. *Standard Stream Buffer Widths.* Buffer widths must reflect the sensitivity of the stream type, the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the stream area. The following standard buffers are established for streams:

Table 19.70.330 Stream Buffers

DNR Water Type (WAC 222-16-030)	Standard Buffer Width
Type F Streams that are known to be used by fish, or meet the physical criteria to be potentially used by fish.	50 feet
Type Np Streams that have year-round flow and do not meet the physical criteria of a Type F. This also includes streams that have been proven not to contain fish using methods described in Forest Practices Board Manual Section 13.	50 feet
Type Ns Streams that do not have surface flow during at least some portion of the year, and do not meet the physical criteria of a Type F stream.	50 feet
Piped Streams and Roadside Ditched Segments Those segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert, or conveyed through a public roadside ditch as part of the city stormwater infrastructure.	10 feet

3. *Increased Stream Buffer Widths.* The stream buffer widths may be increased by the decision-maker as follows:

- a. When the qualified professional determines that the minimum width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area as a result of a habitat assessment required pursuant to AMC [19.70.350](#), Critical area report additional requirements;
- b. When the frequently flooded area exceeds the minimum stream buffer width, the stream buffer must extend to the outer edge of the frequently flooded area;
- c. When a channel migration zone is present, the stream buffer must extend to the outer edge of the channel migration zone;

d. When the habitat area is in an area of high blowdown potential, the stream buffer width must be expanded an additional 50 feet on the windward side;

e. When the habitat area is within an erosion or landslide hazard area, or buffer, the stream buffer width must be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

C. *Building Setbacks From Stream Buffers.* Buildings, structures, paving, and other hard surfacing must be set back a minimum distance of 10 feet from the edge of the stream buffer unless determined by the decision-maker that a smaller distance would meet the intent of this subsection. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer. The following may be allowed in the building setback from the buffer if they do not cause damage to the critical root zone of trees in the buffer:

1. Landscaping;

2. Uncovered decks, roof eaves and overhangs, unroofed stairways and steps;

3. Pervious ground surfaces, such as driveways, patios, and parking may be allowed; provided, that they are engineered as a permeable pavement system as defined in AMC 19.12.020, Definitions. Such improvements may be subject to the requirements in AMC Chapter 19.76, Stormwater.

D. *Functionally Separated and Isolated Stream Buffers Riparian Management Zones.* Consistent with the definition of “buffers” Riparian Management Zone in this chapter, areas that are functionally isolated and physically separated from a stream riparian watercourse due to existing, legally established public roadways, railroads or other legally established structures or paved areas eight feet or more in width that occur between the area in question and the stream must be are considered physically isolated and functionally separated stream buffers riparian management zone. Once determined by the decision-maker, based on a submitted critical area report, to be a physically separated and functionally isolated stream buffer riparian management zone, development proposals are allowed in these areas.

E. *Additional Allowed Activities in Streams.* Activities, uses and alterations of streams are prohibited unless otherwise listed as exempt or allowed according to the provisions of AMC 19.70.040, 19.70.045, and 19.70.050. No alteration to a stream buffer may be permitted unless consistent with the provisions of this section and the specific standards for development outlined below.

1. *Stream Crossing.* Crossing of streams may be permitted and is required to be designed to allow fish passage based on state and federal fish passage criteria.

F E. *Piped Watercourses and Roadside Ditches.* It is recognized that within the urban environment many historical streams watercourses have been substantially modified to accommodate development. Many of the regulated and mapped streams watercourses within the city of Anacortes pass through natural reaches, modified reaches, piped reaches, and sometimes along manmade roadside ditches.

1. Development along piped watercourses and roadside ditched segments of regulated ~~streams~~ ~~riparian corridors~~ are subject to a 10-foot setback from the centerline of the ~~stream course~~ ~~watercourse~~ and are subject to the recording of a utility easement granted to the city for access and maintenance of the watercourse infrastructure.
2. The voluntary opening and restoration or rehabilitation of previously channelized, culverted, or piped ~~streams~~ ~~watercourses~~ is highly encouraged and may be approved by the decision-maker, when the following is demonstrated within a critical area report:
 - a. The restoration will result in a net gain in FWHCA functions, including an improvement in water quality and ecological functioning;
 - b. Opened channels must be designed to support fish and wildlife habitat and uninhibited fish access, unless demonstrated to be infeasible;
 - c. A reduction to the standard ~~buffer~~ ~~riparian management zone~~ is allowed to a minimum of 25 feet, or as recommended by a qualified professional in the critical area report. Measured from the ordinary high water mark (OHWM) and which includes habitat improvements, and measures to prevent erosion, landslide and water quality impacts;
 - d. The proposal will not significantly increase the threat of erosion, flooding, slope stability or other hazards on the site or on adjacent properties;
 - e. The proposal must demonstrate that ~~their~~ ~~the~~ conveyance will maintain the flow capacity and not create flooding elsewhere in the drainage basin.

G F. ~~Stream Enhancement Measures~~ ~~Riparian Corridor Enhancement Measures~~. Only those enhancement measures deemed most applicable and/or appropriate for ~~stream channel or buffer~~ ~~riparian corridor~~ enhancement projects will be considered in a ~~buffer~~ ~~riparian corridor~~ modification proposal, and must be supported by best available science and a critical area report. These include, but are not limited to:

1. Removal of fish barriers to restore accessibility to fish;
2. Enhancement of fish habitat using log structures incorporated as part of a fish habitat enhancement plan;
3. Enhancement of fish and wildlife habitat structures that are likely to be used by wildlife, including wood duck houses, bat boxes, nesting platforms, snags, rootwads/stumps, birdhouses, and heron nesting areas;
4. Planting native vegetation within the buffer area, especially vegetation that would increase value for fish and wildlife, increase stream bank or slope stability, improve water quality, or provide aesthetic/recreational value; or

5. Creation of a surface channel where a ~~stream watercourse~~ was previously underground, in a culvert or pipe. Surface channels which are “daylighted” must be located within a ~~buffer~~ riparian management zone-area and must be designed with energy dissipating functions or channel roughness features such as meanders and rootwads to reduce future bank failures or nearby flooding;
6. Removal or modification of existing stream culverts (such as road crossings) to improve fish passage, stream habitat, and flow capacities; or
7. Upgrading of retention/detention facilities or other stormwater management facilities beyond required levels. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021)

19.70.335 Specific standards for other FWHCAs.

A. *Endangered, Threatened, and Sensitive Species.* Fish and wildlife habitat conservation areas or buffers with state or federally endangered, threatened, or sensitive species or anadromous fish species have a primary association are subject to the following:

1. No development is allowed within a fish and wildlife habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.
2. Whenever activities are proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area must be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the city. Approval for alteration of the fish and wildlife habitat conservation area or its buffer may not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

B. *Other Priority Habitats and Species.* Fish and wildlife habitat conservation areas or buffers with species that are not state or federally listed as endangered, threatened, or sensitive species, and are not anadromous fish species are subject to the following:

1. Development activities and uses that result in unavoidable impacts are prohibited except as otherwise allowed by this chapter and may occur in priority species habitat areas and associated buffers only if the proposed alteration of the habitat does not degrade the functions and values of the habitat in accordance with an approved critical area report with habitat assessment/management plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant’s objectives. Full compensation for the loss of acreage and functions of habitat and buffer areas must be provided in compliance with the mitigation performance standards and requirements of these regulations.

C. *City-Designated Habitats and Species of Local Importance.*

1. *Anacortes Community Forest Lands.*

- a. *Purpose.* The Anacortes Community Forest Lands include three lakes and their watersheds, numerous wetlands, rock bluffs, old growth forests, grassy knolls, windswept hilltops, sheltered caves, and a variety of other habitats and microclimates that provide a unique and irreplaceable habitat for both imperiled and commonplace species. This land has been dedicated by the city for the preservation of forest lands and species, as described in the conservation easement documents, the ACFL comprehensive plan, and in AMC Title [12](#).
- b. *Recreation and Recreation-Related Facilities.* Construction of public recreation-related facilities such as trails, benches, interpretive displays, and viewing platforms may be allowed in fish and wildlife habitat conservation areas or buffers.
- c. Proposed alterations must be consistent with the adopted Anacortes Community Forest Lands comprehensive plan, as amended.
- d. *Noxious and Invasive Plants.* The Skagit County noxious weed ordinance and the ACFL invasive plant control program must be carefully considered in any adjacent development decision. Nonnative plants known to be invasive into the ACFL must be prohibited in landscaping plans of adjacent developments. Where such developments have CC&Rs, reference to this requirement must be included therein.
- e. *Right-of-Way Vacations.* In the case of street or alley vacations contiguous with an ACFL boundary, the half of the area vacated which is adjacent to the ACFL must be incorporated into the ACFL and subject to all ACFL-related requirements.
- f. *Private Access to ACFL.* No new accesses will be established to the ACFL without prior request for such access to the Parks and Recreation Department and the forest advisory board and approval by the City Council.
- g. *Burning.* No burn piles or outdoor fires must ever be left unattended while ignited and in the event sparks or flames come within 300 feet of the ACFL, the fire must immediately be brought under control or extinguished.
- h. *Boundary Identification.* City staff will work closely with property owners and developers to ensure that survey lines adjacent to the ACFL boundary are clearly and correctly marked before any timber and/or vegetation is removed from adjacent property. The forest manager will be involved in the final inspection of boundary lines.
- i. *ACFL Buffers.* City staff will work closely with builders to secure 30-foot ACFL buffers using all available incentives.

2. March Point Heronry:

- a. *Purpose.* Because Skagit County is home to the greatest concentration of nesting great blue heron in the Salish Sea, March Point being the largest, the city has identified the March Point Heronry as a habitat of local importance.
- b. Proposed development activities within 1,000 feet, or that are likely to impact the colony, must provide a critical areas assessment report and habitat management plan that follows at a minimum the guidelines provided by WDFW's Management Recommendations for Washington's Priority Species (March 2012) https://wdfw.wa.gov/publications/00026/abbreviated_great_blue_heron.pdf.
- c. Buffers will be implemented as described in the buffer section below.
- d. Colony protection is required for minimum 10 years after abandonment.

D. Required buffer for ~~nonstream~~ Non-Riparian Corridor FWHCAs:

1. *Marine FWHCAs Buffers.* Buffers for all designated fish and wildlife habitats or species within marine shorelines must be regulated by AMC Chapter [19.72](#) shoreline regulations and the shoreline master program.
2. *All Other ~~Nonstream~~ Non-Riparian Corridor-FWHCA Buffers.* Buffers from fish and wildlife habitat conservation areas must be established to protect the functions and values of the critical area from the impacts of proposed adjacent activities.
 - a. Buffer widths for fish and wildlife habitat areas must be based on consideration of the following factors: species-specific recommendations of the Washington State Department of Fish and Wildlife; recommendations contained in a habitat management plan submitted by a qualified professional; and the nature and intensity of land uses and activities occurring on the land adjacent to the site. Buffers must:
 - i. Consist of an undisturbed area of native vegetation, or areas identified for restoration, sufficient to protect the integrity, functions, and values of the affected habitat;
 - ii. Reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby;
 - iii. Be consistent with the applicable species-specific management recommendations issued by the Washington Department of Fish and Wildlife.
 - b. Nesting bald eagles and bald eagle habitats must be protected consistent with the U.S. Fish and Wildlife Service (USFWS) national bald eagle management guidelines, or the state or federal regulations in place at the time of application. Whenever activities are proposed adjacent to a confirmed nest territory or communal roost, a bald eagle habitat management plan must be developed by a qualified professional. Activities are adjacent to managed bald eagle sites when they

are within 660 feet of a nest or within one-half mile (2,640 feet) of a shoreline foraging area.

Approval of the activity must not occur prior to consultation with the state or federal agency with authority on bald eagle pairs and their nest.

c. *Great Blue Heron Nesting and Breeding Areas.* Development near a verified heron breeding habitat including nesting colony areas, former nesting colonies:

- i. A year-round urban buffer of 197 feet,
- ii. For unusually loud activities that occur during breeding season (February through September) a seasonal buffer of 656 feet, and a blasting buffer of 1,320 feet,
- iii. For properties without an existing and approved management plan, a management plan developed by a qualified professional to follow, at a minimum, WDFW's Management Recommendations for Washington's Priority Species (March 2012) and that identifies the nesting and breeding site as well as pre-nesting staging area, and breeding season foraging habitat,
- iv. For the March Point colony, given the observed and documented sensitivity of this mega-colony to human intrusion and the fact that the colony is in a rare, isolated, but tight location, a year-round buffer of 984 feet. (Ord. 3064 § 2 (Att. A), 2021)

19.70.340 Stormwater management facilities.

Establishment of low-impact stormwater management facilities, such as stormwater dispersion outfalls and bioswales, may be allowed within fish and wildlife habitat conservation area buffers consistent with the adopted stormwater manual; provided, that:

- A. No other location is feasible; and
- B. There will be "no net loss" of functions and values of the fish and wildlife habitat conservation area; and
- C. The critical area lies in the natural routing of the runoff, and the discharge follows the natural routing; and
- D. Stormwater dispersion outfalls, bioswales, bioretention facilities, and other low-impact facilities consistent with the adopted stormwater manual may be allowed within the outer 25 percent of the buffer riparian management zone when determined by a qualified professional that the location of the facilities will enhance the buffer area riparian management zone and protect the stream watercourse; and
- E. Such facilities are designed consistent with the requirements of AMC Chapter 19.76. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021. Formerly 19.70.345)

19.70.350 Critical area report additional requirements.

A. *Additional Report Contents for FWHCAs.* In addition to the minimum report contents required per AMC [19.70.115](#), Critical area report, FWHCA reports must also include:

1. Documentation of any fieldwork performed on the site, including field data sheets for delineations, water typing and other habitat conservation area classification, baseline hydrologic data, site photos, etc.;
2. A description of the methodologies used to conduct the delineations, classifications, or impact analyses, including references;
3. A discussion of the potential impacts to the critical area or buffer associated with the proposed development including an assessment of cumulative impacts.

B. *Habitat Assessment/Management Plan.* A habitat assessment/management plan is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical area report for a fish and wildlife habitat conservation area must contain an assessment of habitats including the following site- and proposal-related information at a minimum:

1. Detailed description of vegetation on and adjacent to the project area and its associated buffer;
2. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
3. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
4. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;
5. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with AMC [19.70.125](#), Mitigation requirements;
6. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.

C. *Additional Technical Information Requirements for Streams Riparian Corridors.* If no project impacts are anticipated and standard [stream buffer riparian management zone](#) widths are retained, a [stream riparian corridor](#) delineation report, general critical area report or other reports, alone or in combination, may be submitted as consistent with the specific requirements of this section. In addition to the general critical area report requirements for fish and wildlife habitat conservation areas provided in subsections [\(A\)](#) through [\(D\)](#) of

this section, technical information on **streams** **riparian corridors** must include the following information at a minimum:

1. A written assessment and accompanying maps of the stream and associated hydrologic features on and off site within 300 feet of the project area, including the following information at a minimum:
 - a. **Stream** **Riparian Corridor** survey showing the field delineated ordinary high water mark(s);
 - b. Standard **stream buffer** **riparian corridor** boundary as determined by AMC [19.70.330](#), Specific standards for **riparian corridors**;
 - ~~c.~~ **Boundary for proposed stream buffers—averaging, if applicable;**
 - ~~d.~~ **c.** Vegetative, faunal, and hydrologic characteristics;
 - ~~e.~~ **d.** Soil and substrate conditions; and
 - ~~f.~~ **e.** Topographic elevations, at two-foot contours;
2. A detailed description and functional assessment of the **stream** **riparian watercourse** channel and **stream buffer** **riparian management zone** under existing conditions pertaining to the protection of **stream**—**the riparian corridor** functions, fish habitat and, in particular, potential anadromous fisheries;
3. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and **stream** **riparian corridor** functions;
4. Proposed **buffer** **riparian corridor** enhancement, if needed, including a written assessment and accompanying maps and planting plans for **buffer** **riparian corridor** areas to be enhanced, including the following information at a minimum:
 - a. A description of existing **buffer** **riparian corridor** conditions;
 - b. A description of proposed **buffer** **riparian corridor** conditions and how proposed conditions will increase **buffer** **riparian corridor** functions in terms of **stream** **riparian corridor** and fish habitat protection;
 - c. Performance standards for measuring enhancement success through a monitoring period of at least five years;
 - d. Provisions for monitoring and submission of monitoring reports documenting **buffer** **riparian corridor** conditions, as compared to performance standards, for enhancement success; and
 - e. A discussion of ongoing management practices that will protect **stream** **riparian corridor** functions and habitat value through maintenance of vegetation density within the **stream** **riparian corridor** **buffer**.

D. *Additional Technical Information for Heron Habitat.*

1. The report must identify the heron management area (HMA). An HMA consists of the nesting colony, year-round and seasonal buffer, foraging habitat, and, when present, a pre-nesting congregation area.
2. All survey activity such as nest tree identification and flagging should occur in the nonbreeding season (mid-September to mid-February), and preferably right after breeding season ends.
3. Identify the nesting colony's boundary. To do this, flag all nest trees at the colony's outer perimeter. Mark each of these trees on a map. If a nest tree's canopy overlaps the canopy of an adjacent tree, flag the adjacent tree and consider this to be a nest tree. The outermost nest trees will be used to map the nesting colony boundary.
4. Map outer perimeter of the 197-foot year-round buffer. Using the buffer radius, draw a circle around each peripheral nest tree.
5. Map seasonal buffer if any unusually loud activities will occur during breeding season (February through September). Measure the seasonal buffer starting at the outer edge of the year-round buffer.
6. Locate potential foraging habitat by mapping all waterbodies within a one-and-nine-tenths mile radius of the colony. The perimeter and shallow portions are especially important for foraging.

E. *Additional FWHCA Information.* When appropriate, due to the type of habitat or species present, or the project area conditions, the decision-maker may also require the critical area report to include:

1. A request for consultation with the Washington State Department of Fish and Wildlife (DFW), Washington Department of Ecology (Ecology), local Native American tribes or other appropriate agency;
2. Copies of the joint aquatic resource permit application (JARPA) and related approvals, such as a hydraulic project approval (HPA) from the WDFW, when applicable to the project; and
3. Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.355 Mitigation performance standards and requirements.

Compensatory mitigation for FWHCAs must follow the plan requirements described under AMC [19.70.130](#), Mitigation plan requirements. (Ord. 3064 § 2 (Att. A), 2021)

Definitions

“Adjacent” means areas adjacent to critical areas must be considered to be within the jurisdiction of these requirements and regulations to support the intent of this title and ensure protection of the functions and values of critical areas. “Adjacent” must include lands within a distance equal to the required buffer for the critical area as determined by the provisions of this chapter.

“Anadromous fish” means fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following stages: upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

“Aquifer” means a body of soil or rock that contains sufficient saturated material to conduct groundwater and yield usable quantities of groundwater to wells or springs.

“Averaging” means establishing the required buffer setback from a critical area, within the permitted parcel of land only, so that areas within the parcel determined to be more environmentally sensitive than others will have a larger buffer than the less sensitive areas. For every increase in setback for one area of the parcel, there will be an equal corresponding decrease in another area of the parcel. The total land area within the buffer must remain the same as if the buffer were a uniform width.

“Base flood” means a flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the “100-year flood.”

“Base flood elevation” means the water surface elevation of the base flood in relation to the North American Vertical Datum of 1988. The Anacortes FIRMs still make reference to the 1929 National Geodetic Vertical Datum (NGVD). While using NAVD is acceptable, please recognize that surveyors and designers will need to convert the datum when preparing plans. FEMA elevation certificates require the use of the datum utilized on the FIRMs.

“Best available science” means current scientific information used in the process to designate, protect, or restore critical areas that is derived from a valid scientific process as defined by WAC [365-195-900](#) through [365-195-925](#). Sources of best available science are included in “Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas” published by the Washington State Department of Commerce.

“Best management practices (BMPs), critical areas” means physical or structural tools and/or management practices which, when used singularly or in combination, prevent or reduce adverse impacts to critical areas or their buffers.

“Buffer” is an area contiguous to a critical area that is required to protect the critical area and provide for the continued maintenance, functioning, and/or structural stability of a critical area.

“Critical aquifer recharge areas” are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

“Critical areas” means critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, streams, and wetlands, as defined in this chapter.

“Development” means any human-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

“Ditches” are artificial drainage features created through purposeful human action, such as irrigation and drainage ditches, grass-lined swales, and canals. Purposeful creation from uplands must be demonstrated through documentation, photographs, statements, and/or other evidence in order to be unregulated by this chapter.

“Enhancement” means an action which increases the functions and values of a stream, wetland, or other critical area or buffer.

“Erosion” means the process by which soil particles are mobilized and transported by natural agents such as wind, rain-splash, frost action or surface water flow.

“Erosion hazard areas” are those areas containing soils which, according to the United States Department of Agriculture Natural Resources Conservation Service Soil Survey Program, may experience significant erosion. Erosion hazard areas also include coastal erosion-prone areas and channel migration zones.

“Federal Emergency Management Agency (FEMA) floodway” means the channel of the stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.

“Fish and wildlife habitat conservation areas” are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. As defined in AMC [19.70.310](#).

“Floodplain” means the total area subject to inundation by the base flood.

“Floodway, zero rise” means the channel of a stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without any measurable increase in flood height. A measurable increase in base flood height means a calculated upward rise in the base flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and changed conditions directly attributable to development in the floodplain. This definition is broader than that of the FEMA floodway, but

always includes the FEMA floodway. The boundaries of the 100-year floodplain, as shown on the current flood insurance study for the city of Anacortes, are considered the boundaries of the zero rise floodway unless otherwise delineated by a critical area study.

“Frequently flooded areas” are lands in the floodplain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater, high tides, with strong winds, sea level rise, and extreme weather events resulting from global climate change. These areas include, but are not limited to streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.

“Functions and values” means the beneficial services provided by critical areas to society, including, but not limited to, improving and maintaining water quality, providing fish and wildlife habitat, supporting terrestrial and aquatic food chains, reducing flooding and erosive flows, wave attenuation, historical or archaeological importance, educational opportunities, and recreation. These beneficial roles are not listed in order of priority.

“Geologically hazardous areas” means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

“Groundwater” means water in a saturated zone or stratum beneath the surface of the land or below a surface water body.

“Habitats of local importance” designated as fish and wildlife habitat conservation areas include those areas found to be locally important by the city of Anacortes.

“Hazard tree” means any tree determined by an International Society of Arboriculture (ISA) certified arborist to be a hazard to people or property as a result of a risk assessment conducted according to ISA guiding principles.

“In-lieu-fee program” means an agreement between a regulatory agency (state, federal or local) and a single sponsor, generally a public natural resource agency or nonprofit organization. Under an in-lieu-fee agreement, the mitigation sponsor collects funds from an individual or a number of individuals who are required to conduct compensatory mitigation required under a wetland regulatory program. The sponsor may use the funds pooled from multiple permittees to create one or a number of sites under the authority of the agreement to satisfy the permittees’ required mitigation.

“Landslide” means an episodic downslope movement of a mass including, but not limited to, soil, rock or snow.

“Landslide hazard areas” are areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

“Mine hazard areas” are those areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or airshafts, and those areas probable to sink holes, gas releases, or subsidence due to mine workings.

“Mitigation” means avoiding, minimizing, or compensating for adverse critical areas impacts, using the sequential order of preference listed in AMC [19.70.125](#), Mitigation requirements.

“Monitoring” means evaluating the impacts of development proposals on biologic, hydrologic and geologic systems and assessing the performance of required mitigation through the collection and analysis of data for the purpose of understanding and documenting changes in natural ecosystems, functions and features including, but not limited to, gathering baseline data.

“Native growth protection area/easement” (NGPA/E) means an easement granted for the protection of native vegetation within a sensitive area or its associated buffer. The easement should be recorded on the appropriate documents of title and filed with the county records division.

“Native vegetation” means plant species that occur naturally in a particular region or environment and were present before European colonization.

“Normal appurtenances” means those structures secondary to a primary use that are common to and do not constitute a special privilege. Examples for residential uses include garages, decks, driveways, utilities, and fences.

“Noxious weed” means any plant which is highly destructive, competitive, or difficult to control by cultural or chemical practices, limited to those plants on the state noxious weed list contained in Chapter [16-750](#) WAC and those regulated by Skagit County.

“Primary association” means the fundamental link between a species and land or aquatic area where anadromous fish, endangered, threatened or sensitive species breed or feed.

“Repair” or “maintenance” means an activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

Riparian Corridors are the riparian watercourse and the riparian management zone. The riparian watercourse of Type F, Np, and Ns waters defined in Wac 222-16-030 and 222-16-031 that have fish or wildlife habitat. Pipes, culverts, flow control facilities, water quality facilities, and storm water conveyances are not regulated as riparian watercourses.

Riparian Management Zone is the zone within 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark of the watercourse as surveyed in the field, or from the top of the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the ordinary high water mark must be determined so as to include the entire watercourse feature.

“Restoration” means measures taken to restore an altered or damaged natural feature, including: (1) active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and (2) actions performed to reestablish structural and functional characteristics of a critical area that have been lost by alteration, past management activities, or catastrophic events.

“Seismic hazard areas” are areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, debris flows, lahars, or tsunamis.

“Shoreline jurisdiction” means all marine waters along Puget Sound, streams and rivers with an annual mean flow of more than 20 cubic feet per second, lakes greater than 20 acres in size, shorelands adjacent to these water bodies, and associated wetlands.

“Significant tree” means a deciduous or evergreen tree greater than six inches in diameter at five feet above grade.

“Slope” means an inclined ground surface, the inclination of which is expressed as a ratio or percentage of vertical distance to horizontal distance by the following formula: $((\text{vertical distance} / \text{horizontal distance}) \times 100) = \% \text{ slope}$.

“Special flood hazard area” means the land in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

“Species of local importance” are those species that are of local concern designated by the city due to their population status or their sensitivity to habitat manipulation.

“Stream” means an area where open surface water produces a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or are used to convey a watercourse naturally occurring prior to construction. A channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

“Unavoidable impacts” means adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.

“Volcanic hazard areas” include areas subject to pyroclastic flows, lava flows, and inundation by debris flows, lahars, mudflows, or related flooding from volcanic activity.

“Wetland” or “wetlands” means those areas that are inundated or saturated by surface water or groundwater 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 nonwetland 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” include those artificial wetlands intentionally created from nonwetland areas to mitigate conversion of wetlands.

“Wetland mitigation bank” means a site where wetlands are restored, created, enhanced, or, in exceptional circumstances, preserved, expressly for the purpose of providing compensatory mitigation in advance of unavoidable impacts to wetlands or other aquatic resources that typically are unknown at the time of certification to compensate for future, permitted impacts to similar resources.

“Wetland mosaic” means an area with a concentration of multiple small wetlands, in which each patch of wetland is less than one acre; on average, patches are less than 100 feet from each other; and areas delineated as vegetated wetland are more than 50 percent of the total area of the entire mosaic, including uplands and open water. (Ord. 3064 § 2 (Att. A), 2021)

The Anacortes Municipal Code is current through Ordinance 4020, passed April 11, 2022.

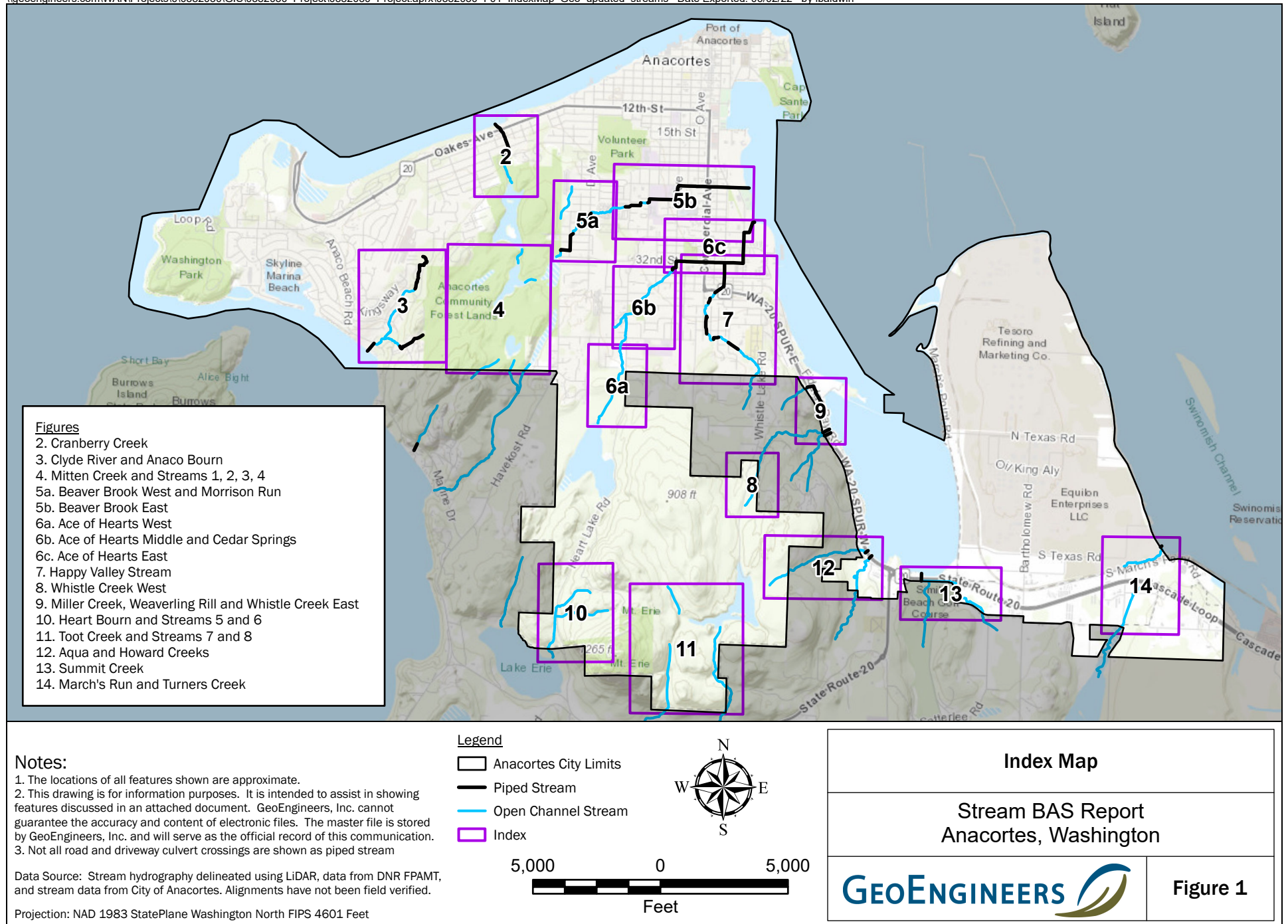
Disclaimer: The city attorney’s office has the official version of the Anacortes Municipal Code. Users should contact the city attorney’s office for ordinances passed subsequent to the ordinance cited here.

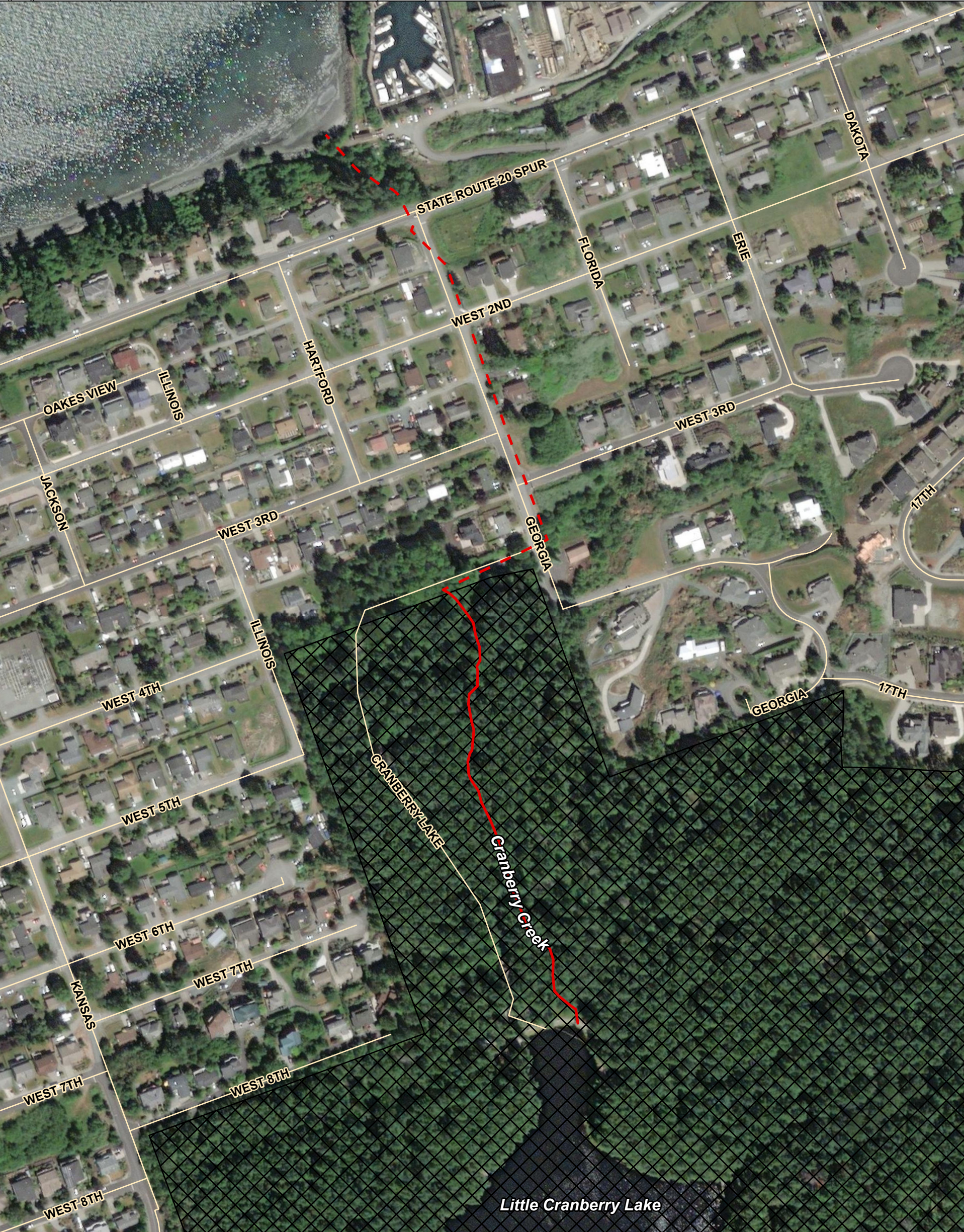
Note: This site does not support Internet Explorer. To view this site, Code Publishing Company recommends using one of the following browsers: Google Chrome, Firefox, or Safari.

[City Website: www.cityofanacortes.org](http://www.cityofanacortes.org)

City Telephone: (360) 293-1900

[Code Publishing Company](#)





Legend

— Road

DNR Stream Type

— Fish-Bearing

- - Fish-Bearing (Piped)

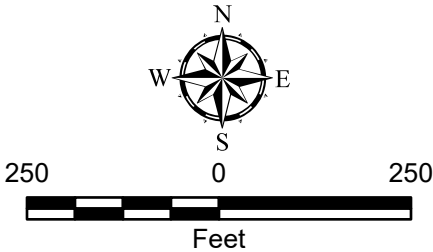
⊠ Anacortes Community Forest Land

Notes:

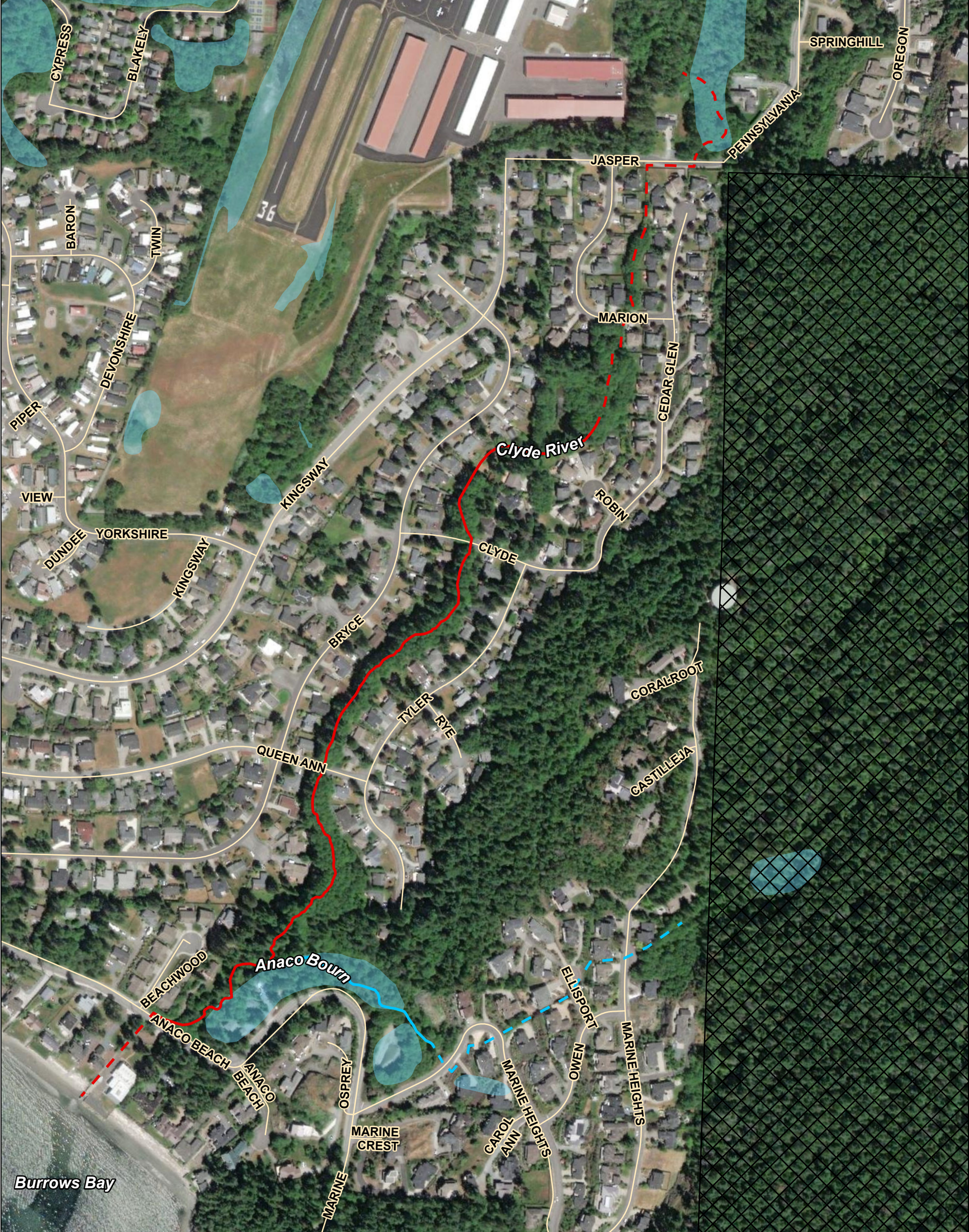
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Cranberry Creek	
Stream BAS Report Anacortes, Washington	
	Figure 2



Legend

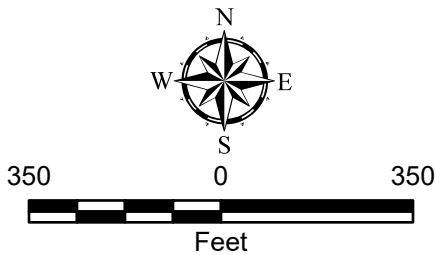
- Road
- Fish-Bearing (Piped)
- Unclassified (Piped)
- Fish-Bearing
- Unclassified
- Anacortes Mapped Wetlands
- Anacortes Community Forest Land

Notes:

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

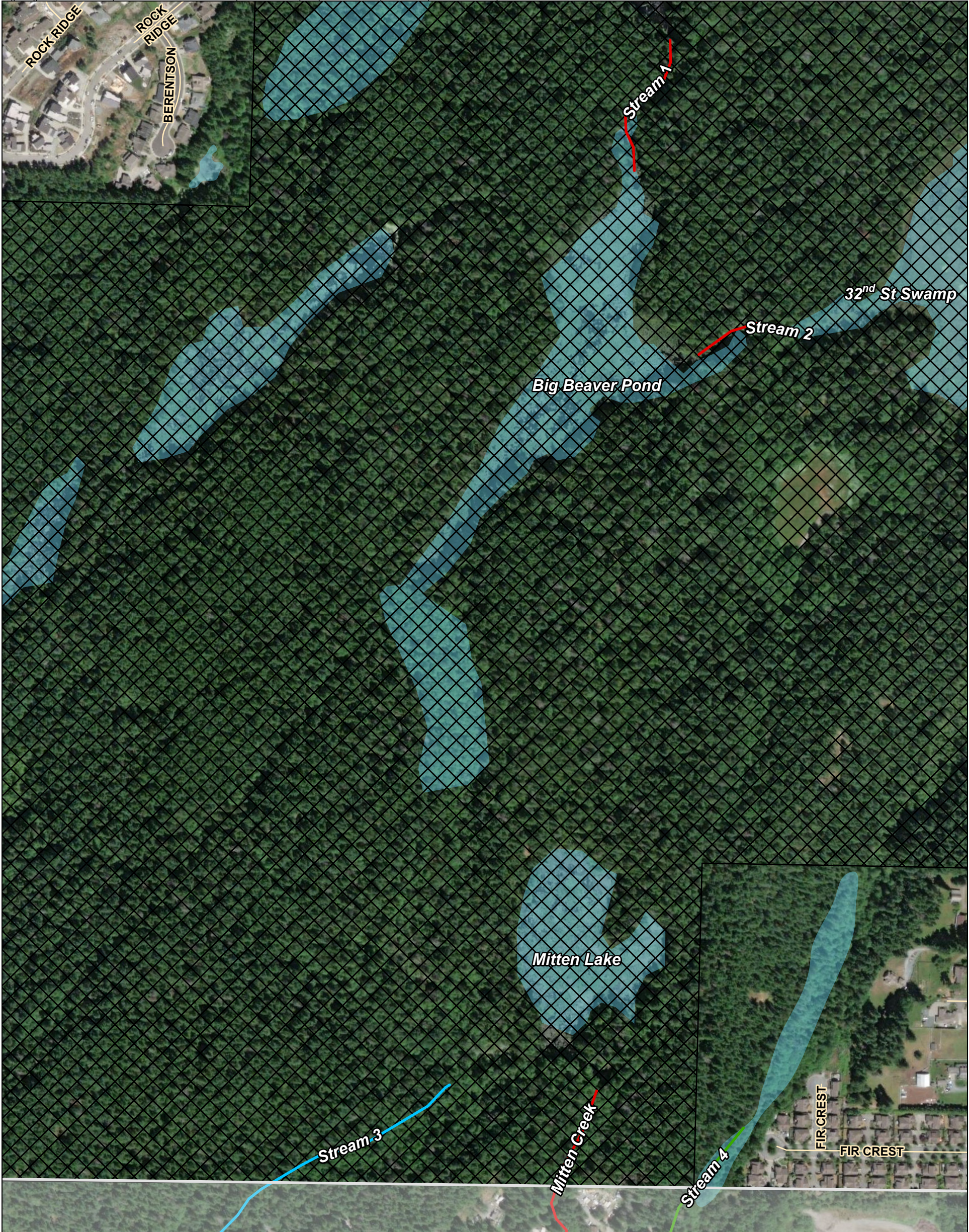


Clyde River and Anaco Bourn

Stream BAS Report
Anacortes, Washington



Figure 3

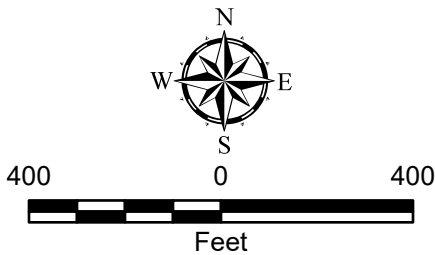


Legend

- | | |
|--------------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Non-Fish-Bearing | ■ Skagit County |
| — Unclassified | |

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- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

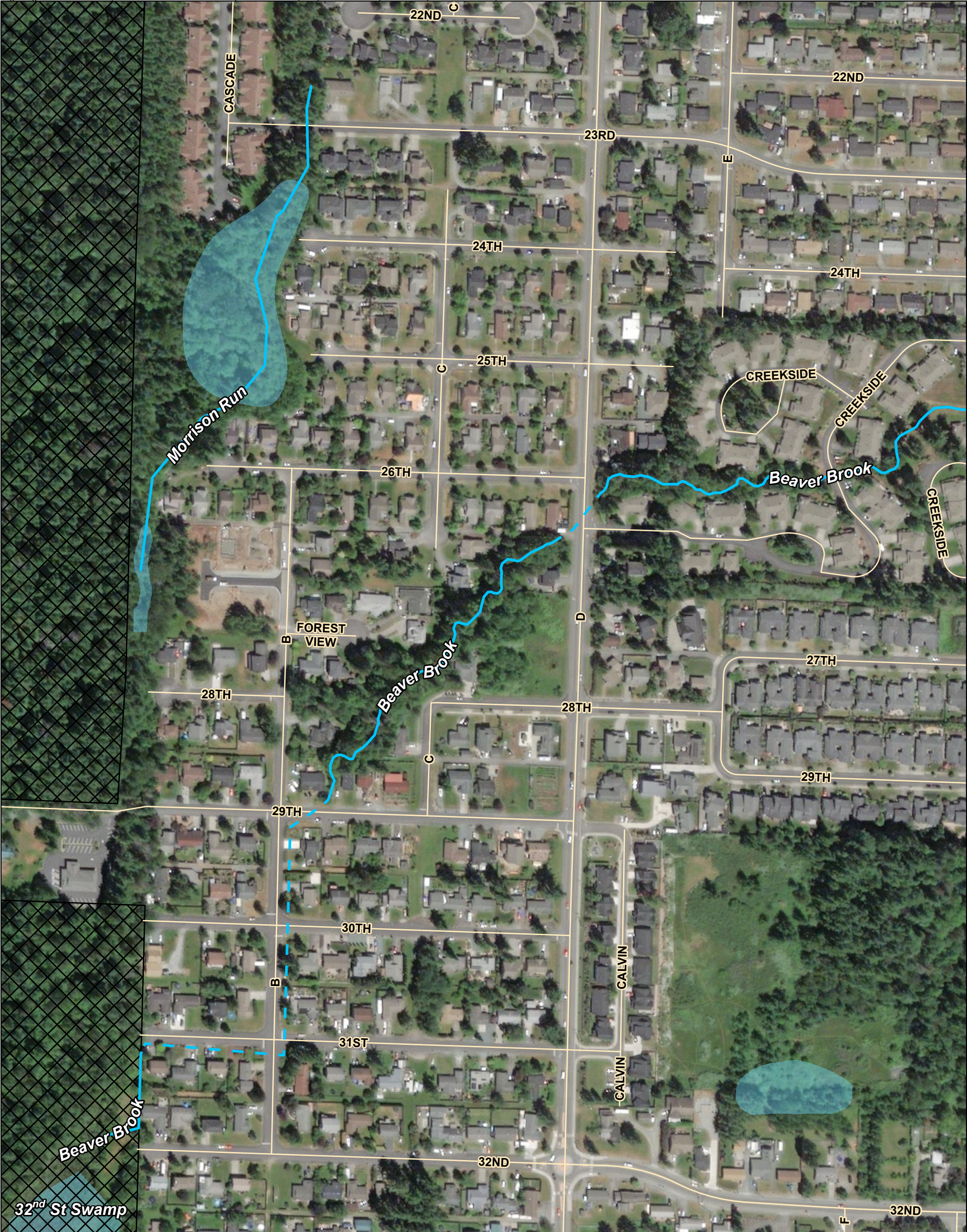


Mitten Creek and Streams 1, 2, 3, and 4

Stream BAS Report
Anacortes, Washington



Figure 4

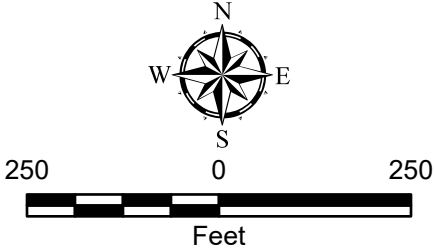


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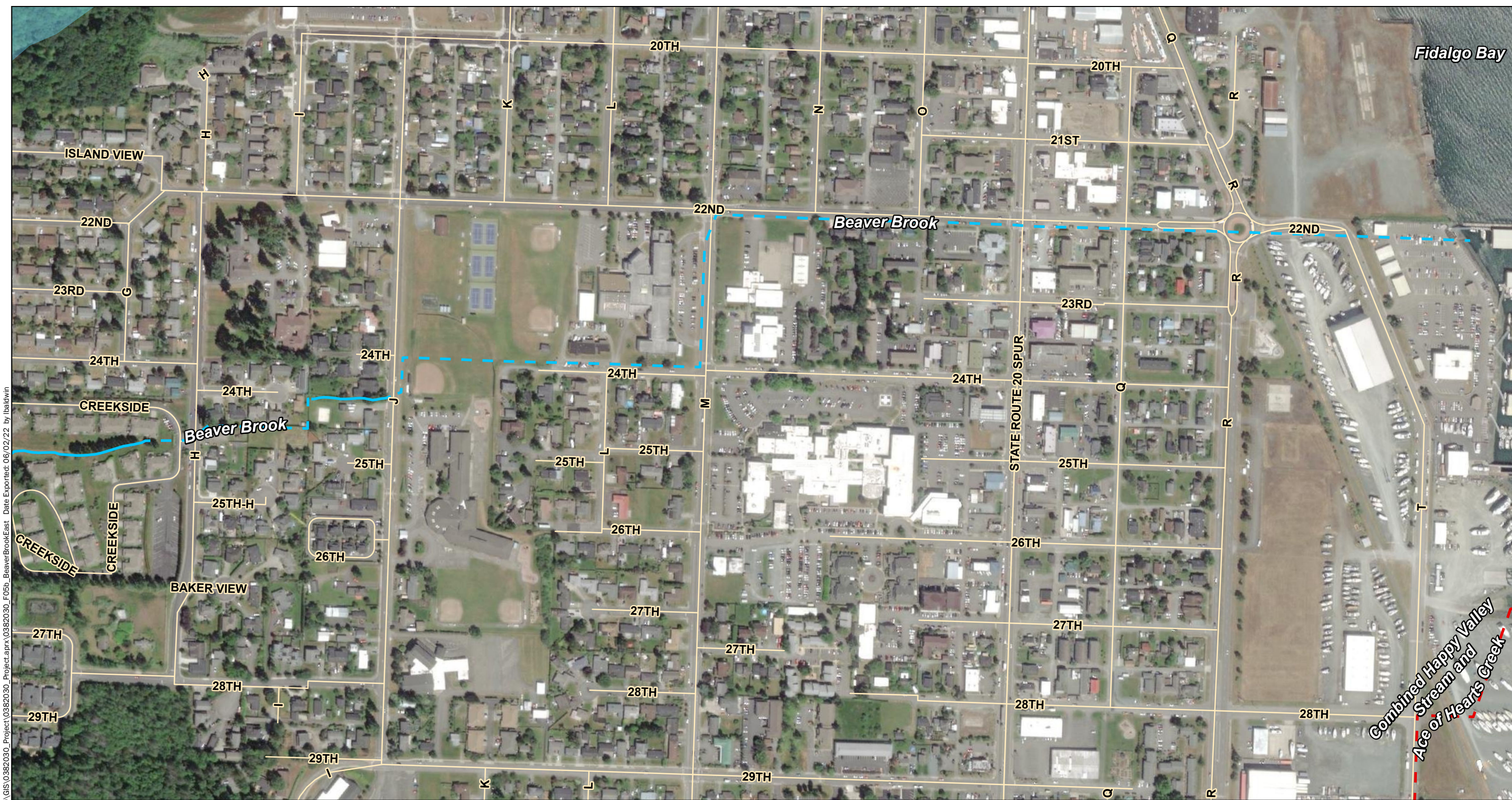
- Road
- Piped Stream Buffer (10-ft)
- DNR Stream Type
- Unclassified
- Unclassified (Piped)
- Anacortes Mapped Wetlands
- Anacortes Community Forest Land

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- Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Beaver Brook West and Morrison Run	
Stream BAS Report Anacortes, Washington	
	Figure 5a



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Notes:

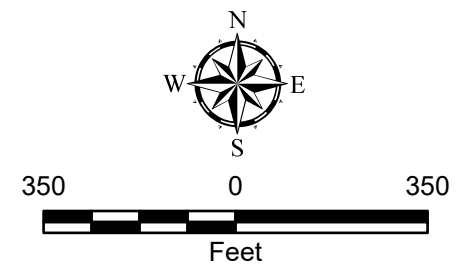
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

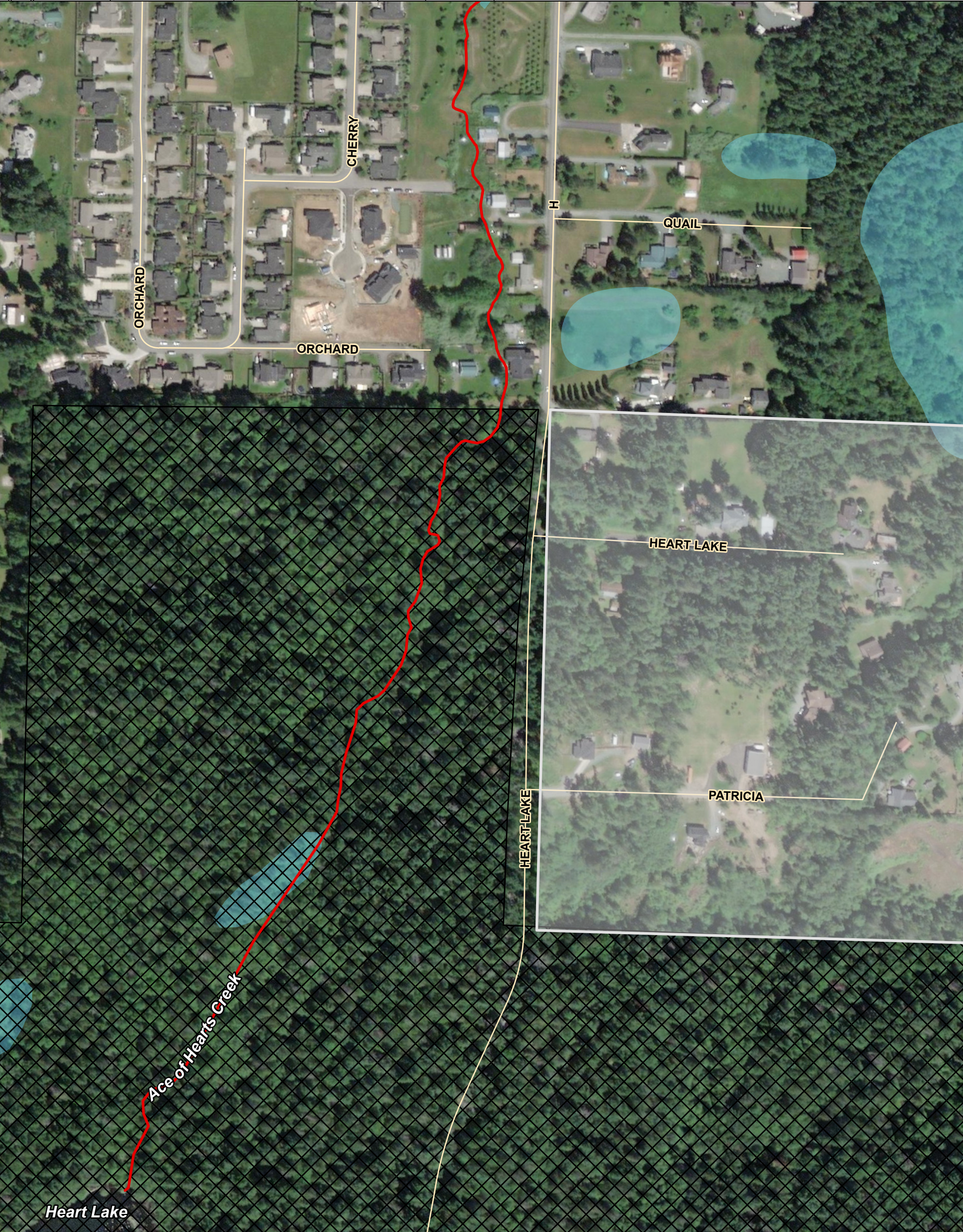
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

— Road	- - Fish-Bearing (Piped)
DNR Stream Type	- - Unclassified (Piped)
— Unclassified	■ Anacortes Mapped Wetlands



Beaver Brook East	
Stream BAS Report Anacortes, Washington	
	Figure 5b



Legend

- Road

DNR Stream Type

Fish-Bearing

Anacortes Mapped Wetlands
- Anacortes Community Forest Land

Anacortes City Limits

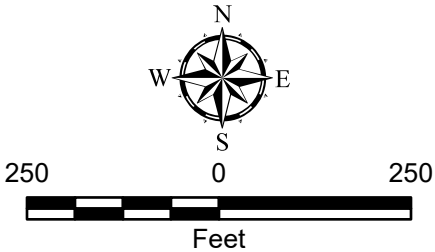
Skagit County

Notes:

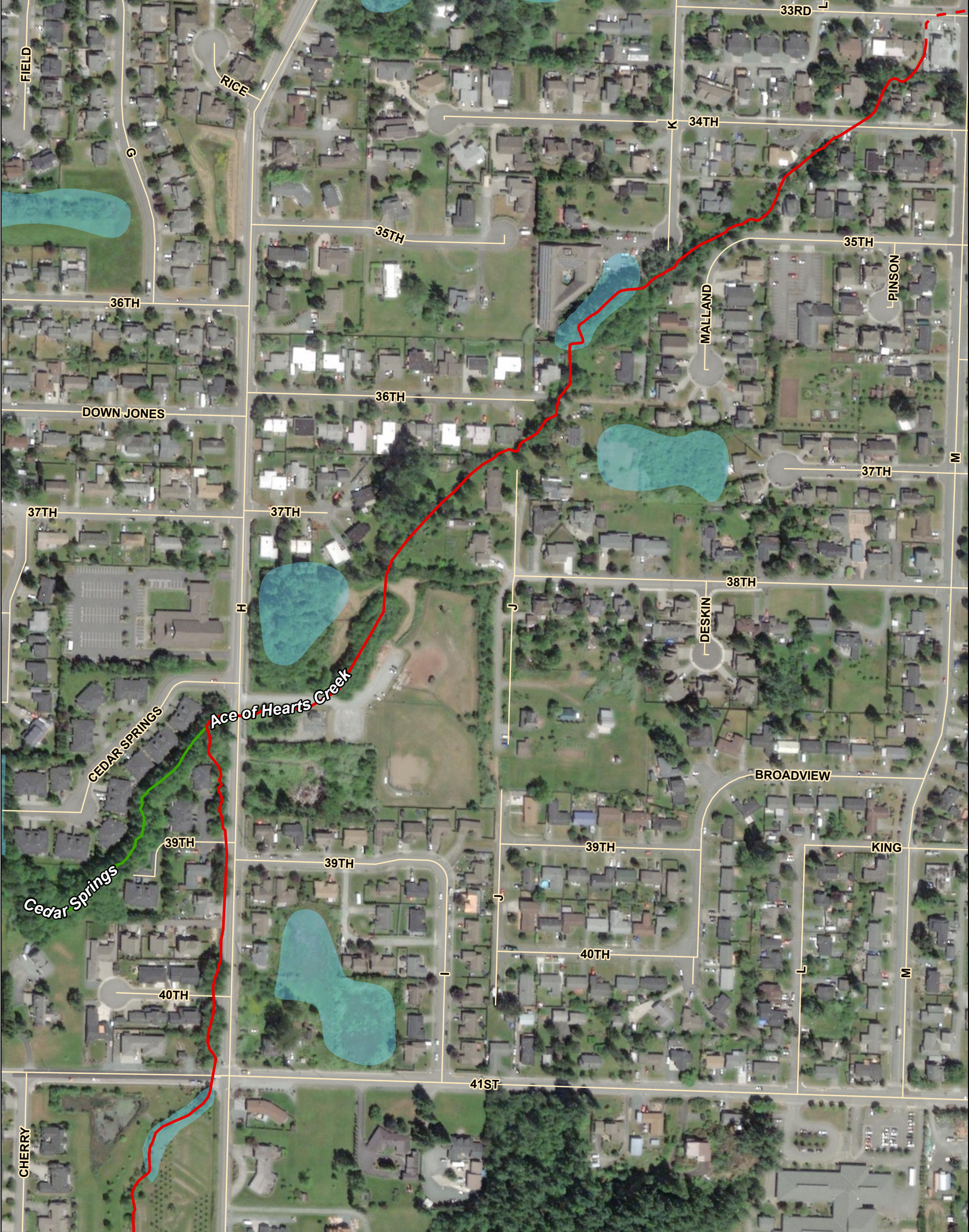
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Ace of Hearts West	
Stream BAS Report Anacortes, Washington	
	Figure 6a



Legend

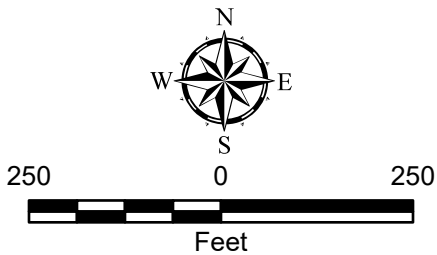
- Road
- Non-Fish-Bearing
- DNR Stream Type
- Fish-Bearing (Piped)
- Fish-Bearing
- Anacortes Mapped Wetlands

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Ace of Hearts Middle and Cedar Springs

Stream BAS Report
Anacortes, Washington

GEOENGINEERS

Figure 6b



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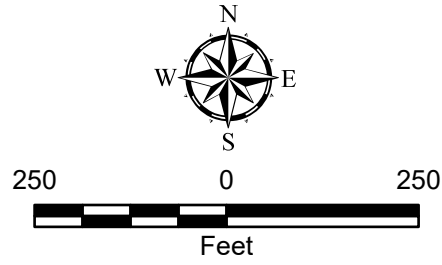
Notes:
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

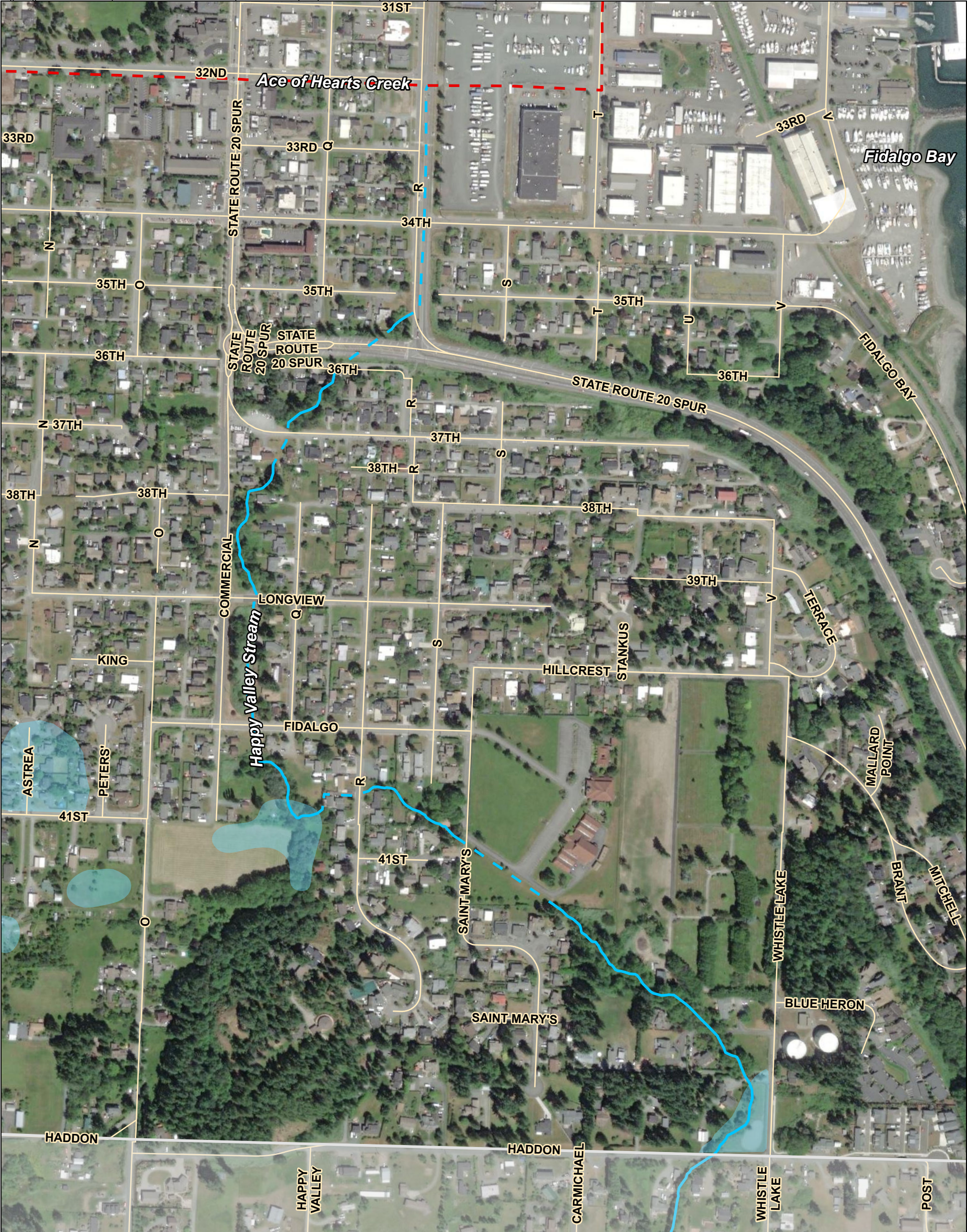
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

	Road		Fish-Bearing (Piped)
	DNR Stream Type		Unclassified (Piped)
	Fish-Bearing		



Ace of Hearts East	
Stream BAS Report Anacortes, Washington	
	Figure 6c



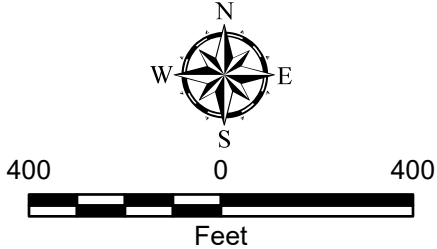
Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | — Anacortes Mapped Wetlands |
| — Unclassified | — Anacortes City Limits |
| — Fish-Bearing (Piped) | — Skagit County |

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Happy Valley Stream	
Stream BAS Report Anacortes, Washington	
	Figure 7



Legend

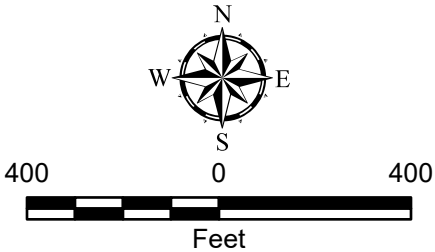
- Road
- Anacortes Community Forest Land
- DNR Stream Type
- Anacortes City Limits
- Non-Fish-Bearing
- Skagit County
- Unclassified

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Whistle Creek West	
Stream BAS Report Anacortes, Washington	
	Figure 8

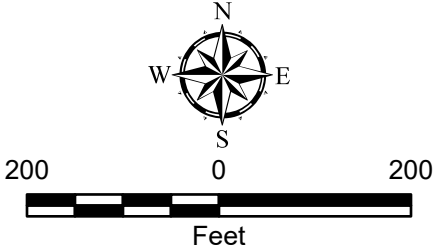


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | — Anacortes Mapped Wetlands |
| — Fish-Bearing | — Anacortes City Limits |
| — Unclassified | — Skagit County |
| — Fish-Bearing (Piped) | |

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3. Not all road and driveway culvert crossings are shown as piped stream
Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Miller Creek, Weaverling Rill, and Whistle Creek East

Stream BAS Report
Anacortes, Washington



Figure 9



Legend

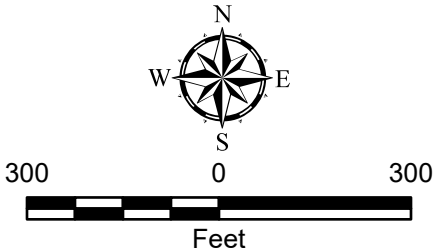
- | | |
|--------------------|-----------------------------------|
| — Road | ⊠ Anacortes Community Forest Land |
| DNR Stream Type | □ Anacortes City Limits |
| — Fish-Bearing | □ Skagit County |
| — Non-Fish-Bearing | |

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Heart Bourn and Streams 5 and 6

Stream BAS Report
Anacortes, Washington



Figure 10



Legend

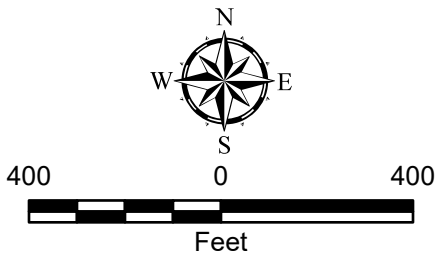
- | | |
|-----------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Unclassified | ■ Skagit County |

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3. Not all road and driveway culvert crossings are shown as piped stream
4. Toot Creek and Stream 8 drain to Lake Campbell

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

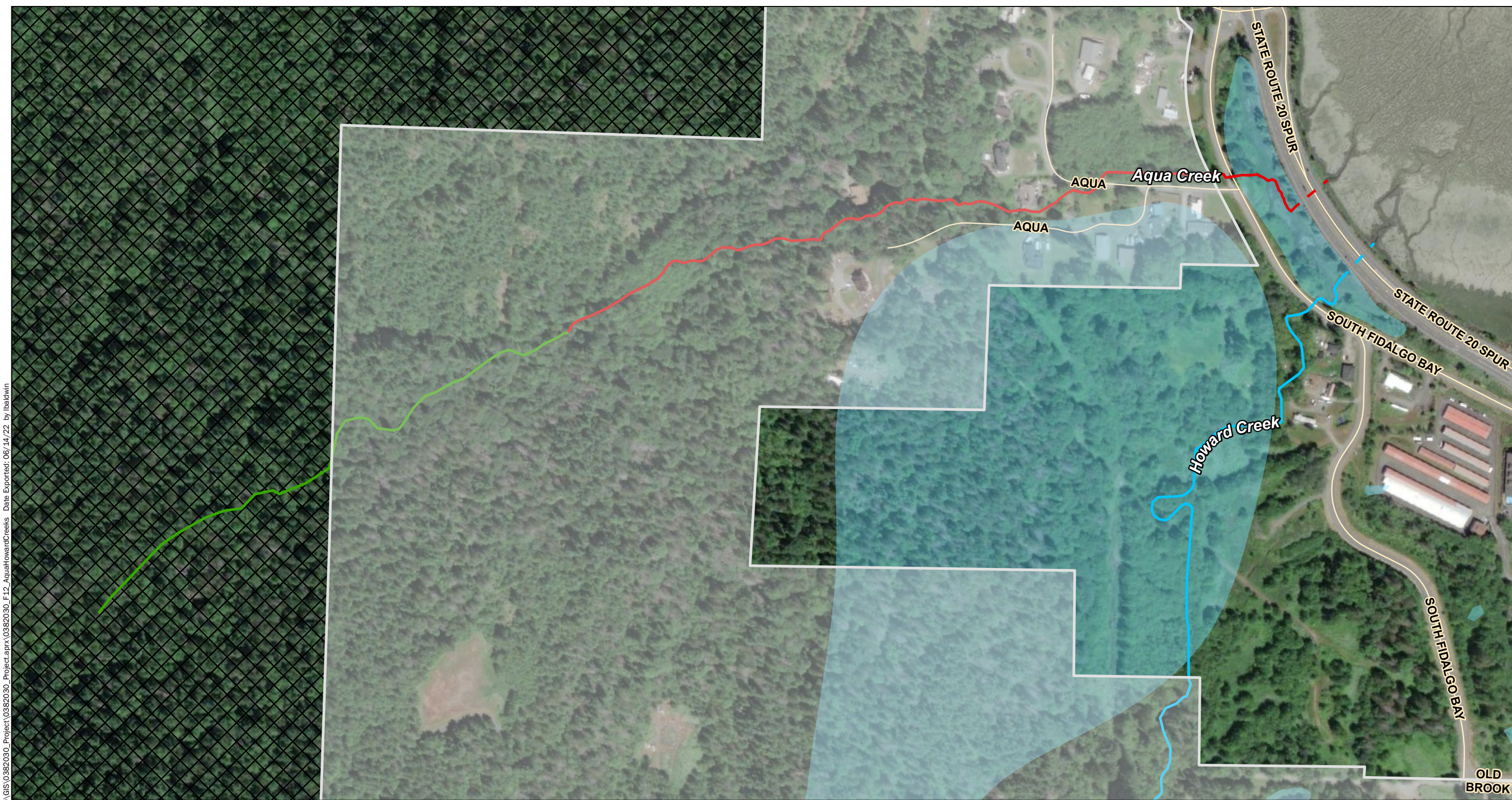


Toot Creek and Streams 7 and 8

Stream BAS Report
Anacortes, Washington



Figure 11



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Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

— Road

DNR Stream Type

— Fish-Bearing

— Non-Fish-Bearing

— Unclassified

— Fish-Bearing (Piped)

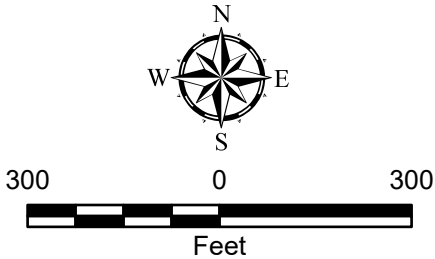
— Unclassified (Piped)

Anacortes Mapped Wetlands

Anacortes Community Forest Land

Anacortes City Limits

Skagit County



Aqua and Howard Creeks

Stream BAS Report
Anacortes, Washington



Figure 12

\\geoengineers.com\WAN\Projects\0382030\GIS\0382030_Project\0382030_F13_SummitCreek Date Exported: 06/14/22 by lbaldwin



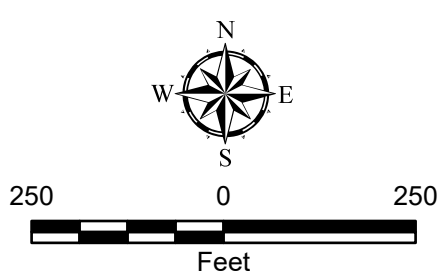
Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

- Legend**
- Road
 - Fish-Bearing (Piped)
 - Anacortes Mapped Wetlands
 - DNR Stream Type
 - Fish-Bearing (Uncertain Hydrography)
 - Anacortes City Limits
 - Fish-Bearing
 - Skagit County



Summit Creek	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS 	Figure 13

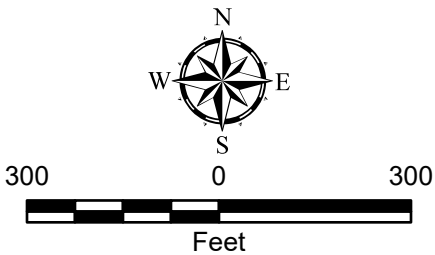


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Non-Fish-Bearing |
| FPAMT_Type | — Unclassified |
| — Unclassified (Piped) | — Anacortes Mapped Wetlands |
| DNR Stream Type | — Anacortes City Limits |
| — Fish-Bearing | — Skagit County |

Notes:

1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. Not all road and driveway culvert crossings are shown as piped stream
 4. Turners Creek drains southwest to Turners Bay
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



March's Run and Turners Creek

Stream BAS Report
Anacortes, Washington



Figure 14

Ordinance No. 4025

An Ordinance Amending the Critical Area Regulations Contained in Anacortes Municipal Code Chapter 19.70, 19.70.235.F.5 and Article III, Fish and Wildlife Conservation Areas, to address Riparian Corridors

Whereas, on July 18, 2016, the City Council adopted Ordinance 2982 adopting a new Comprehensive Plan pursuant to the City's periodic Growth Management Act Comprehensive Plan amendment and update process; and

Whereas, the Anacortes Comprehensive Plan provides guidance for amending the Anacortes Municipal Code (AMC) development regulations and official zoning map to implement its land use, housing, economic development, transportation, environment and conservation, and other goals and policies; and

Whereas, the proposed amendments to the development regulations and official zoning map were initiated by the City in accordance with the requirements of the Growth Management Act and AMC 19.16.030(B), subsequent to the adoption of the 2016 Comprehensive Plan; and

Whereas, the City Council adopted Ordinance 3040 adopting new Development Regulations July 22, 2019; and

Whereas, the City Council adopted Ordinance 3064 updating the Critical Areas Regulations July 26, 2021; and

Whereas, the City Council desires to amend certain sections of the Critical Area regulations as depicted in attachment A;

Whereas, the amendments to the Critical Areas regulations are in the best interest of the City Of Anacortes residents; and

Whereas, the amendments to the Critical Area Regulations set forth herein have been processed, reviewed, considered, and adopted in material compliance with all applicable state and local procedural requirements, standards and requirements, standards, and criteria, including but not limited to the requirements of Chapter 36.70A RCW.

Whereas, a public comment opportunity was provided for certain changes to Critical Area Regulations Chapter 19.70 , 19.70.235.F.5, and Article III Fish and Wildlife Conservation Areas, 19.70.330 at the **date** Planning Commission meeting ; and

Whereas, the City Council considered the Planning Commission recommendation at a meeting on **date**

Now, therefore, the City Council of the City of Anacortes does ordain as follows:

Section 1. Findings. The above recitals are hereby adopted by reference as legislative findings in support of this ordinance. The City Council further enters the following findings:

Section 2. Development Regulation Amendments Adopted. The Anacortes Municipal Code Chapter 19.70 is amended as described in Attachment A.

Section 3. Transmittal to State. Pursuant to RCW 36.70A.106, a copy of this ordinance shall be submitted to the State Department of Commerce.

Section 4. Severability. If any section, sentence, clause, phrase, or word of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality thereof shall not affect the validity or constitutionality of any other section, subsection, sentence, clause, phrase, or word of this ordinance.

Section 5. Effective Date. Consistent with RCW 35A.12.130, this ordinance takes effect 5 days after publication.

Section 6. PASSED and APPROVED this ____ day of _____, 2022.

CITY OF ANACORTES:

Matt Miller, Mayor

Attest:

Steve Hoglund, City Clerk-Treasurer

Approved as to Form:

Darcy James Swetnam, City Attorney

**Revised Stream Buffer Best Available
Scient Review and Buffer
Recommendations**

City of Anacortes
Anacortes, Washington

for
**City of Anacortes, Planning, Community &
Economic Development Department**

June 29, 2022

**Revised Stream Buffer Best Available
Science Review and Buffer
Recommendations**

City of Anacortes
Anacortes, Washington

for

**City of Anacortes, Planning, Community &
Economic Development Department**

June 29, 2022



554 West Bakerview Road
Bellingham, Washington, 98226
360.647.1510

Revised Stream Buffer Best Available Science Review and Buffer Recommendations

City of Anacortes Anacortes, Washington

File No. 0382-030-04

June 29, 2022

Prepared for:

City of Anacortes
Planning, Community & Economic Development Department
P.O. Box 547
Anacortes, Washington 98221

Attention: Don Measamer

Prepared by:

GeoEngineers, Inc.
554 West Bakerview Road
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Lydia Baldwin, MS, PWS
Biologist



Fiona M. McNair, MRM, PWS
Associate Biologist

FMM:LRB:mls

cc: Libby Grage (pdf)
City of Anacortes

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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1.0 INTRODUCTION

The City of Anacortes (City) adopted an updated Comprehensive Plan in 2016 and as required by the Growth Management Act (GMA, Chapter 36.70A Revised Code of Washington [RCW]) and subsequently conducted a Critical Areas Ordinance (CAO) review and update from early 2019 through the middle of 2021. In the fall of 2019, GeoEngineers, Inc. (GeoEngineers) conducted a Best Available Science (BAS) review for stream buffers and presented a discussion and conclusions related to potential updates to Fish and Wildlife Habitat Conservation Areas (FWHCAs) regulations specific to the 15 streams named in the Anacortes Municipal Code (AMC) 17.70.540(7)(a) (GeoEngineers, 2019). The updated CAO (Chapter 19.70 Critical Areas) was adopted on July 26, 2021.

An appeal to the Growth Management Hearings Board (Western Region State of Washington) was filed by Ian Munce and Evergreen Islands on November 23, 2021 to request "...that the Board declare the provisions cited above [buffer widths, buffer averaging, and buffer reductions and stream relocation provisions] noncompliant with the GMA and invalid and that it remand the Update to City for revisions consistent with that decision and to conduct the applicable SEPA review." In response to this appeal, the city is in the process of updating their CAO regulations specific to streams. The City requested that GeoEngineers prepare an updated BAS review for stream buffers to assist the city is revising the updated CAO regulations specific to streams.

The City first adopted a CAO in 1992. Before the 2021 adopted update, the last major update to the critical areas regulations was completed in 2005. The GMA (Washington Administrative Code [WAC] 365-195-485) requires the use of "best available science (BAS) in developing policies and development regulations to protect the functions and values of critical areas." This updated report summarizes the results of our BAS review for stream buffers conducted in 2019 and presents an updated current literature review, and presents discussion and conclusions related to potential updates to FWHCAs regulations as they related to stream buffers in AMC 19.70.

Our services for this review are described in our scope and fee estimate dated May 13, 2022. Our services were authorized by the city on May 16, 2022. The services were completed in collaboration with the city planning staff.

2.0 PURPOSE AND BACKGROUND

The purpose of this report is to provide an updated technical evaluation, discussion and recommendations to City of Anacortes staff for purposes of updating the related portions of the CAO with regard to current BAS for the Fish and Wildlife Habitat Conservation Areas (FWHCAs) regulations specific to streams. The main consideration for updating the streams portion of the FWHCAs critical areas code is to consider regulated buffer width options for streams located within Anacortes city limits (Figures 1 to 14). Stream buffers or riparian management areas need to provide adequate protection of stream functions consistent with BAS while recognizing the existing surrounding land uses, development, and other characteristics of the urban environment.

According to the Washington State Office of Community Development (OCD), BAS is defined as scientific information applicable to the critical area prepared by local, state, or federal natural resource agencies, or qualified scientific professionals, that is consistent with criteria established in WAC 365-195-900 through

WAC 365-195-925. The applicability of BAS and even particular critical area regulations are unique to each city and county depending on many factors including but not limited to location; geography; hydrologic, geologic and hydrogeologic conditions; and type of water bodies. GeoEngineers completed our BAS review in accordance with the criteria specified in the above referenced WAC sections while considering our understanding of the applicable attributes for the City.

BAS must be involved in developing the policies and regulations related to the critical area; however, local jurisdictions also have the opportunity and responsibility to include context where proposed development regulations consider relevant mitigation strategies for impacts to critical areas. These considerations are generally incorporated into critical area regulations by:

- using BAS in developing policies and development regulations to protect functions and values of critical areas, while recognizing the agency also has a responsibility to protect lives and property within the regulatory framework;
- requiring a valid scientific process to evaluate the effects of the policies and regulations, and consider how a valid scientific process can be incorporated in submittals related to the critical areas when assessing possible impacts to critical areas from proposed development activities; and
- incorporating non-science-based decisions with discussion of supporting information, rationale and potential risks to functions and values of critical areas.

3.0 BAS REVIEW FOR FISH AND WILDLIFE HABITAT CONSERVATION AREAS – STREAMS

3.1. Code Review and Comparison

WAC 365-190-030 defines Fish and Wildlife Habitat Conservation Areas as follows:

“(6)(a) “Fish and wildlife habitat conservation areas” are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species.

(b) “Habitats of local importance” designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities.

(c) “Fish and wildlife habitat conservation areas” does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of, and are maintained by, a port district or an irrigation district or company.”

The Washington State Department of Commerce and the GMA provide guidance for jurisdictions to consider the designation of appropriate fish and wildlife habitat conservation areas, including waters of the state (Washington State Department of Commerce, 2018).

WAC 365-190-130(2) mandates that “Fish and wildlife habitat conservation areas that must be considered for classification and designation include:”...“(f) Waters of the state;” and, WAC 365-190-130(4)(f) mandates that sources and methods of classifying and designating waters of the state include:

“(i) Waters of the state are defined in RCW 90.48.020 and include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses in Washington. Stream types are classified in Title 222 WAC, the forest practices regulations. Counties and cities may use the classification system established in WAC 222-16-030 to classify waters of the state. Counties and cities using the water types defined in WAC 222-16-030 or 222-16-031 (interim) should not rely solely on Washington state department of natural resources maps of these stream types for purposes of regulating land uses or establishing stream buffers.

(ii) Counties and cities that use the stream typing system developed by the department of natural resources should develop a process to verify actual stream conditions, identify flow alterations, and locate fish passage barriers by conducting a field visit. Field verification of all intermittent or non-fish bearing streams should occur during the wet season months of October to March or as determined locally.

(iii) Counties and cities may consider the following factors when classifying waters of the state as fish and wildlife habitat conservation areas:

- (A) Species present which are endangered, threatened or sensitive, and other species of concern;
- (B) Species present which are sensitive to habitat manipulation (e.g., priority habitats and species program);
- (C) Historic presence of species of local importance;
- (D) Existing surrounding land uses that are incompatible with salmonid habitat;
- (E) Presence and size of riparian ecosystems;
- (F) Existing water rights; and
- (G) The intermittent nature of some waters of the state.”

In addition, the Washington State Department of Commerce suggests considering the following principles in classification and designation of FWHCAs (Washington State Department of Commerce, 2018):

- Creating a system of fish and wildlife habitat with connections between larger habitat blocks and open spaces, integrating with open space corridor planning where appropriate;
- The level of human activity in such areas, including presence of roads and level of recreation type (passive or active recreation may be appropriate for certain areas and habitats);
- Protecting riparian ecosystems, including salmonid habitat, which also include marine shoreline areas;
- Evaluating land uses surrounding ponds and fish and wildlife habitat areas that may negatively impact these areas, or conversely that may contribute positively to their function;
- Establishing buffer zones around these areas to separate incompatible uses from the habitat areas;
- Considering the potential for restoring lost and impaired salmonid habitat;
- Considering the potential for designating areas important for local and ecoregional biodiversity; and

- Establishing or enhancing non-regulatory approaches in addition to regulatory methods to protect fish and wildlife habitat conservation areas.

The City of Anacortes' recently updated critical areas regulations include the following designation of streams, defined in AMC 19.70.315(A) as:

“3. Waters of the State, including **streams** as classified in WAC 222- 16- 030, including but not limited to Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March' s Run;”

And:

“4. Lakes, ponds, **streams, and rivers** planted with game fish by a governmental or tribal entity;”

And:

“5. Areas with which anadromous fish species have a primary association;”

The following stream buffers are stipulated per AMC 19.70.330(B):

- Type F streams: 50 feet
- Type Np streams: 50 feet
- Type Ns streams: 50 feet
- Piped Streams and Roadside Ditched Segments: 10 feet

For Type F streams (fish-bearing streams per WAC 222-16-030 Water typing system) and both Type 2 and Type 3 streams (Interim water typing system WAC 222-16-031, streams with high, moderate and slight fish, wildlife, or human use), other jurisdictions generally stipulate riparian buffers of 100 to 150 feet (Watershed Company, 2007). City of Bellingham designates minimum and maximum buffers for specific fish-bearing streams (Type F) within city limits (e.g., Padden Creek, Connelly Creek and Baker Creek) ranging from 75 feet to 200 feet, with buffers varying by stream reach for Padden Creek (Bellingham Municipal Code [BMC] Table 16.55.500(A)). For all other Type F streams the City of Bellingham designates buffers from 75 feet (minimum) to 150 feet (maximum) (BMC Table 16.55.500(A)). City of Mount Vernon designates a 150-foot buffer for fish bearing streams (Type F), a 50-foot buffer for perennial non-fish bearing streams (Type Np), and a 35-foot buffer for seasonal/ephemeral non-fish bearing streams (Type Np), and all stream types are subject to a minimum 15-foot minimum building setback beyond the buffer (Mount Vernon Municipal Code [MVMC] Table 15.40.080(B)). City of Burlington designates a 200-foot buffer for Type 1 and 2 streams, a 100-foot buffer for Type 3 streams, and a 50-foot buffer for Type 4 and 5 streams (Burlington Municipal Code [BMC] 14.15.380(B)). King County designates a 165-foot buffer for fish bearing streams (Type F) in rural areas (in a basin or shoreline designated as "high" on the Basin and Shoreline Conditions Map) and a 115-foot buffer for Type F streams within the urban growth area (King County Code [KCC] 21A.24.358(B)). The City of Seattle *Regulations for Environmentally Critical Areas* (Seattle Municipal Code [SMC] 25.09) regulate and restrict development within a *riparian management area* defined as “...the area within 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark [OHWM] of the watercourse as surveyed in the field, or from the top of

the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the OHWM shall be determined so as to include the entire stream feature. SMC 25.09.012(D)(5)" Within the riparian management area, development is allowed within the limited *riparian development area*, defined as the area within the riparian management area and more than 75 feet from the OHWM for Type F waters with anadromous fish presence, or within the riparian management area and more than 50 feet from the OHWM for Type F waters without anadromous fish presence and for Type Np and Ns waters (SMC 25.09.200(3)(B)).

3.2. Summary of Existing Stream Functions

Table 3-1 below provides a summary of headwaters, general alignment and channel condition, buffer condition and documented fish use for 27 mapped streams in Anacortes. These streams are documented by the City of Anacortes, the Washington Department of Natural Resources (DNR) Forest Practices Application Mapping Tool (FPAMT) (DNR 2022), the Northwest Indian Fisheries Commission (NWIFC) Statewide Washington Integrated Fish Distribution (SWIFD) map (NWIFC 2022), the Washington Department of Fish and Wildlife (WDFW) Fish Passage and Diversion Screening Inventory Database (WDFW 2022a), and the WDFW Priority Habitat and Species (PHS) Interactive map viewer (WDFW 2022b).

Figures 1 through 14 depict these 27 streams. The stream alignments shown in Figures 1 through 14 are based on the above-referenced sources as well as publicly available Lidar and aerial photographs. A field-based ground truthing to confirm the stream alignments was not performed as part of the mapping exercise.

TABLE 3-1. ANACORTES STREAM SUMMARY INFORMATION

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
1	Ace of Hearts Creek	6a, 6b, and 6c	Heart Lake located within Anacortes Community Forest Lands (ACFL)	A combination of wetland, ditched stream, and natural channel that varies throughout its course. This stream is conveyed into the city stormwater system at 33 rd Street, a distance of 5,000 feet before draining into Fidalgo Bay. Cedar Springs confluence with Ace of Hearts Creek is located just upstream of Ace of Hearts Rotary Park (off leash area) near H Avenue and Cedar Springs Lane.	Shrub and forest sections generally have 25-foot buffers, with some limited areas of 50-foot buffer. Invasive species are common in buffer areas. Buffers consist of approximately 1,400 feet of open orchard fields and residential yards from 41 st Street north to Orchard Place. Portion of stream within the ACFL has a 250- to 1,000-foot forested buffer.	FPAMT and SWIFD map the stream as fish-bearing (F) No mapped fish use in PHS or SWIFD
2	Anaco Bourn	3	Forested wetland within ACFL	A stream that begins in a forested wetland in the ACFL. It is conveyed into a culvert through the Marine Heights development and enters Clyde Creek north of Anaco Beach Road. Wetlands periodically occur adjacent to this stream.	First approximately 700 feet has a young forest buffer ranging from 25 to 100 feet. Upper portion through residential neighborhood (approximately 850 feet) has 10 to 25-foot buffers with landscaping and lawn. Headwaters are a forested wetland within ACFL.	Not mapped by SWIFD, PHS or FPAMT
3	Aqua Creek	8 and 12	Forested area to the northeast of Whistle Lake within ACFL	A channelized wetland that flows into Fidalgo Bay. Fidalgo Bay and tidal flushing extends to the west side of SR-20 at the confluence of Aqua Creek.	Young forest ranging in width from greater than 250 feet to 50 feet or less. Buffers include residential yards in the lower watershed.	The first approximately 2,000 feet upstream from Hwy 20 is mapped as fish-bearing (F) by SWIFD/FPAMT and non-fish bearing (N) upstream of that. No mapped fish use in PHS or SWIFD.
4	Beaver Brook	5a and 5b	Headwaters are a large, inundated wetland within ACFL known as the “32 nd Street Swamp”	From the 32 nd Street Swamp, at the western terminus of 32 nd Street, Beaver Brook flows for approximately 1,500 feet along ditches to a natural channel (for approx. 2,000 feet) within a narrow and forested buffer (25 to 35 feet) and then flows through a series of ditches and pipes for approx. 1,500 before draining into the city’s stormwater system along approx. 4,700 feet of pipe before draining into Puget Sound at the end of 22 nd Street.	Buffer along ditched section between 33 rd St and 29 th Street is generally forested on the west side (ACFL) and urban yards on the east side. Buffer upstream and downstream of D Avenue is a mostly narrow (25 feet) forested buffer with a mixture of cedar, Douglas fir, red alder and willow. Buffers along ditched sections are generally grass with some patches of native and non- trees and shrubs.	Not Mapped by FPAMT, SWIFD or PHS
5	Cedar Springs	6b	Artesian well and City-mapped wetland near the headwaters, southwest of Cedar Springs Lane	An approximately 700-foot channel, consisting of a combination of wetlands and stream channel that flows into Ace of Hearts Creek. Much of the flow is from an artesian well.	50-foot forested buffer adjacent to residential neighborhoods. Headwaters are hay fields.	Not mapped by SWIFD, PHS or FPAMT No mapped fish use in PHS or SWIFD
6	Clyde Creek	3	Wetland north of Jaspar Way	Clyde Creek begins as a wetland north of Jaspar Way, is conveyed through ditches and swales as wetlands, and is then channeled through a housing development in open swales and culverts where it picks up lawn and roadside runoff. It then flows into a ditch along Anaco Beach Road and then is culverted into Burrows Bay. Clyde Creek has increased flow during storm events.	Forested sections are approximately 10- to 15-foot wide on either side of the creek (at the ground surface) with a wider canopy above. Vegetation in the forested buffer consists of Douglas fir and western red cedar forest with some red alder and big leaf maple, with sword fern and Oregon grape understory. Salmonberry dominates closer to the creek.	SWIFD maps Clyde Creek as having “modeled presence” / being gradient accessible for Fall chinook salmon, coho, winter steelhead, and pink salmon (odd year). FPAMT and SWIFD map the stream as fish-bearing (F) up to a point approximately 300 feet upstream of Clyde Way, above which the stream is mapped as non-fish-bearing (N).
7	Cranberry Creek	2	Cranberry Lake within ACFL	Stream is the regulated outlet of Cranberry Lake. The stream flows within a gorge, 10-20 feet deep, within a wooded riparian corridor that is part of ACFL. The channel is conveyed into a roadside ditch near West 4th Street and the gravel access road to Cranberry Lake. It is then conveyed, via approximately 1,500 feet of stormwater pipe, into Guemes Channel. (east along the gravel access road, north along Georgia Ave, under Hwy 20 and out into Guemes Channel)	150 to 250 feet+ of forested buffer along the approximately 1,300-foot section of open channel immediately downstream of Cranberry Lake Vegetation in the forested buffer consists of western hemlock and western red cedar forest with some red alder and big leaf maple, with sword fern and Oregon grape understory. Salmonberry dominates closer to the creek.	SWIFD maps the documented presence of resident Coastal Cutthroat Trout in Cranberry Creek. FPAMT and SWIFD map the stream as fish-bearing (F)
8	Happy Valley Stream	7 and 6c	In Skagit County north of Haddon Road within a shrub and forest wetland complex	A combination of wetland, ditched stream, and natural stream channel. It is also conveyed into the city stormwater system after crossing under Hwy 20 at R Avenue, a distance of 4,000 feet before draining into Fidalgo Bay.	25 to 50 foot sections of forested and shrub buffer areas in the middle and upper watershed and mowed lawns and open fields. Piped section is urban and mostly impervious.	Not mapped by SWIFD, PHS or FPAMT WDFW fish passage online map viewer maps fish passage barrier culverts and dams along the alignment of Happy Valley Stream.

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
9	Heart Bourn	10	Forested lands with the ACFL located north of Lake Erie.	Heart Bourn flows south along Heart Lake Road and discharges into Lake Erie in Skagit County.	Second growth mixed forested lands within the ACFL. Deciduous forest near the mouth along Lake Erie.	Mapped by SWIFD/FPAMT as fish-bearing (F) No fish distribution mapped by SWIFD or PHS.
10	Howard Creek	12	Wetland complex south and west of S Fidalgo Bay Road	Howard Creek is a large wetland complex with an outlet.	Young forest and shrub.	Not Mapped by SWIFD, PHS or FPAMT No fish distribution mapped by SWIFD or PHS.
11	March's Run	14	Wetlands north of South March Point Road and the BNSF railroad	March's Run is a ditched wetland and turns into a natural channel near the confluence of a shallow estuarine portion of Padilla Bay west of South March Point Road. March's Run, as ditches wetland, is mapped by the City as a stormwater system occurring on both the south and north side of the railroad tracks. The northern portion of March's Run is a channeled drainage that collects runoff from the ditches alongside of the road and the railroad.	Disturbed fields and Himalayan blackberry	Not Mapped by SWIFD, PHS or FPAMT No fish distribution mapped by SWIFD or PHS
12	Miller Creek	8 and 9	A rural residential area west of Hwy 20 accessed via San Juan Hill Road	Miller Creek is similar to Weaverling Rill that is culverted under SR-20 and is difficult to determine where it enters Fidalgo Bay. This stream also requires additional fieldwork to determine the source of hydrology.	Young forest with some open field areas in the upper watershed.	The first approximately 500 feet is mapped as fish-bearing (F) on FPAMT/SWIFD and non-fish bearing (N) above that. No fish distribution mapped by SWIFD or PHS.
13	Mitten Creek	4	Mitten Lake	Mitten Creek flows south out of Mitten Lake (within the ACFL) for approximately 500 feet before passing into Skagit County. In Skagit County, Mitten Creek flows through forested and wetland areas then passing under Marine Drive and South Del Mar Lane before discharging into Burrows Bay.	Approximately 500 linear feet of headwaters channel located within the Cranberry Lake ACFL lands has second growth forested buffers. Within Skagit County buffers consist of mixed young forest, open fields and wetlands. Near the mouth, Mitten Creek passes through a residential community.	FPAMT and SWIFD map Mitten Creek as Fish-Bearing. A tributary of Mitten Creek that originates from an Anacortes-mapped wetland near Fir Crest Boulevard (Stream 4) is mapped as non-fish-bearing by FPAMT and SWIFD. SWIFD does not show Mitten Creek as having any salmonid fish distribution.
14	Morrison Run	5a	Channelized wetland located north of Beaver Brook and east of Cranberry Lake between 28 th and 23 rd Streets	Morrison Run is a wetland that has been channelized in select locations that enter into the city stormwater system.	Forested area immediately east of the Cranberry Lake ACFL	Not Mapped by SWIFD, PHS or FPAMT Wetlands are not mapped by NWI ²
15	Summit Creek	13	A rural residential area west of Thompson Road	Summit Creek begins within rural residential area west of Thompson Road, is conveyed through a series of ditches over to Saterlee Road where it flows through a series of man-made and natural wetlands, then flows through an open ditch on the south side of SR-20 west of Christiansen Road, under Hwy 20 then ditched until it drains into Fidalgo Bay. A drainage channel through the golf course has a confluence with Summit Creek at Hwy 20.	Rural residential fields and lawns.	Both Summit Creek and its tributary that drains through the golf course are mapped as fish-bearing (F) by SWIFD/FPAMT. The headwaters of Summit Creek and the golf course tributary (in Skagit County) are mapped as non-fish-bearing (N) by SWIFD/FPAMT. WDFW fish passage online map viewer maps a fish passage barrier (culvert under Christianson Road). No fish distribution mapped by SWIFD or PHS
16	Toot Creek	11	Whistle Lake	Toot Creek flows south from Whistle Lake through the ACFL and Skagit County, under Campbell Lake Road, and into Campbell Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	SWIFD maps the lower portion of Toot Creek as having "modeled presence" (gradient accessible) for Fall chinook salmon, coho salmon, winter steelhead, and pink salmon (odd year). The first approximately 3,220 feet is mapped as fish-bearing (F) on FPAMT and not classified above that.

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
17	Turner's Creek	14	Wetland located between SR 20 and Padilla Heights Road	Turner's Creek flow southwest through industrial use and undeveloped areas, under Reservation Road and into Turners Bay.	Young forest and cleared industrial use areas.	SWIFD/FPAMT mapped as fish-bearing (F) south/downstream of Padilla Heights Road and non-fish bearing (N) north/upstream of that. SWIFD maps the lower portion of Turner's Creek as having "modeled presence" (gradient accessible) for fall chum salmon, fall chinook salmon, winter steelhead, and pink salmon (odd year). SWIFD shows documented presence of Coho and Resident Coastal Cutthroat Trout within the lower portion of Turner's Creek.
18	Weaverling Rill	9	Forested area west of Hwy 20. Fields near headwaters appear wet on aerial photographs	Flows through a forested area west of Hwy 20 and is conveyed under SR-20 into a ditch that is piped under Fidalgo Bay Road and out into Fidalgo Bay.	West of Hwy 20 and between Hwy 20 and Fidalgo Bay Road buffer consists of young forest ranging in width from greater than 250 feet to 50 feet or less. Piped sections consist of parking lots and open fields.	Mapped as fish-bearing (F) on FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
19	Whistle Creek	8 and 9	Wetlands in the vicinity of Whistle Lake	Stream originates in wetlands north of Whistle Lake within the ACFL, parallels Whistle Lake Road in the upper watershed.	Young forest ranging in width from greater than 250 feet to 50 feet or less. Whistle Lake Road is within the buffer in the upper watershed.	Not Mapped by SWIFD, PHS or FPAMT. No fish distribution mapped by SWIFD or PHS.
20	Stream 1	4	Big Beaver Pond	Stream originates at Big Beaver Pond within the ACFL and flows approximately 630 feet into Little Cranberry Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Mapped as fish-bearing (F) by FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
21	Stream 2	4	Big Beaver Pond	Stream originates at Big Beaver Pond within the ACFL and flows approximately 450 feet into the 32 nd Street Swamp. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Mapped as fish-bearing (F) by FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
22	Stream 3	4	Forested areas within ACFL and Skagit County	Stream appears to flow northeast from forested areas in Skagit County into Mitten Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Not Mapped by SWIFD, PHS or FPAMT.
23	Stream 4	4	Unnamed wetland within ACFL	Stream flows southwest from an unnamed wetland on the eastern border of the ACFL approximately 930 feet into Mitten Creek. Stream centerline and headwaters need to be field verified.	Forested area between the eastern boundary of the ACFL and residential areas.	Mapped as non-fish-bearing (N) on FPAMT No fish distribution mapped by SWIFD or PHS.
24	Stream 5	10	Forested areas within ACFL north of Lake Erie	Stream flows southwest from forested area in the ACFL, under Heart Lake Road and into Heart Bourn. Stream centerline and headwaters need to be field verified.	Second growth mixed forested area within ACFL	SWIFD/FPAMT mapped as non-fish-bearing (N) No fish distribution mapped by SWIFD or PHS.
25	Stream 6	10	Forested areas within ACFL north of Lake Erie	Stream flows west from forested area in the ACFL, under Heart Lake Road and into Heart Bourn. Stream centerline and headwaters need to be field verified.	Second growth mixed forested area within ACFL	SWIFD/FPAMT mapped as non-fish-bearing (N) No fish distribution mapped by SWIFD or PHS.
26	Stream 7	11	Forested areas within ACFL	Stream appears to flow southeast from forested area in the ACFL and into Whistle Lake/a wetland at the western edge of Whistle Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL	SWIFD/FPAMT mapped as fish-bearing (F) No fish distribution mapped by SWIFD or PHS.
27	Stream 8	11	Forested areas within ACFL	Stream flows south from forested areas in the ACFL, into Skagit County, under Campbell Lake Road and into Campbell Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL	Mapped as fish-bearing (F) on FPAMT Documented presence of Coastal Cutthroat Trout mapped by SWIFD.

Note:

¹ Priority Habitats and Species (WDFW 2022b), SWIFD (NWIFC 2022) and FPAMT (DNR 2022). PHS reports are the up to date source for fish use.

² NWI is the National Wetlands Inventory (USFWS 2022)

ACFL = Anacortes Community Forest Lands

3.3. BAS Literature Review

The buffer size necessary to provide a particular level of function depends on the functions of the stream, the stream's relative sensitivity (as influenced by hydrology and other factors), the characteristics of the buffer, the intensity of adjacent land use, and watershed characteristics. A multi-function buffer should be sized to meet all of the functions identified as being locally important.

In addition to their essential role as fish and wildlife habitats, riparian areas provide other significant benefits to humans in the form of a variety of ecosystem goods and services such as: provisioning food and water; decreasing flood flows; nutrient cycling, sediment and pollutant filtering; carbon sequestration; and recreational, spiritual, and other nonmaterial benefits (Naiman and Bilby 1998; NRC 2002). The literature review below focuses on the water quality protection functions (nutrient cycling, sediment and pollutant filtering) and fish and wildlife habitat functions of riparian buffers.

3.3.1. Buffers: Water Quality Protection

Buffers protect the water quality of streams by preventing the buffer area itself from serving as a source of pollution and by reducing harmful inputs through processing pollutants and absorbing heat. Urbanization can increase the amount of sediments and contaminants in surface runoff, cause changes in hydrology (rates and amounts of surface and groundwater contributions), increase the severity of water fluctuations in streams during storm events, and affect hydrology by changing the rate and nature of (more frequent rapid high flows and lower sustained low flows) (ELI, 2008; May, 1997a). Vegetated buffers with deep permeable soils absorb and slow down surface flows and impede the formation of channelized flows, allowing for infiltration before runoff reaches the stream channel and improving removal of sediments and nutrients (ELI, 2008).

Water quality benefits to streams and other waters of the state vary with the size of the buffer, and also vary with flow patterns, type of vegetation, slope, soils, adjacent and surrounding land use, pollutant type and dose, and patterns of precipitation (Adamus, 2007; Wenger, 1999; Sheldon et al., 2005). Buffers with both forested and grassy vegetation have been shown to be most effective at removing both sediments and nutrients. Buffer effectiveness can be reduced over time if sediments and/or nutrients are added too quickly or in chronically high concentrations, and by actions that remove vegetation or compact or erode soils, which can lead to the formation of rills and gullies (ELI, 2008).

3.3.1.1. Removal of Sediments and Pollutants

Many researchers have found that the majority of sediment removal occurs within the first 15 to 30 feet, but that buffers of 30 to 100 feet will remove sediments more consistently (Dillaha et al., 1988, 1989; Magette et al., 1989; Schoonover et al., 2006; Sheldon et al., 2005). The effectiveness of buffers to remove sediment decreases as slopes increase and as sediment loads increase (Wenger, 1999; Sheldon et al., 2005). From their review of the literature, Sheldon et al. (2005) concluded that coarser sediments are likely removed effectively in the first 16 to 66 feet of a buffer, while removal of finer particles may require buffers of 66 feet or larger. Locations with high sediment loads and steep slopes may also require wider buffers, as sediment removal efficiency decreases as slope increases (Wenger, 1999; Sheldon et al., 2005). The ability of buffers to remove sediments and nutrients can degrade over time, if rates of sediment and contaminant inputs is too fast or in high enough concentrations that soil voids fill up with sediments and/or soil binding sites reach capacity (Cooke, 1992). Channelized flow in the form of rills, gullies, ditches, subsurface pipes, and other types of highly focused flows does not allow for contact with buffer vegetation and often is not sufficiently slowed to allow sediment removal, reducing or eliminating the pollution filtering

capability of the buffer. Wenger (1999) found that the use of level spreaders, grass filter strips, and other structural techniques also can encourage sheet flow through buffers. Welsch (1991) recommended planting a grass strip 20 feet (6.1 meters) wide at the outer edge of a forested riparian buffer to help disperse concentrated flow into sheet flow.

Phosphorus is carried to waterways in both dissolved and particulate form. Much of the phosphorus entering buffers is attached to sediments and thus buffer effectiveness at removing sediments can be a surrogate for much of the phosphorus removal function (Wenger, 1999). Therefore, like sediment removal, much of the phosphorous removal may occur within the first 15 to 30 feet of a buffer, but more consistent phosphorus removal may occur within buffers of 30 to 100 feet (Dillaha et al., 1988, 1989; Emmons & Olivier Resources, 2001; Kuusemets and Mander, 1999; Lowrance and Sheridan, 2005; Syverson, 2005). Buffers can become saturated with phosphorous and are not effective at long term phosphorous storage, but they can regulate rates of phosphorous release and prevent large pulses from reaching streams and wetlands (Wenger, 1999). Removal of plant biomass (haymaking, mowing, grazing) from portions of the buffer, can permanently remove some phosphorus from the system (Wenger, 1999).

Waschbusch et al. (1999) reported that lawns and streets were the largest sources of total phosphorus, dissolved phosphorus, and total suspended solids (TSS) in a basin study, with a combined contribution of 80 percent of the phosphorus load. Lawns had the highest concentrations and load rates of both dissolved and total phosphorus, contributing from 56 to 70 percent of total phosphorus. Streets were the next largest contributor of phosphorus, while parking lots and roofs were the lowest contributors. Pitt et al. (2005) found that lawns and landscape areas were the largest sources of dissolved phosphorus with streets and driveways the next highest source. Barr (2005) identified the following major contributing sources of phosphorus loadings in a Minnesota watershed: streets 41 percent; lawns 17 percent; pet waste 5.1 percent; and fertilizers 1.4 percent. Matthews et al. (2007) identified lawn fertilizers as almost always being the single largest source of phosphorus in urban soils. There are conflicting study results as to the relative phosphorus loading contributions from fertilizers compared to lawn clippings; however, the literature is in general agreement that lawns are a major source of phosphorus (Waschbusch et al. 1999, Pitt et al. 2005, Barr 2005, Matthews et al. 2007).

Subsurface flows of nitrates dissolved in groundwater is the primary route of nitrogen transport through buffers, with secondary transport occurring via particulates. Primary removal processes are conversion of nitrate to nitrogen gas via denitrifying bacteria, and removal by uptake into plants. Wetlands and riparian areas remove nitrogen from surface water and shallow groundwater through three primary means: (1) denitrification which involves anaerobic bacteria converting nitrate (NO_3^-) or nitrite (NO_2^-) into nitrogen gas (N_2) or nitrous oxide gas (N_2O) (known as “degassing”); (2) settling out particulate matter and incorporating it into the soil/sediment; and (3) nitrate uptake by plants into their tissues (Howard-Williams, 1985). Nitrogen removal in riparian areas is primarily through denitrification and plant uptake with nitrates being removed from seasonally high groundwater near the surface (Groffman et al., 1992). Removal of nitrates from groundwater via uptake by plants occurs in riparian zones where groundwater comes into contact with the root zones of plants (Hill, 1996). In a study of eight streams in southern Ontario, Canada, 90 percent of the nitrate in groundwater (varying in concentration from 0.15 to 44.7 mg/L) was removed across 50-foot-wide stream buffers in areas where the confining layer was close to the surface (within 3 to 6 feet of the surface) (Philippe et al., 2004). In addition to nitrate removal within riparian buffers, removal of ambient nitrates was also documented within streams in the Catskill Mountains

of New York (Burns, 1998). Both denitrification and uptake of nitrates by photosynthetic organisms (photoautotrophs) was observed occurring in these streams (Burns, 1998).

From a comprehensive review and synthesis of the literature pertaining to the nitrogen removal function of riparian buffers, Mayer et al. (2005) concluded that narrow buffers, of approximately 3 to 50 feet, can be effective at removing nitrogen, but wider buffers, of greater than approximately 160 feet, more consistently remove greater amounts of nitrogen. In buffers of approximately 10 feet, 90 feet, and 370 feet wide, Mayer et al. (2005) suggested 50 percent, 75 percent, and 90 percent nitrogen removal efficiencies respectively, via both surface and subsurface flow, depending on nitrate loading rates and buffer characteristics. Wenger (1999), after reviewing the same literature, concluded that a minimum of 50 feet is necessary for effective nitrogen removal, with wet organic soils performing the best, and that 100-foot buffers or greater would provide more areas for denitrification and more nitrogen removal.

In order for effective microbial denitrification and plant uptake of nitrogen, soils must have high levels of organic carbon, be saturated, and have anoxic or low oxygen conditions, and the root zone of riparian vegetation must have extended contact with groundwater (Groffman et al., 1992). When these soil conditions are maintained, removal of subsurface nitrate is highest (Correll, 1997; Wenger, 1999). These soil and root zone criteria may be more important than width in determining the effectiveness of the buffer (Mayer et al., 2005). For example, Vidon and Hill (2004) found that 50-foot buffers were effective at removing 90 percent of the nitrate at locations with loamy soils, but the buffer width required for 90 percent nitrate removal at locations with sand and cobble sediments (low organic matter) ranged from approximately 80 to 580 feet. To maintain nitrogen removal effectiveness of buffers over time, removal of leaf litter or ground cover, soil compaction, gully, and increases in impervious surfaces should be minimized (Mayer et al., 2005).

A few studies have evaluated effective buffer widths for removing potentially toxic compounds, fecal coliform and other pathogenic microorganisms. Urban buffers were found to generally be good at removing hydrocarbons and metals from surface runoff (Herson-Jones et al., 1995, as cited in Wenger, 1999). Potentially toxic compounds, such as pesticides and metals, may also be partially removed through filtration of sediments by the buffer (Sheldon et al., 2005), and temporarily, through vegetative uptake (Gallagher and Kibby, 1980). A 30-foot buffer treated with poultry manure removed 34 to 74 percent of the fecal coliform, however, the primary contact standard was still exceeded in the resulting runoff (Coyne et al., 1995).

3.3.1.2. Shade, Temperature and Dissolved Oxygen

Factors that influence water temperature include overhead cover, shade, groundwater and surface inputs, relative humidity, ambient air temperature, wind, substrate and channel dimensions (Adams and Sullivan, 1989; Mohseni and Stefan, 1999). Shading and wind reduction provided by riparian vegetation influences water quality by maintaining cooler temperatures. Water temperature can affect species distribution, metabolism and survival, and cooler temperatures help maintain sediment-pollutant bonds and increase the water's dissolved oxygen capacity (McMillan, 2000). Stream temperatures have been observed to significantly increase after the loss of riparian forest cover (Brown and Krygier, 1970; Beschta et al., 1987). The Washington Department of Ecology modeled the effects of riparian buffer width on effective shade and stream temperature (Cristea and Janisch, 2007). They found that for streams with a 10-foot channel width, that a 50-foot buffer produced 73 to 86 percent effective shade. Assumptions built into the model included: north-south orientation, vegetation cover right at the bankfull edge, no channel incision, no topographic shade, 80-foot tall buffer vegetation and 85 percent canopy cover.

The temperature of stream water and the factors affecting it have been the focus of studies for many years because of the importance of temperature in governing in-stream processes such as decomposition of organic matter, metabolism, and oxygen solubility as well as the effects of temperature on stream biota (Johnson, 2004). There is conflicting information in the peer-reviewed literature about the relative ranking of factors affecting stream temperature (Johnson, 2004). Johnson (2004) found that as hyporheic flow declines, stream temperature buffering declines, and daily minimum and maximum temperatures may increase.

3.3.2. Buffers: In-Stream and Wildlife Habitat

Riparian zones provide many functions for fish and wildlife including, maintaining in-stream habitat, serving as a source of organic matter and woody debris, providing habitat for water-dependent species that rely on adjacent uplands as a critical part of their life history, screening for adjacent human disturbance, and serving as wildlife corridors (Environmental Law Institute, 2008). Riparian zones play a critical role of providing both transition zone wildlife habitat and in-stream habitat for aquatic life. Wildlife habitat value is determined by the ability of a buffer to provide structural complexity, connectivity with other habitats, food and water, and a moist and moderate microclimate (Knutson and Naef, 1997). The ability of a buffer to provide in-stream habitat is determined by the ability of a buffer to produce and provide inputs of small and large organic debris into the stream. Although riparian ecosystems constitute a small portion of the surface landscape, approximately 85 percent of Washington's wildlife species are known to use riparian areas associated with rivers and streams (Knutson and Naef 1997).

3.3.2.1. Wildlife Habitat

The appropriate buffer size for providing habitat functions depends on:

- resident species and their life-history characteristics,
- condition of the stream and the stream buffer,
- intensity of surrounding land use, and
- functions the buffer is providing/can provide

Many buffer studies in the literature make conclusions on appropriate buffer sizes for wildlife habitat based on how far individuals range from a stream or wetland for breeding or other life-cycle needs. A review of the science by the Environmental Law Institute (2008) found that effective buffer sizes for wildlife protection can range from 33 feet to more than 5,000 feet, depending on the species. Most studies report a range of 200 to 300 feet necessary to provide essential habitat for most wildlife species (Keller et al., 1993). However, it has been noted that even a narrow buffer will enhance the habitat of most species (Wenger, 1999). Specific information on ranges for birds, mammals, reptiles, and amphibians have been developed in the literature:

- Birds: from 49 to over 5,000 feet (Environmental Law Institute, 2008, Fischer, 2000)
- Mammals: between 98 and 600 feet (Environmental Law Institute, 2008)
- Reptiles & Amphibians: between 164 and 951 feet (Semlitsch and Bodie, 2003)

Buffers can protect aquatic life and wildlife from light, noise, domestic pets, and human presence (Castelle, et al. 1992). The intensity of adjacent land uses is directly related to the level of human disturbance in a

buffer, and buffer effectiveness can decline over time from continued disturbance (Cooke, 1992). Buffers of at least 50 feet are likely necessary to maintain buffer effectiveness over time (Cooke, 1992). Amphibian species richness was observed to decline with increasing urban land use and road density (Rubbo and Kiesecker, 2005; Houlahan and Findlay, 2003). Buffers with greater structural complexity generally support more species (Shirley, 2004); however, buffers with less complexity can be more favorable to a specific, locally rare species. Native vegetation is more likely to be effective at conserving native wildlife (Wenger, 1999). Parkyn et al. (2000, as cited in Parkyn 2004) suggest that a buffer of 33 to 66 feet is necessary for sustaining a community of native vegetation.

3.3.2.2. In-stream Habitat

The composition, structure, and functions of riparian and aquatic ecosystems have a primary connection with wood (Quinn et al. 2020). Instream large wood increases hydraulic complexity, (i.e., wider range of flow velocities), which causes streambed scour, pool formation, channel migration and sediment deposition, all resulting in a greater diversity of aquatic habitat types (Quinn et al. 2020).

Vegetation (especially woody vegetation) has mechanical and hydrologic effects on bank stability, and these effects can be stabilizing or destabilizing. In general, the net effect of vegetation is stabilizing. Bank stability (dynamic stability) is one of five key ecological functions of riparian areas (Quinn et al. 2020). Simple models suggest that in an old-growth riparian forest, the full contribution of root strength to streambank stability is provided by trees within approximately 33 feet of the streambank.

Large woody debris (LWD) influences the development of geomorphic structures, especially in headwater streams, compared to downstream channels (Gregory et al., 1991). Small streams and headwater streams rarely transport LWD (and other debris) so that as the debris builds up, the consequent obstructions formed alter hydrology and geomorphology (Knutson and Naef, 1997). Larger streams have increased capacity to transport large wood downstream. The influence of instream large wood on stream and rivers is a function of wood size relative to channel size. For example, up to 80 percent of pools in small streams can be associated with wood (Montgomery et al. 1995) with the frequency of wood-associated pools decreasing with increasing stream size (Bilby and Ward 1989, 1991; Montgomery et al. 1995). LWD lengthens water residence time in streams (Naiman and Décamps, 1997) and captures and retains small organic debris and provides a substrate for microbial life and algae, thus supplying a food base for macroinvertebrates (Bolton and Shellberg, 2001). Woody debris and the entrapped smaller branches, limbs, leaves and other material significantly reduce flow conveyance (Dudley et al., 1998).

Studies on LWD recruitment conducted for timber managed forest lands generally recommend buffer widths of from one to two site potential tree heights (SPTHs) (Spence et al., 1996; Kondolf et al., 1996; Forest Ecosystem Management Assessment Team, 1993). Site potential tree height is defined as the average maximum height that a tree can attain, given site conditions. For smaller streams, ephemeral streams and streams on private land, buffers of one SPTH were generally recommended (Spence et al., 1996; Kondolf et al., 1996; Forest Ecosystem Management Assessment Team, 1993). In an unmanaged natural riparian area, 100 percent of a site's large wood recruitment potential comes from a distance of approximately 85 to 230 feet from the stream channel, depending on site productivity class. This does not account for additional wood recruitment through landslides, debris flows, or extreme channel migration.

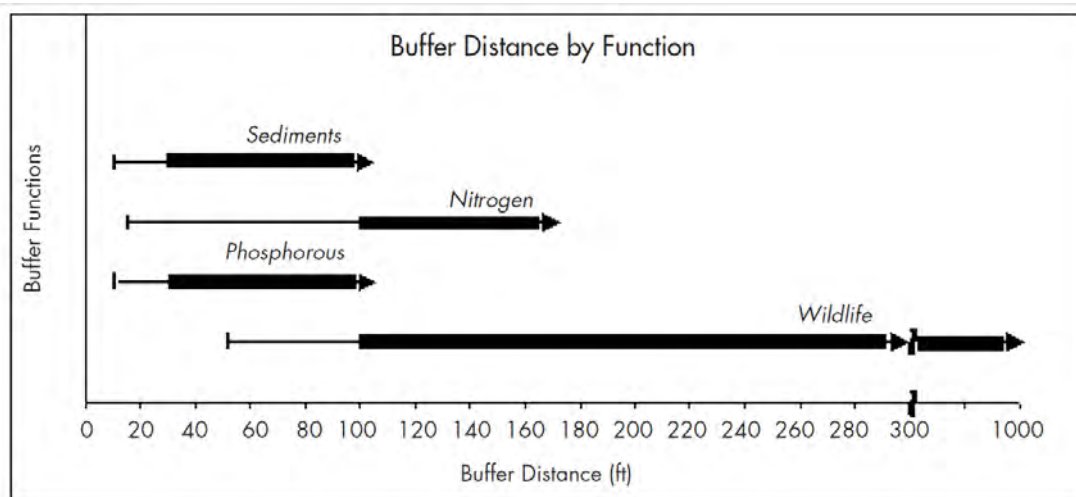
Based on WDFW's Site-potential Tree Height and Riparian Management Zone Values online map tool, SPTHs in Anacortes range from 91 to 231 feet (WDFW 2022c). SPTHs in Anacortes are based on 200-year-old projected heights for Douglas fir (*Pseudotsuga menziesii*) and red alder (*Alnus rubra*)

combined with Natural Resources Conservation Service (NRCS) soil productivity data. Douglas fir SPTHs in Anacortes range from 91 to 231 feet, with the most common SPTHs being from 165 to 189 feet. Red alder SPTHs in Anacortes range from 100 to 105 feet (WDFW 2022c).

3.4. Buffer BAS Summary

The literature on buffers generally suggests that a 50-foot buffer is the minimum required to provide a basic level of functions. As discussed above, 50-foot buffers can provide a high level of function for sediment and phosphorus removal but generally provide moderate to low levels of function for wildlife habitat and nitrogen removal. Figure 1 below (from Environmental Law Institute, 2008) provides a visual summary of buffer function provided by width of buffer.

BUFFER DISTANCE BY FUNCTION (ENVIRONMENTAL LAW INSTITUTE, 2008)



*Effective buffer distance for water quality and wildlife protection functions. The thin arrow represents the range of potentially effective buffer distances for each function as suggested in the science literature. The thick bar represents the buffer distances that may **most** effectively accomplish each function (30 - > 100 feet for sediment and phosphorous removal; 100 - > 160 feet for nitrogen removal; and 100 - > 300 feet for wildlife protection. Depending on the species and the habitat characteristics, effective buffer distances for wildlife protection may be either small or large.*

Although simplified generalizations can be made from the literature about level of function by buffer width, the actual function provided by a buffer depends on many site-specific factors including the following:

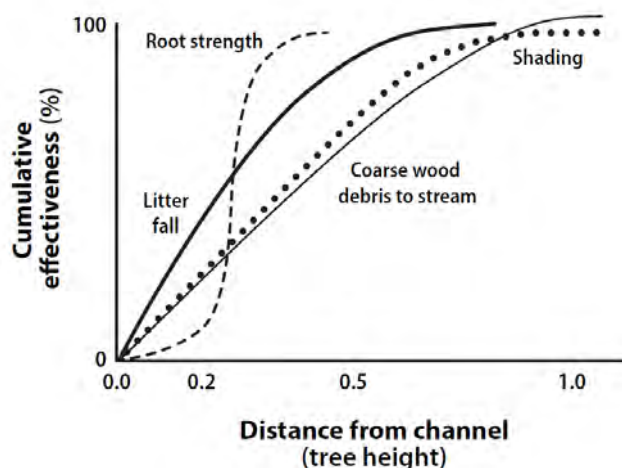
- Structural complexity (e.g., tree, shrubs and herbaceous canopy layers; snags; downed wood; canopy openings, conifers and hardwoods)
- Connectivity with other habitats
- Availability of food and water for wildlife (e.g., rotten wood for insect prey, berries, nuts)
- Moist and moderate microclimate (e.g., shade, canopy closure, wind protection)
- Buffer trees tall enough to provide inputs of small and large organic debris into the stream
- Organic content of soil
- Slope

- Riparian vegetation root zone has extended contact with groundwater (nitrogen removal)
- Grass filter strips combined with forest buffer (disperses channelized flow into sheet flow and encourages sedimentation)

A smaller buffer can provide more sediment, phosphorus and nitrogen removal, and more in-stream and wildlife habitat if it has more of the elements listed above.

FEMAT's (1993) curves are conceptual models describing how the cumulative effectiveness of four fundamental riparian ecosystem functions changes with distance from the stream channel (see chart below). The four functions in the FEMAT model are litter fall (i.e., input of detrital nutrients), stream shading, root strength (i.e., streambank stability) and coarse woody debris to stream (i.e., large wood recruitment). FEMAT (1993) also included the pollution removal function (i.e., water quality) but did not create a curve for it. The curves convey two central points: first that the four riparian ecosystem functions occur within one SPTH, and secondly that the marginal return for each function decreases as distance from the stream channel increases. In other words, the FEMAT curves show that areas closer to the stream provide more of each function per unit width than areas farther from the stream.

FEMAT CURVES: CUMULATIVE EFFECTIVENESS OF RIPARIAN ECOSYSTEM FUNCTIONS AND PROCESSES VS DISTANCE FROM CHANNEL (FEMAT, 1993) – FIGURE FROM QUINN ET AL. 2020



The “FEMAT Curves” (FEMAT 1993) are generalized conceptual models describing some riparian ecosystem functions and processes as the distance from a stream channel increases. “Tree height” in the figure above is based on the average maximum height of the tallest dominant trees (200 years old or greater) and is referred to as site-potential tree height (SPTH).

Although some riparian functions, such as pollution removal, are not strongly associated with tree height. Several key riparian functions are, including large wood recruitment, stream shading and litter fall. The FEMAT curves can thus be used to help estimate the amount of function provided by riparian areas of different widths for those functions that are strongly associated with tree height. Based on the FEMAT curves, a buffer with a width equivalent to half the SPTH will be providing the vast majority of the root strength and litter fall functions and from 70 to 75 percent of the coarse wood recruitment and shading functions. With SPTHs in Anacortes ranging from 91 to 231 feet with the most common SPTHs being from

165 to 189 feet (WDFW 2022c), a riparian buffer in Anacortes that ranges from 85 to 95 feet (50 percent of the SPTH) will provide most of the root strength and litter fall functions and from 70 to 75 percent of the course wood recruitment and shading functions.

3.5. BAS Evaluation of Existing Ordinance, Conclusions and Recommendations

As discussed in Section 3.4, a 50-foot riparian buffer is the minimum required to provide a basic level of functions and a riparian buffer that is at least 50 percent of the SPTH will provide most of the root strength and litter fall functions and more than 70 percent of the course wood recruitment and shading functions. Riparian functions can be improved by adding/incorporating the following into the buffer:

- Diverse native vegetation (especially woody vegetation) including multiple canopy layers, berries and nuts, snags, and downed wood.
- Grass filter strips along the edges of buffers, or other low impact development (LID) structures that encourage sheet flow and infiltration.
- Buffer management that includes removing invasive plant species, decompacting and amending top soils with organic matter, and retaining leaf litter, replacing native plants if dead or damaged.

In addition, adjacent surface water management and land use planning will influence how much of the area is impervious and how much surface water infiltrates to recharge local groundwater.

Existing conditions of the 27 mapped streams in Anacortes are summarized in Table 3-1. With the exception of portions of the streams located within ACFL, and forested portions of Weaverling, Whistle, Turner's, Morrison Run, Miller, Howard and Aqua Creeks, the majority of riparian buffer zones for Anacortes streams consist of narrow (15 to 25 feet) buffers with varying stages of riparian vegetation development. Many areas are mowed lawns, fields, pastures or orchards, while others have narrow bands of young native trees and shrubs and some invasive plants (e.g., Himalayan blackberry [*Rubus armeniacus*], English ivy [*Hedera helix*] and reedcanary grass [*Phalaris arundinacea*]). The headwaters of many of the streams are located within high quality forested ACFL lands, but downstream of ACFL lands the riparian zones are generally narrow and do not connect with other habitat areas such as natural preserves or parks of an acre or larger. This fact, combined with the adjacent high intensity residential land use, means that Anacortes riparian zones are unlikely to support diverse assemblages of wildlife that have large life-cycle ranges and require extensive wildlife corridors such as large mammals, reptiles and amphibians. Forested portions of the riparian corridors have the potential to offer some root strength, litter fall, course wood recruitment and shading functions and the potential to support species of song birds and small mammals. Portions of the riparian corridors with grass and herbaceous cover also provide some water quality improvement and habitat value.

Stormwater from adjacent neighborhoods is generally collected into catch basins and piped directly into streams and, therefore, stream buffers are not given the opportunity to provide sediment and phosphorus removal from surface waters. Improvements to surface water management could allow for more infiltration techniques that would provide better treatment and allow for more infiltration/recharge of ground water in the highly urbanized environment. Currently, surface waters are receiving basic levels of treatment and the City inspects all catch basins and inlets owned or operated by the City every 2 years and annually inspects all municipally owned or operated permanent stormwater treatment and flow control best management practices/facilities. Going forward, the City has adopted provisions in the development code regarding

techniques for LID that make it the preferred and commonly-used approach to site development, in order to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations.

Within residential neighborhoods, many sections of stream channels have been ditched and piped. In addition, the mouths of many of the creeks have been extensively piped including Cranberry Creek, Happy Valley Creek, Beaver Brook and Ace of Hearts, with lower piped sections ranging from 1,600 to 5,000 feet in length before discharging into Puget Sound. These streams currently do not have the ability to support anadromous fish although their hydrology and channel dimensions may meet characteristics determined to support fish use. All other remaining Anacortes creeks have mouths with shorter piped or ditched sections, some of which are partial or full passage barriers. Some of these streams may have the ability to support anadromous fish and some may have hydrology and channel dimensions that meet characteristics determined to support fish use.

Most streams in Anacortes do not have documented salmonid use; however, some streams have been modeled as gradient accessible for anadromous salmonids and some have documented salmonid use (NWIFC 2022). SWIFD maps Clyde Creek, Toot Creek and Turner's Creek as having modeled presence/being gradient accessible for anadromous salmonids. SWIFD shows documented presence of Coho and Resident Coastal Cutthroat Trout within the lower portion of Turner's Creek. SWIFD maps Cranberry Creek and Stream 8 as having documented presence of Coastal Cutthroat Trout (NWIFC 2022). It is the long-term goal of the City to restore the City's riparian corridors and to protect salmon passage where scientifically justified. Through buffer restoration, buffer mitigation and stream daylighting, the functions of Anacortes streams and their associated riparian areas will continue to improve.

AMC 19.70.330(B) currently stipulates 50-foot buffers for Type F, Type Np and Type Ns streams and 10-foot buffers for piped streams and roadside ditched segments of stream.

AMC 19.70.125 (Mitigation requirements) stipulates that:

“Mitigation must be sufficient to restore impacted functions and values, or compensate for the impacted functions and values of the critical area and to prevent risk from a hazard posed to a critical area by the proposed activity.”

AMC 19.70.125 requires that an applicant must demonstrate that mitigation sequencing has occurred during design and planning in the following order avoid, minimize, rectify, reduce, compensation and monitor.

AMC 19.70.325(A) stipulates that:

“Alterations of FWHCA' s or their buffers is prohibited except as otherwise allowed by this chapter and may occur only if the proposed alteration of the habitat and any associated mitigation proposed does not degrade the functions and values of the habitat.”

AMC 19.70.325(C) stipulates that:

“Any approval of alterations or impacts to a FWHCA area must be supported by the best available science as described in the required Critical Area Report.”

AMC 19.70.330(B) lists the required stream buffers and AMC 19.70.330(C) describes allowances for the reduction of buffer widths on a case- by-case basis when the critical areas report demonstrates the following criteria are met:

1. There is no feasible alternative to the site design that could be accomplished without buffer reduction;
2. The total buffer width is not reduced to less than 35 feet in stretches of natural stream channel with intact native vegetation within the buffer, and the buffer reduction does not reduce the functions or values of the stream or buffer;
3. The total buffer width is not reduced to less than 25 feet in stretches of modified stream channel with little to no intact native vegetation within the buffer, and the buffer reduction plan must include an enhancement plan to increase the functions or values of the stream or buffer.
4. A buffer enhancement plan is proposed to improve the overall function of the buffer.

3.5.1. Summary of Recommendations

Recently updated science and management recommendations for riparian ecosystems (Quinn et al. 2020 and Rentz et al. 2020) provide information and policy recommendations for maintaining riparian functions thought to be important to fish and wildlife and their habitats including stream morphology, large wood and water quality (stream temperature, pollutant removal and nutrient dynamics. As discussed in Section 3.4 FEMAT curves convey that four riparian ecosystem functions (root strength, litter fall, coarse wood recruitment and shading) occur within one SPTH and that riparian areas closer to the stream provide more of each function per unit width than areas farther from the stream. Section 3.4 discusses that a 50-foot riparian buffer is the minimum required to provide a basic level of functions and that a riparian buffer that is at least 50 percent of the SPTH will provide most of the root strength and litter fall functions and more than 70 percent of the coarse wood recruitment and shading functions.

We recommend that Anacortes adopt stream protection provisions based on Riparian Management Zones (RMZs), to be determined by the project proponent, and based on the WDFW Priority Habitats and Species Site Potential Tree Height (SPTH) (WDFW 2022c). As summarized in Section 3.4, with SPTHs in Anacortes ranging from 91 to 231 feet with the most common SPTHs being from 165 to 189 feet (WDFW 2022c), a riparian buffer in Anacortes that ranges from 85 to 95 feet (50 percent of the SPTH) will provide most of the root strength and litter fall functions and from 70 to 75 percent of the coarse wood recruitment and shading functions. Therefore, we recommend the RMZ be no less than 100 feet.

Other local jurisdictions (e.g., City of Seattle) who have adopted the RMZ approach for stream protection provisions, have allowed for limited development within the RMZ (for lots existing prior to adoption of the ordinance) by defining a Riparian Development Area as an area in the RMZ and more than a set distance from the top of the riparian watercourse. The Riparian Development Area should be located farther from the watercourse for Type F waters with anadromous fish presence, and the Riparian Development Area should not be closer than 50 feet from the top of the riparian watercourse.

All impacts that occur within the RMZ should be mitigated for by increasing functions within the RMZ to result in no net loss of functions and values. In addition to those stream enhancement measures listed in AMC 19. 70. 330(H), RMZ enhancement actions should focus on improving root strength, litter fall, coarse wood recruitment and shading functions by increasing cover of native woody vegetation (especially trees) and installing wood into stream channels. Additionally, RMZ enhancement actions should focus on water

quality improvement functions through actions such as increasing organic content of soils, increasing cover of native woody vegetation, and establishing grassy filter strips between areas of impervious surface or mowed lawns.

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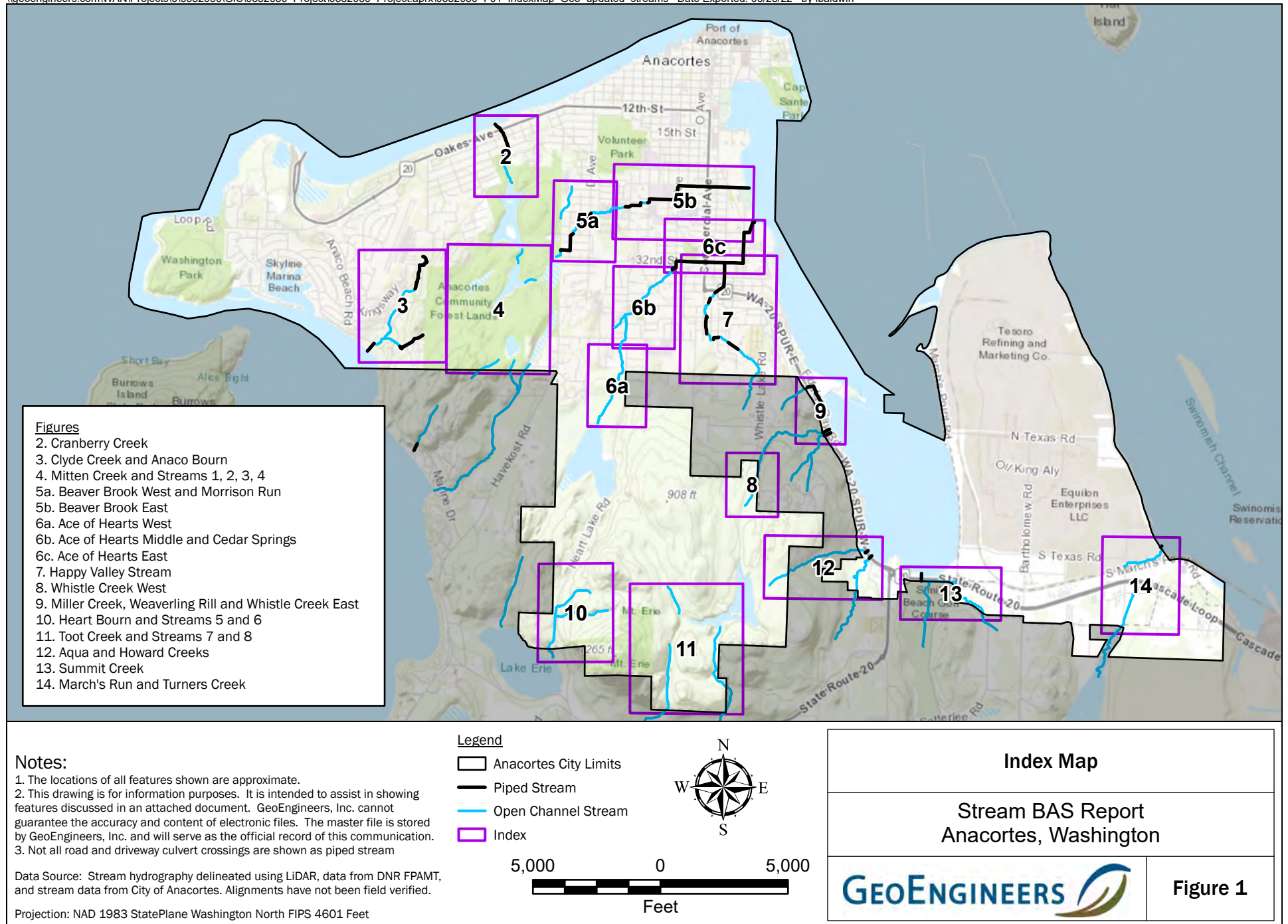
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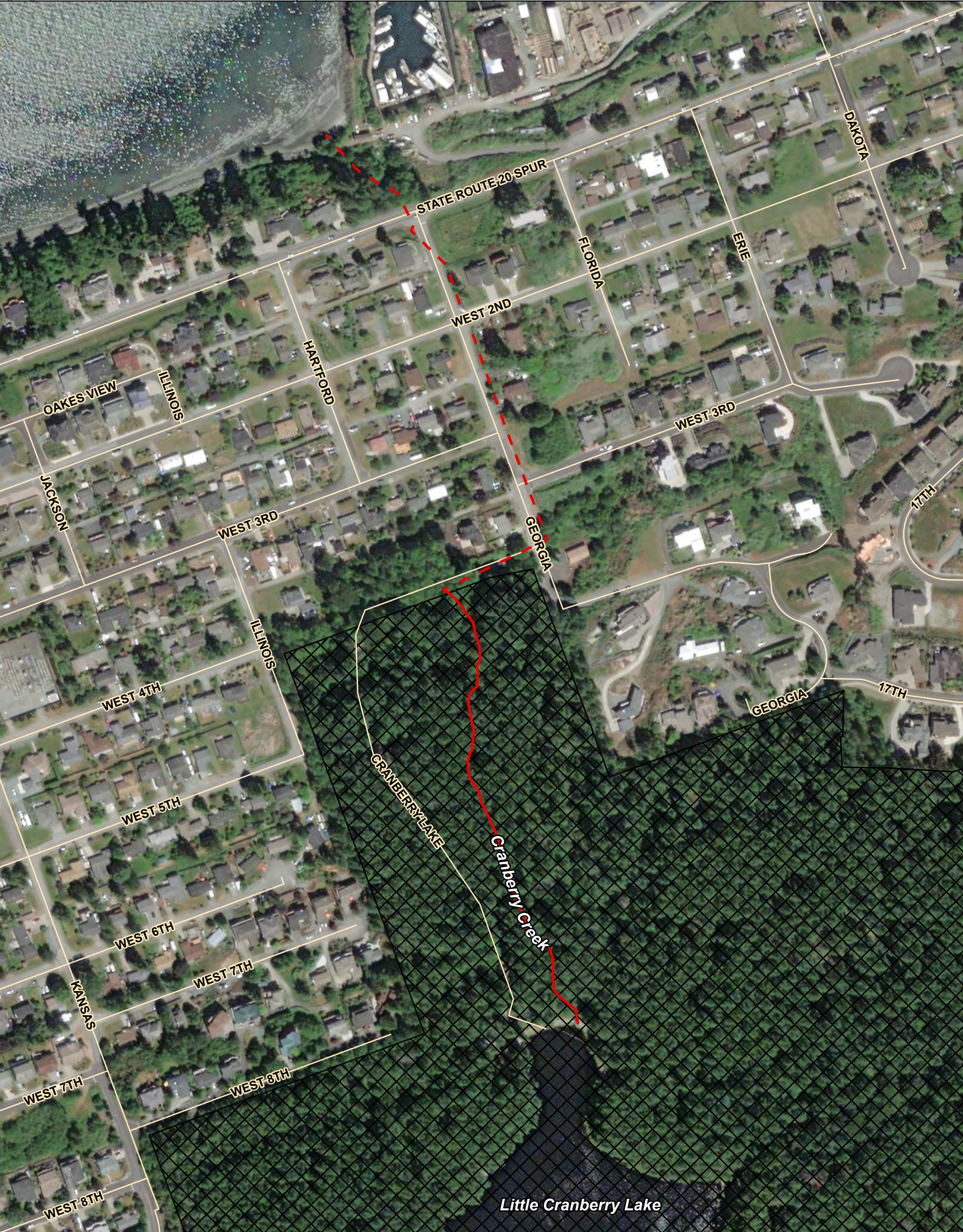
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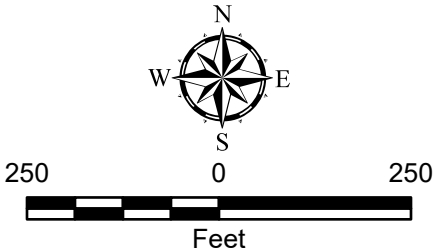
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 - Fish-Bearing
 - - Fish-Bearing (Piped)
- ⊞ Anacortes Community Forest Land

Notes:

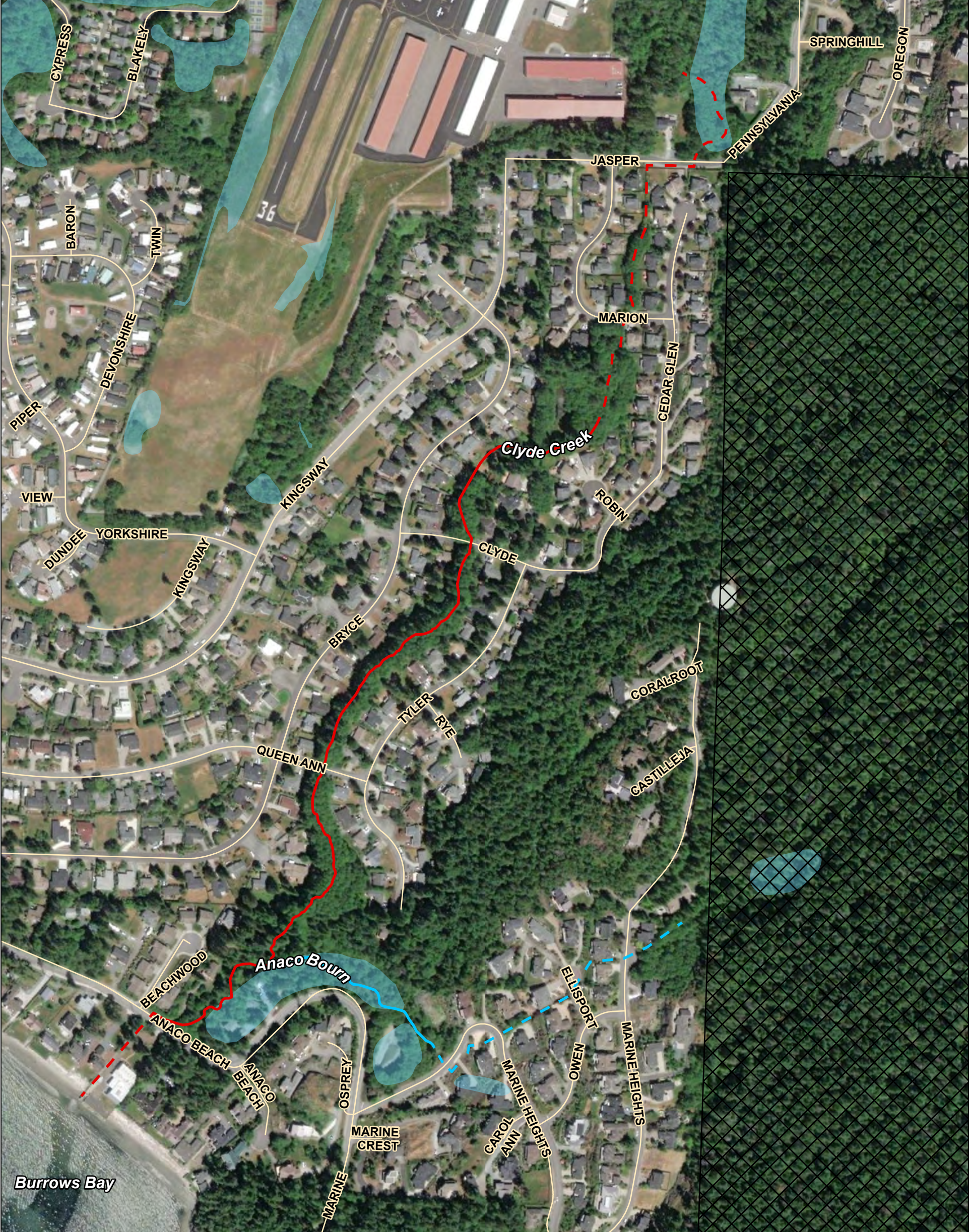
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Cranberry Creek	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS 	Figure 2



Legend

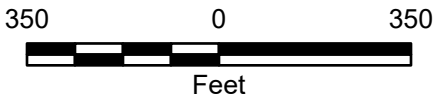
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|---|---|
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|  Unclassified |  Anacortes Community Forest Land |

Notes:

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

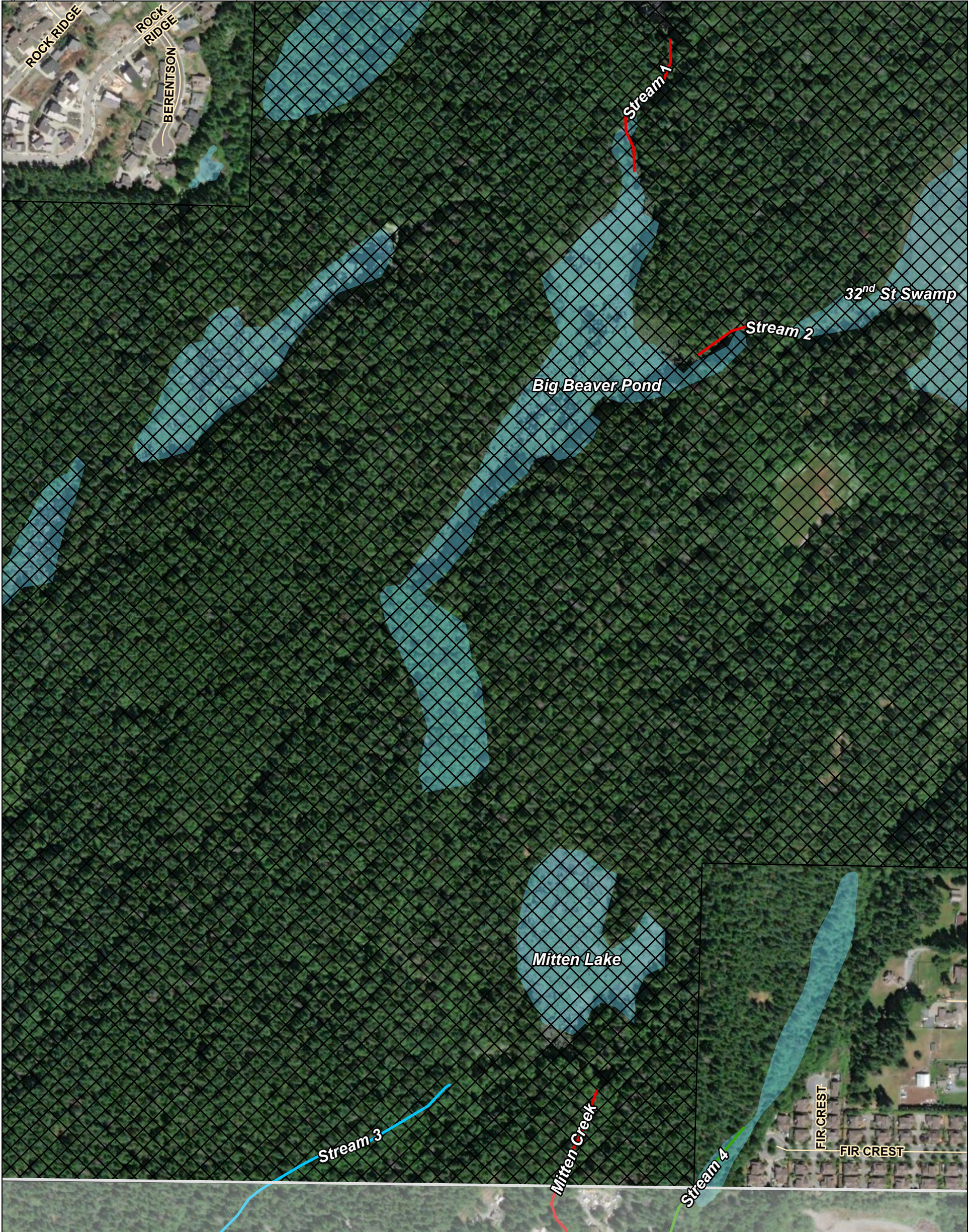


Clyde Creek and Anaco Bourn

Stream BAS Report
Anacortes, Washington



Figure 3

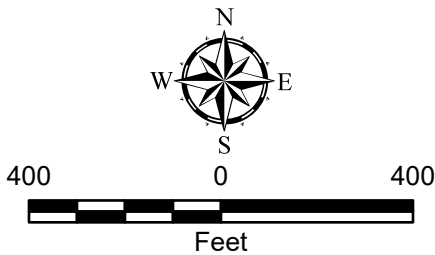


Legend

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|--------------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Non-Fish-Bearing | ■ Skagit County |
| — Unclassified | |

Notes:

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 3. Not all road and driveway culvert crossings are shown as piped stream
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

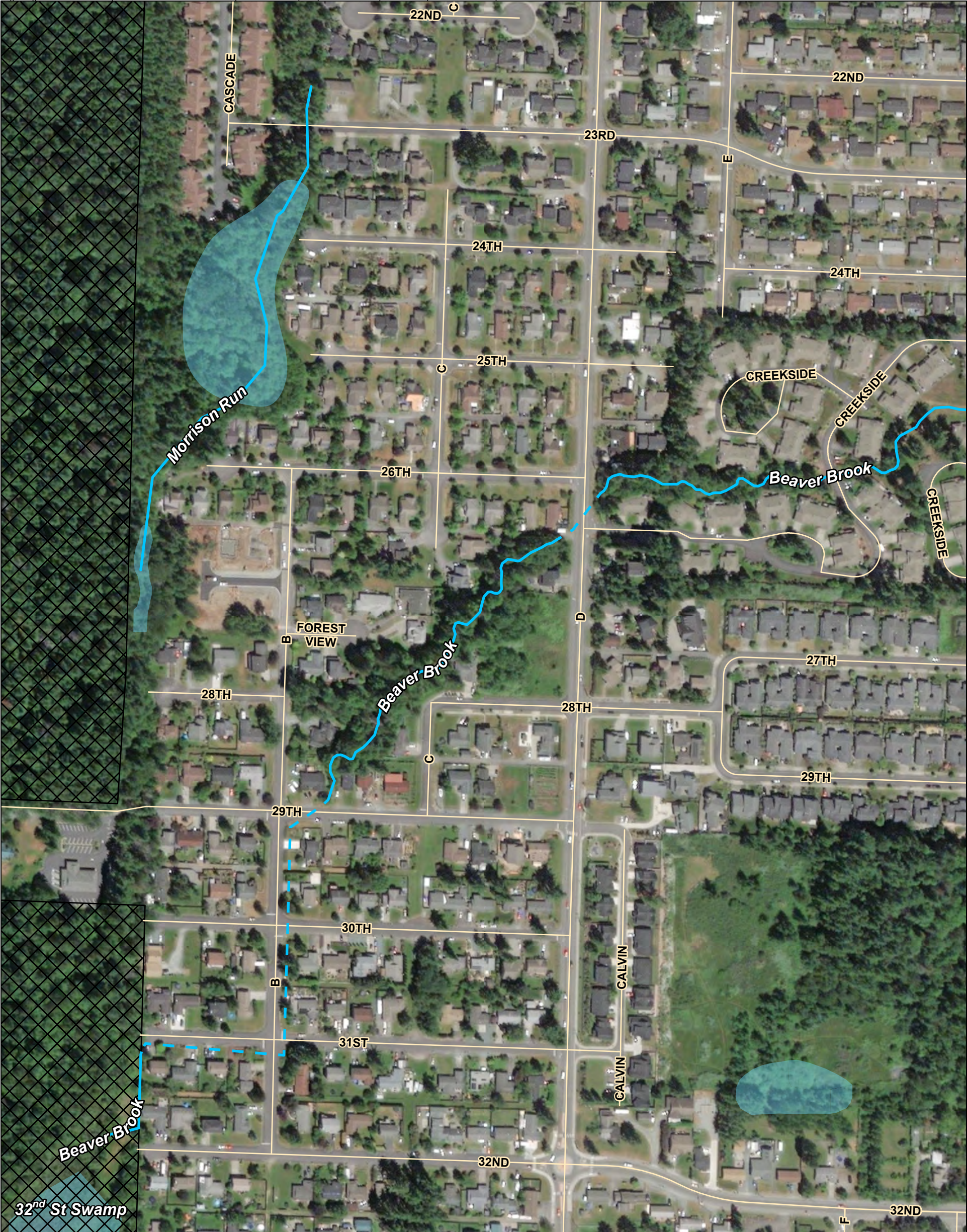


Mitten Creek and Streams 1, 2, 3, and 4

Stream BAS Report
Anacortes, Washington



Figure 4

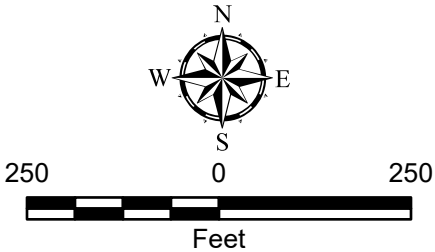


Legend

- Road
- Piped Stream Buffer (10-ft)
- DNR Stream Type
- Unclassified
- Unclassified (Piped)
- Anacortes Mapped Wetlands
- Anacortes Community Forest Land

Notes:

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 - Not all road and driveway culvert crossings are shown as piped stream
- Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

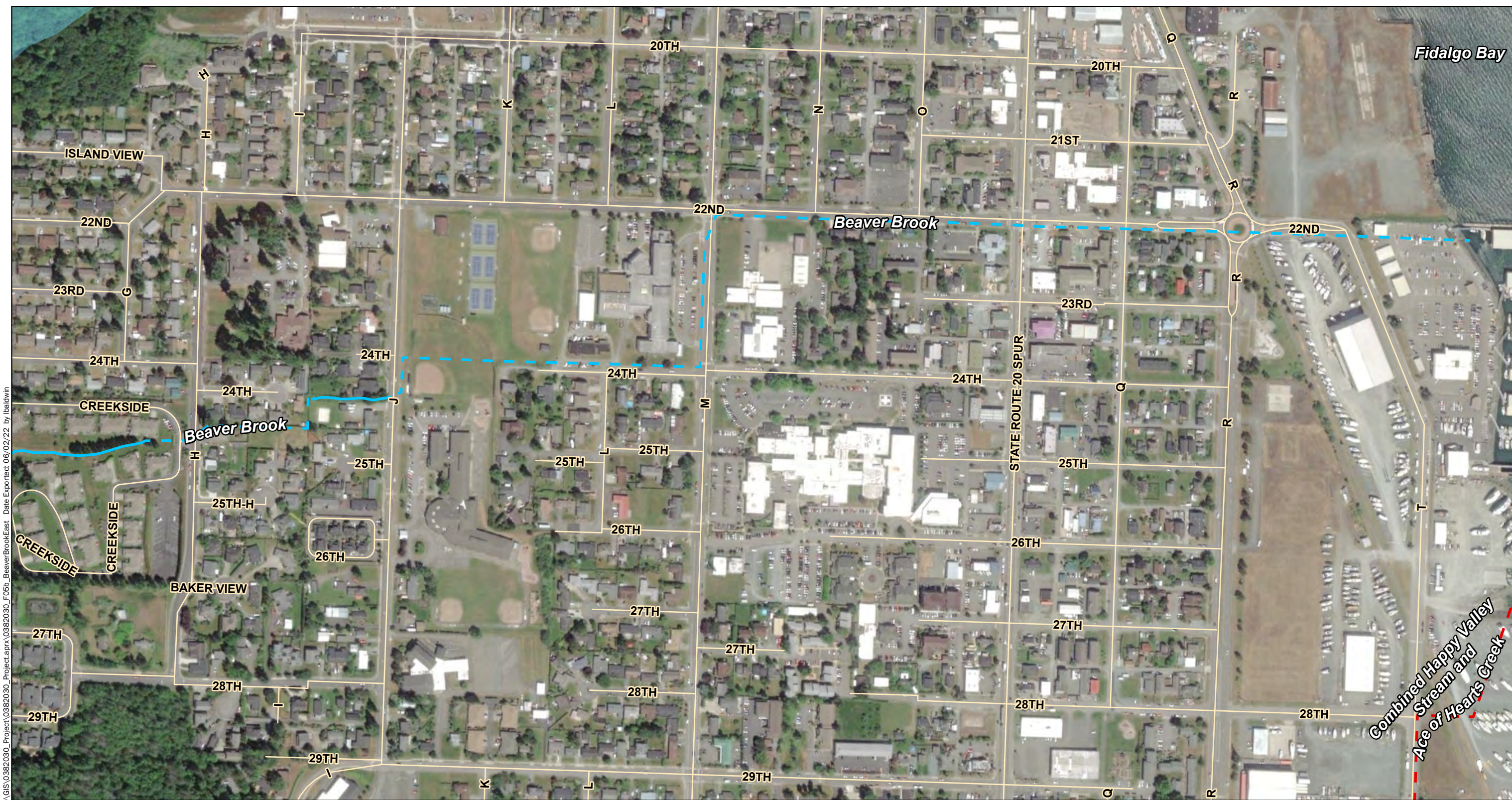


Beaver Brook West and Morrison Run

Stream BAS Report
Anacortes, Washington



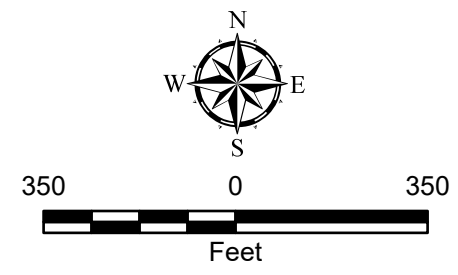
Figure 5a



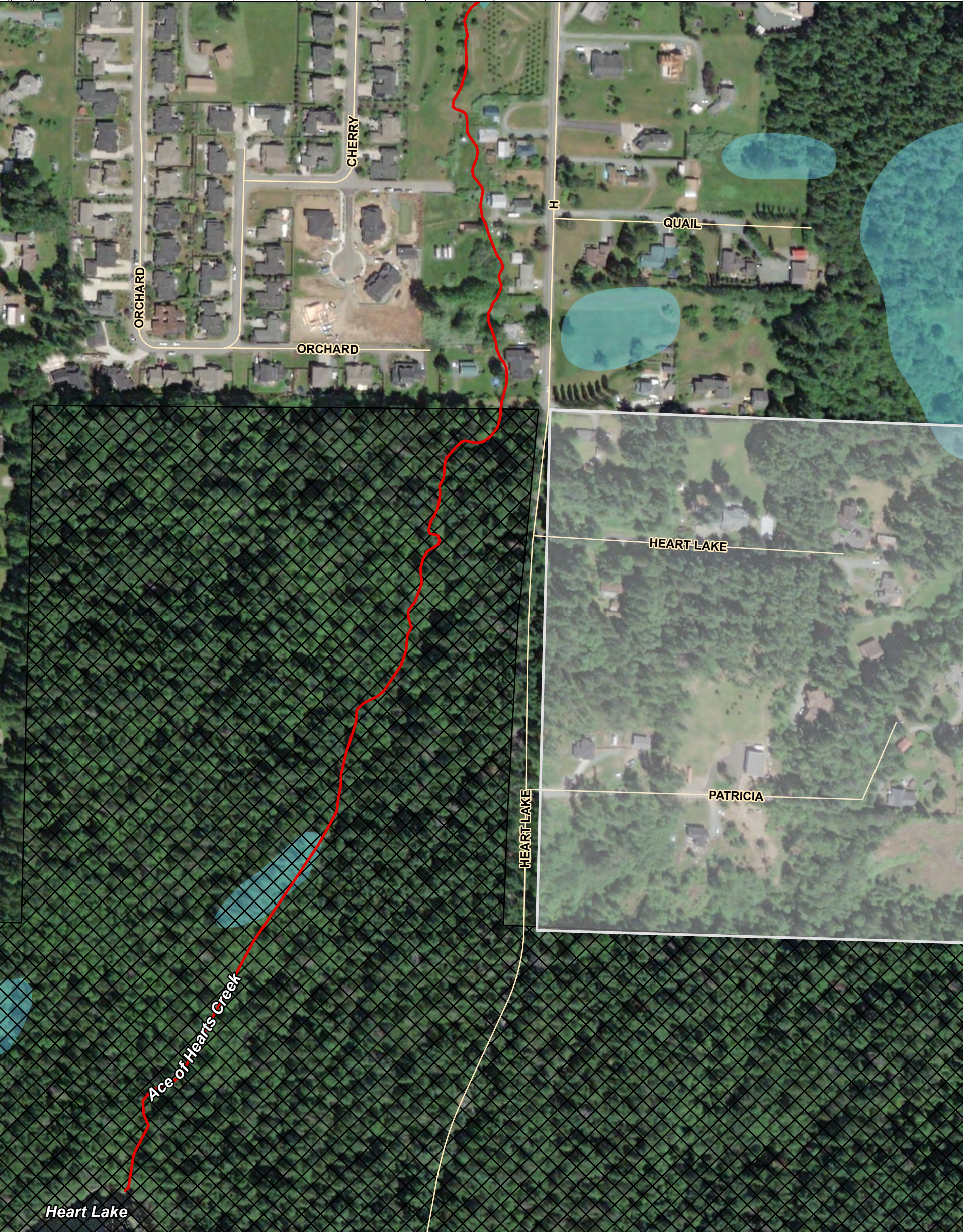
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- Legend**
- Road
 - DNR Stream Type
 - Unclassified
 - Fish-Bearing (Piped)
 - Unclassified (Piped)
 - Anacortes Mapped Wetlands

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

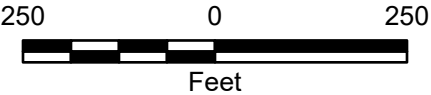


Beaver Brook East	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS	Figure 5b



Legend

- Road
- DNR Stream Type
- Fish-Bearing
- Anacortes Mapped Wetlands
- Anacortes Community Forest Land
- Anacortes City Limits
- Skagit County



Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

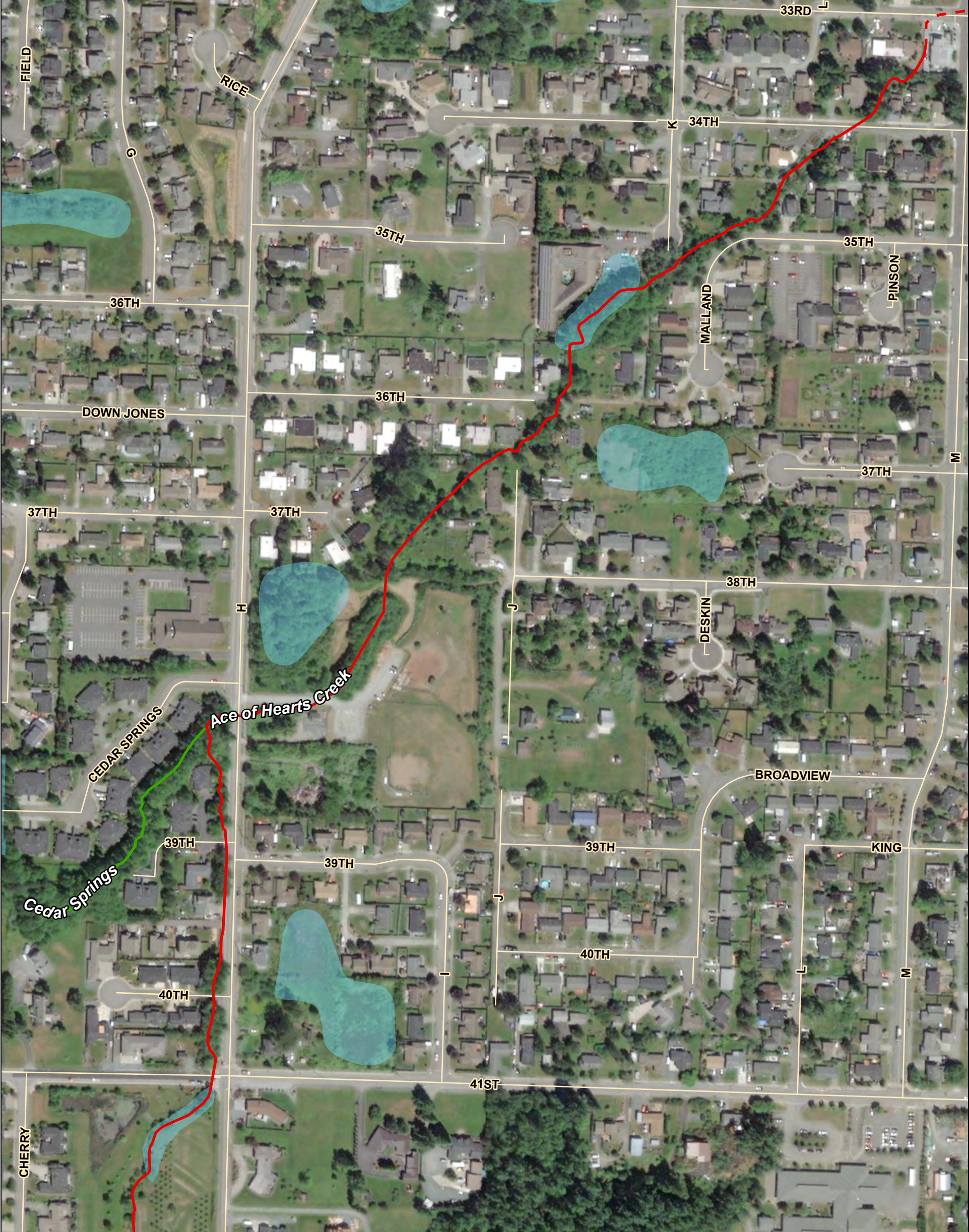
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Ace of Hearts West

Stream BAS Report
Anacortes, Washington



Figure 6a



Legend

Road

DNR Stream Type

Fish-Bearing

Non-Fish-Bearing

Fish-Bearing (Piped)

Anacortes Mapped Wetlands

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Ace of Hearts Middle and Cedar Springs

Stream BAS Report
Anacortes, Washington

GEOENGINEERS

Figure 6b

Page 135 of 161





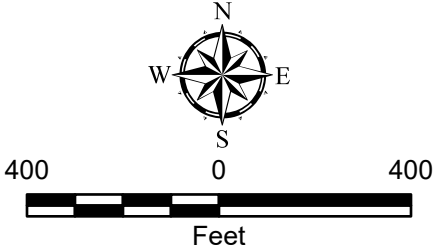
Legend

- Road
- Unclassified (Piped)
- Anacortes Mapped Wetlands
- Unclassified
- Anacortes City Limits
- Fish-Bearing (Piped)
- Skagit County

Notes:

- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Happy Valley Stream	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS	Figure 7



Legend

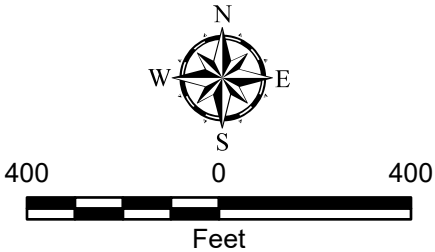
- Road
- Anacortes Community Forest Land
- DNR Stream Type
- Anacortes City Limits
- Non-Fish-Bearing
- Skagit County
- Unclassified

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Whistle Creek West	
Stream BAS Report Anacortes, Washington	
	Figure 8

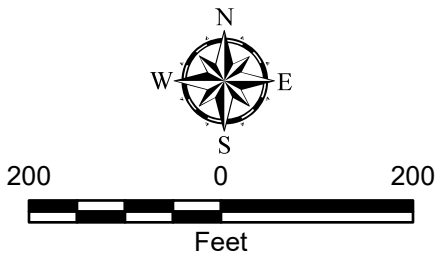


Legend

- | | |
|------------------------|---------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | Anacortes Mapped Wetlands |
| — Fish-Bearing | — Anacortes City Limits |
| — Unclassified | — Skagit County |
| — Fish-Bearing (Piped) | |

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream
Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Miller Creek, Weaverling Rill, and Whistle Creek East

Stream BAS Report
Anacortes, Washington



Figure 9



Legend

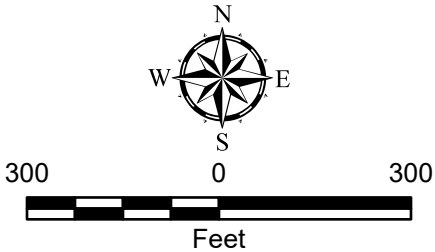
- | | |
|--------------------|-----------------------------------|
| — Road | ⊠ Anacortes Community Forest Land |
| DNR Stream Type | □ Anacortes City Limits |
| — Fish-Bearing | □ Skagit County |
| — Non-Fish-Bearing | |

Notes:

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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Heart Bourn and Streams 5 and 6

Stream BAS Report
Anacortes, Washington



Figure 10



Legend

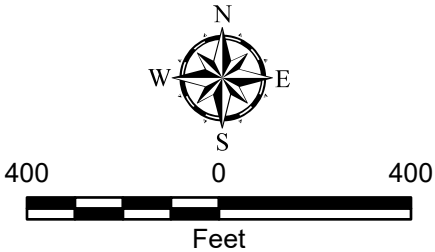
- | | |
|-----------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Unclassified | ■ Skagit County |

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream
4. Toot Creek and Stream 8 drain to Lake Campbell

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



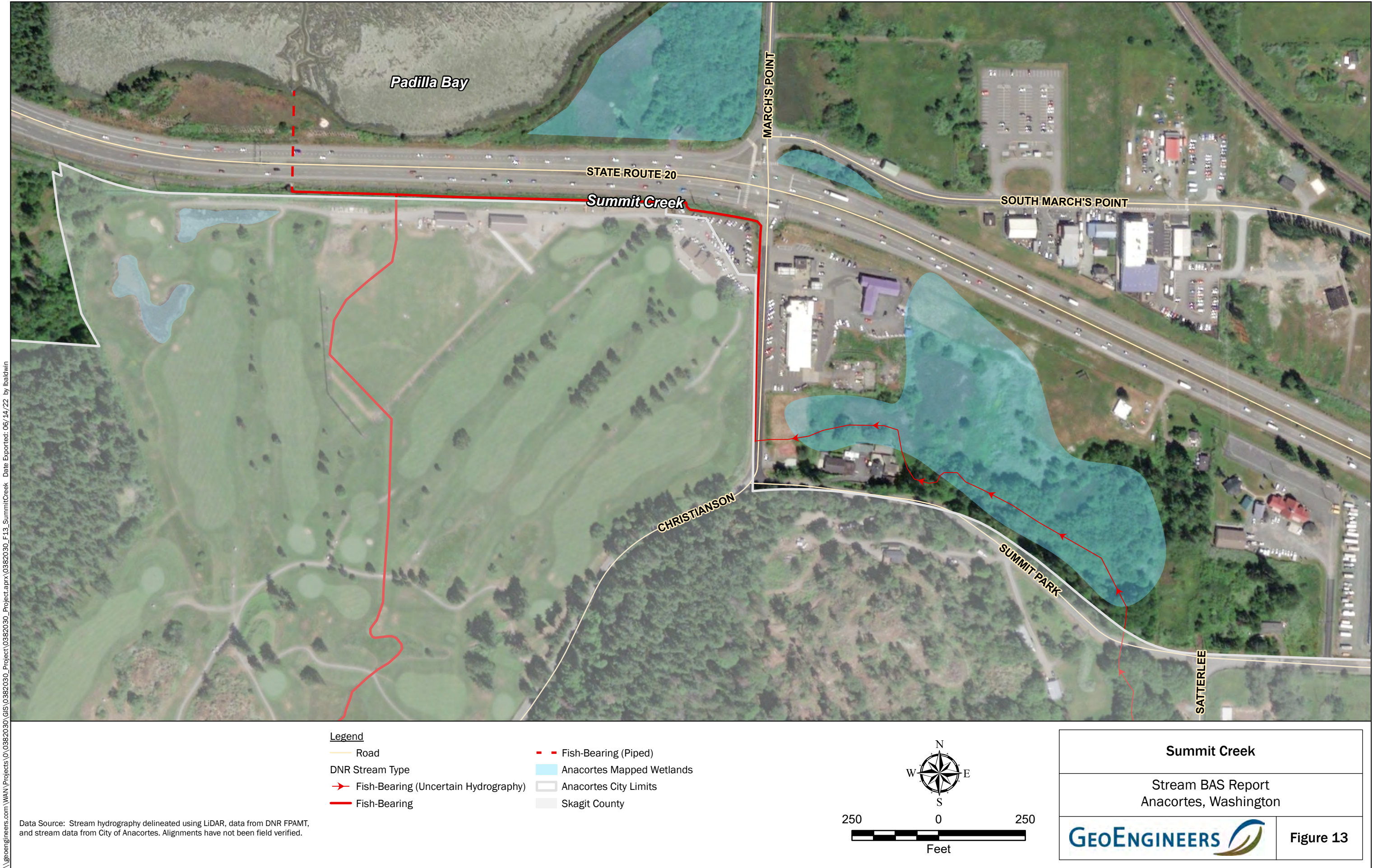
Toot Creek and Streams 7 and 8

Stream BAS Report
Anacortes, Washington



Figure 11

\\geoengineers.com\WAN\Projects\0382030\GIS\0382030_Project\0382030_F13_SummitCreek Date Exported: 06/14/22 by lbaldwin



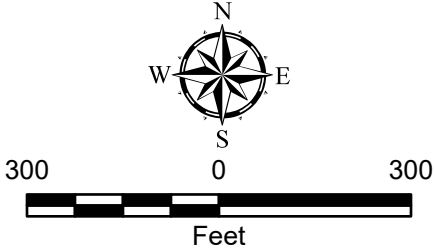


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Non-Fish-Bearing |
| FPAMT_Type | — Unclassified |
| — Unclassified (Piped) | — Anacortes Mapped Wetlands |
| DNR Stream Type | — Anacortes City Limits |
| — Fish-Bearing | — Skagit County |

Notes:

1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. Not all road and driveway culvert crossings are shown as piped stream
 4. Turners Creek drains southwest to Turners Bay
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



March's Run and Turners Creek

Stream BAS Report
Anacortes, Washington



Figure 14



Determination of Non-Significance (DNS)

Proposal: Ordinance 4025 amending Anacortes Municipal Code Chapter 19.70, Critical Areas, Article III, *Fish and Wildlife Habitat Conservation Areas* regarding stream buffers to comply with the Growth Management Hearings Board Final Decision and Order concerning Case No. 21-2-0002c and amending AMC Ch. 19.70, Article II *Wetlands* regarding buffer width averaging.

The draft amendments are available for review at:

<https://www.anacorteswa.gov/198/Anacortes-Municipal-Code-Updates>

Applicant /Proponent: City of Anacortes

Location of Proposal: City limits of the City of Anacortes

Lead Agency: City of Anacortes, Planning, Community, & Economic Development Department

The lead agency for this proposal has determined that it 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 of file with the lead agency. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments regarding this DNS must be submitted by July 15, 2022, at 5:00 PM.

Responsible Official: Don Measamer

Position and Title: Director of Planning, Community & Economic Development

Phone/Email: 360-299-1942; don@CityofAnacortes.org

Address: P.O. Box 547, Anacortes, WA 98221

Don Measamer, Director

Date of Issuance: July 1, 2022

Appeals of this environmental determination may be made per the procedures outlined in AMC 18.04 and Ch. 19.20 by July 20, 2022, at 5:00 PM. Additional information regarding the appeal process may be obtained from the City of Anacortes PCED Department, 360-299-1984.



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: [\[help\]](#)

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.

Use of checklist for nonproject proposals: [\[help\]](#)

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: [\[help\]](#)

Anacortes Riparian Corridors development regulation amendments

2. Name of applicant: [\[help\]](#)

Anacortes Planning, Community, and Economic Development Department.

3. Address and phone number of applicant and contact person: [\[help\]](#)

Don Measamer, Director, 360.299.1942, 904 6th St, Anacortes, WA 98221

4. Date checklist prepared: [\[help\]](#)

July 1, 2022

5. Agency requesting checklist: [\[help\]](#)

City of Anacortes Planning, Community & Economic Development Department

6. Proposed timing or schedule (including phasing, if applicable): [\[help\]](#)

**Planning Commission Public Hearing – 7/20/22
City Council Review and Adoption – August 2022**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [\[help\]](#)

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [\[help\]](#)

**Revised Stream Buffer Best Available Science Review and Buffer
Recommendations, June 29, 2022, GeoEngineers**

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. [\[help\]](#)

This is a non-project action that affects multiple parcels in the City of Anacortes.

10. List any government approvals or permits that will be needed for your proposal, if known. [\[help\]](#)

The City of Anacortes City Council must approve the changes to the development regulations.

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.) [\[help\]](#)

The proposal is to amend the Anacortes Municipal Code Chapter 19.70 Critical Areas regarding stream buffers to comply with the Growth Management Hearings Board Final Decision and Order concerning Case No. 21-2-0002c. Amendment to AMC Ch. 19.70, Article II Wetlands regarding buffer width averaging is also proposed.

The proposed amendments would establish riparian corridor and stream protection provisions based on Riparian Management Zones and WDFW Priority Habitats and Species Site Potential Tree Height. The provisions include definitions, development standards for land within riparian corridors, including for new development and for existing platted lots, and critical area report requirements. The amendments also would revise AMC 19.70.235(F)(5) to limit allowed wetland buffer width reduction in buffer width averaging proposals to no more than 75% of the standard wetland buffer width.

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. [\[help\]](#)

The update is a citywide non-project action.

B. ENVIRONMENTAL ELEMENTS [\[help\]](#)

1. Earth

a. General description of the site [\[help\]](#)

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

N/A, this is a non-project action. The City of Anacortes includes a variety of terrain, including flat, rolling, hilly, and steep slope areas.

b. What is the steepest slope on the site (approximate percent slope)? [\[help\]](#)

N/A, this is a non-project action.

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. [\[help\]](#)

Soils within the city include Bellingham silt loam, Bow gravelly loam, Bow-Urban land

complex, Catla gravelly fine sandy loam, Clallam gravelly loam, Coveland gravelly loam, Coveland-Bow complex, Dystric Xerochrepts, Fidalgo-Lithic Xerochrepts Rock outcrop complex, Guemes very stony loam, Guemes very gravelly loam, sandy substratum, Hydraquents, tidal, Keystone loamy sand, Laconner very gravelly loamy sand, Lithic Haploxerolls – Rock outcrop complex, Mukilteo muck, Norma silt loam, Pits, Swinomish gravelly loam, Swinomish-Fidalgo0Rock outcrop complex, Tacoma silt, Tacoma silt loam, Terric Medisaprists, Whistle-Fidalgo-Rock outcrop complex, and Xerorthents.

There are no known agricultural lands of long-term commercial significance; the proposal is a non-project action and will not result in removing any soils.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [\[help\]](#)

N/A, this is a non-project action. Geologically hazardous areas within the City include steep slopes, landslide and erosion hazards, and seismic hazards (liquefaction prone areas). These hazard areas are concentrated along the northern portion of Anacortes near Guemes Channel and Burrows Bay near in Washington Park. Liquefaction prone areas are located in areas of modified shorelines near Skyline and the eastern part of the city along Fidalgo Bay.

- 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. [\[help\]](#)

N/A, this is a non-project action, which does not include any filing, excavation, or grading. Under the SMP, clearing and grading activities within shoreline jurisdiction are permitted only as part of an allowed use or an ecological restoration or enhancement plan.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which does not include any clearing or construction. Erosion control would be addressed on a project level basis through the City's stormwater design requirements, the clearing and grading code, and other provisions of the SMP.

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

N/A, this is a non-project action.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [\[help\]](#)

N/A, this is a non-project action. When future site-specific projects are submitted, any erosion-related impacts created during clearing and construction activities will be mitigated in compliance with the Ecology 2019 Stormwater Management Manual for Western Washington. This requires any erosion-related impacts created during clearing and construction activities to be addressed according to a Temporary Erosion Sedimentation Control Plan (TESC), which is a standard part of engineering review and approval.

2. Air

- 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. [\[help\]](#)

N/A, this is a non-project action which would not result in emissions to the air.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which would not be affected by any sources of emissions or odors.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any: [\[help\]](#)

N/A, this is a non-project action and there would be no emissions or other impacts to the air, therefore, no measures are proposed.

3. Water

- 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. [\[help\]](#)

N/A, this is a non-project action. Anacortes is surrounded on three sides by marine shorelines including Guemes Channel, Burrows Bay, Fidalgo Bay, and a portion of Padilla Bay, with lakes including Little Cranberry, Heart, Whistle, and a portion of Lake Erie.

There are multiple streams located within city limits including Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March's Run.

- 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. [\[help\]](#)

N/A, this is a non-project action that will not result in any work within 200 feet of the above described waters.

- 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. [\[help\]](#)

N/A, this is a non-project action, which does not include filling or dredging surface water or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

N/A, this is a non-project action, which would not require surface water withdrawals or diversions.

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

[\[help\]](#)

N/A, this is a non-project action. The 100 year flood plain is mapped for the City of Anacortes on Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRM).

- 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. [\[help\]](#)

N/A, this is a non-project action, which would not discharge any waste materials to surface waters.

b. Ground Water:

- 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. [\[help\]](#)

N/A, this is a non-project action, which would not withdraw groundwater.

- 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. [\[help\]](#)

N/A, this is a non-project action, which would not discharge any waste material into the ground from septic tanks or other sources.

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. [\[help\]](#)

N/A, this is a non-project action, which will not result in runoff.

- 2) Could waste materials enter ground or surface waters? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which will not cause waste materials to enter ground or surface waters.

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

N/A, this is a non-project action, which would not alter or otherwise affect drainage patterns.

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

N/A, this is a non-project action. When site-specific projects are submitted, any water-related impacts created during clearing and construction activities will be mitigated in compliance with the Ecology 2019 Stormwater Management Manual for Western Washington.

4. Plants [\[help\]](#)

- a. Check the types of vegetation found on the site: [\[help\]](#)

☐ deciduous tree: alder, maple, aspen, other
☐ evergreen tree: fir, cedar, pine, other
☐ shrubs
☐ grass
☐ 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

N/A, this is a non-project action. However, a variety of vegetation can be found in Anacortes, including deciduous and evergreen trees, shrubs, grass, herbs, pasture, wet soil plants and water plants.

- b. What kind and amount of vegetation will be removed or altered? [\[help\]](#)

N/A, this is a non-project action. When a specific application is submitted, the kind and amount of vegetation to be removed or altered will depend on City requirements, which would be reflected in an approved landscape plan

- c. List threatened and endangered species known to be on or near the site. [\[help\]](#)

NA, this is a non-project action. Various species of rare plants, listed by the Washington Natural Heritage Program, may occur within the city.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [\[help\]](#)

N/A, this is a non-project action and no landscaping is proposed to be done.

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

NA, this is a non-project action.

5. Animals

- 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: [\[help\]](#)

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

N/A, this is a non-project action. A variety of birds, mammals, and fish are known to have habitat within the City.

- b. List any threatened and endangered species known to be on or near the site. [\[help\]](#)

N/A, this is a non-project action. Bull trout, Puget Sound Chinook, Puget Sound Steelhead, Southern Resident Killer Whale, Yelloweye Rockfish, Bocaccio Rockfish and Marbled Murrelet are known to occur along the marine shoreline.

- c. Is the site part of a migration route? If so, explain. [\[help\]](#)

Anacortes is located within the Pacific Flyway migration route utilized by waterfowl migrating north into Alaska and northern Canada.

- d. Proposed measures to preserve or enhance wildlife, if any: [\[help\]](#)

N/A, this is a non-project action.

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

N/A, this is a non-project action.

6. Energy and natural resources

- 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. [\[help\]](#)

N/A this is a non-project proposal that will not use any sources of energy.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [\[help\]](#)

N/A this is a non-project proposal that will not result in any solar energy impacts.

- 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: [\[help\]](#)

N/A this is a non-project proposal.

7. Environmental health

- 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. [\[help\]](#)

N/A this is a non-project proposal.

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

N/A this is a non-project proposal.

- 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.

N/A this is a non-project proposal.

- 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.

N/A this is a non-project proposal and there is no associated construction.

- 4) Describe special emergency services that might be required.

N/A this is a non-project proposal and no emergency services are required.

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

N/A, this is a non-project proposal and no measures are necessary to reduce or control environmental health hazards.

b. Noise

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

N/A, this is a non-project action, which would not be affected by any noise in the area.

- 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)? Indicate what hours noise would come from the site. [\[help\]](#)

N/A, this is a non-project action, which would not result in any noise.

- 3) Proposed measures to reduce or control noise impacts, if any: [\[help\]](#)

N/A, this is a non-project action and no measures are needed to reduce or control impacts.

8. Land and shoreline use

N/A, this is a non-project action. Answers provided below are intended to give a general description of conditions within the city.

- 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. [\[help\]](#)

Land uses include residential, recreational, industrial, multi-family, public institutional uses, and vacant land. The proposal is a non-project action and does not propose changes to current land uses.

- 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? [\[help\]](#)

N/A, this is a non-project action. There are no working farmlands or working forest lands in the City.

- c. 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:

N/A, this is a non-project action. There are no working farmlands or working forest lands in the shoreline jurisdiction area.

- d. Describe any structures on the site. [\[help\]](#)

N/A, this is a non-project action. Much of the city is modified and contains commercial, residential, industrial, and recreational structures.

- e. Will any structures be demolished? If so, what? [\[help\]](#)

N/A, this is a non-project action.

- f. What is the current zoning classification of the site? [\[help\]](#)

The City contains a variety of residential, mixed use, and industrial zone categories.

- g. What is the current comprehensive plan designation of the site? [\[help\]](#)

The City contains a variety of Comprehensive plan land use designations.

- h. If applicable, what is the current shoreline master program designation of the site? [\[help\]](#)

SMP Designations include Aquatic, Conservancy, Natural, Shoreline Residential, Urban

Maritime, and Urban.

- i. Has any part of the site been classified as a critical area by the city or county? If so, specify. [\[help\]](#)

N/A, this is a non-project action. There are sites throughout the city that have been designated as critical areas.

- j. Approximately how many people would reside or work in the completed project? [\[help\]](#)

N/A, this is a non-project action.

- k. Approximately how many people would the completed project displace? [\[help\]](#)

N/A, this is a non-project action that would not displace any people.

- l. Proposed measures to avoid or reduce displacement impacts, if any: [\[help\]](#)

N/A, this is a non-project action and no measures to avoid or reduce displacement impacts are necessary.

- L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [\[help\]](#)

N/A, this is a non-project action.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

N/A, this is a non-project action, and no measures are necessary to reduce or control impacts to agricultural and forest lands of long-term commercial significance

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [\[help\]](#)

N/A, this is a non-project action that will not result in any housing development.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [\[help\]](#)

N/A, this is a non-project action that will not eliminate any housing units.

- c. Proposed measures to reduce or control housing impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

10. Aesthetics

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

N/A, this is a non-project action.

- b. What views in the immediate vicinity would be altered or obstructed? [\[help\]](#)

N/A, this is a non-project action.

- c. Proposed measures to reduce or control aesthetic impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [\[help\]](#)

N/A, this is a non-project action.

- b. Could light or glare from the finished project be a safety hazard or interfere with views? [\[help\]](#)

N/A, this is a non-project action.

- c. What existing off-site sources of light or glare may affect your proposal? [\[help\]](#)

N/A, this is a non-project action.

- d. Proposed measures to reduce or control light and glare impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? [\[help\]](#)

This is a non-project action. The city contains many designated and informal recreational opportunities.

- b. Would the proposed project displace any existing recreational uses? If so, describe. [\[help\]](#)

This is a non-project action. As such, the project will not displace any existing recreational uses.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [\[help\]](#)

This is a non-project action. As such, no measures to reduce or control impacts on recreation

will be needed.

13. Historic and cultural preservation

- 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 located on or near the site? If so, specifically describe. [\[help\]](#)

N/A, this is a non-project action.

- 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. [\[help\]](#)

N/A, this is a non-project proposal. However, historically, Native American families including those of the Samish and Swinomish Tribes have made residence on Fidalgo Island. As such, there may be evidence, artifacts, or areas of cultural importance within the City.

- 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. [\[help\]](#)

N/A, this is a non-project action, which would not result in impacts to cultural and historic resources.

- 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.

This is a non-project action that will not result in impacts to cultural and historic resources.

14. Transportation

- 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. [\[help\]](#)

N/A this is a non-project action.

- 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? [\[help\]](#)

N/A this is a non-project action.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [\[help\]](#)

N/A, this is a non-project action, which would not add or eliminate any parking spaces.

- 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). [\[help\]](#)

N/A, this is a non-project action, therefore, there would be no need for any new or improved roads, streets, pedestrian, bicycle or state transportation facilities.

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

N/A, this is a non-project action. Various forms of water, rail, and air transportation occur throughout the city.

- 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? [\[help\]](#)

N/A, this is a non-project action, which would not generate any additional vehicular trips per day.

- 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.

N/A, this is a non-project action, and will not affect movement of agricultural or forest products.

- h. Proposed measures to reduce or control transportation impacts, if any: [\[help\]](#)

N/A, this is a non-project action and there is no need for any measures to reduce or control transportation impacts.

15. Public services

- 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. [\[help\]](#)

N/A, this is a non-project action, which would not result in the need for increased public services, such as fire protection, police protection, public transit, health care, and schools.

- b. Proposed measures to reduce or control direct impacts on public services, if any. [\[help\]](#)

N/A, this is a non-project action and there is no need to reduce or control impacts on public services.

16. Utilities

N/A this is a non-project action. None of the questions in this section apply.

- a. Circle utilities currently available at the site: [\[help\]](#)
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
other _____

N/A, this is a non-project action.

- 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. [\[help\]](#)

N/A, this is a non-project action.

C. SIGNATURE [\[HELP\]](#)

I certify (or declare) under penalty of perjury under laws of the State of Washington that 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 a decision.

Signature:  _____

Name of signee Libby Grage

Position and Agency/Organization Planning Manager, City of Anacortes

Date Submitted: July 1, 2022

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

The proposed amendments are not anticipated to increase any of the above.

Future development proposals that occur under the proposed amendments are not anticipated to result in increased discharge to water because they would continue to be subject to then-current stormwater management requirements, including water quality treatment and flow control. Development allowed under the proposed amendments on existing developed lots may result in a decrease of untreated and uncontrolled discharge to streams through requirements to improve on-site stormwater management and provide buffer enhancement, thereby potentially improving water quality.

Proposed measures to avoid or reduce such increases are:

None proposed.

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

The proposal is anticipated to increase protections for plants, animals, fish and marine life over existing through requirements that development proposals establish a riparian management zone within which alteration is prohibited, or limited in cases of existing development, with improved stormwater management and RMZ enhancement requirements.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

None proposed.

3. How would the proposal be likely to deplete energy or natural resources?

The proposal would result in no direct, indirect, or cumulative adverse impacts relating to depletion of energy or natural resources.

Proposed measures to protect or conserve energy and natural resources are:

None proposed.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The proposal is anticipated to increase protections for environmentally sensitive areas.

Proposed measures to protect such resources or to avoid or reduce impacts are:

None proposed.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The proposal will affect future land use by limiting development near streams and within riparian areas. Existing land uses within areas affected by this proposal would be allowed to continue and add limited new development under specific limited circumstances, while ensuring no net loss of functions and values of FWHCAs.

Proposed measures to avoid or reduce shoreline and land use impacts are:

None proposed.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The proposed amendments would not increase demand on transportation or public services and utilities.

Proposed measures to reduce or respond to such demand(s) are:

None proposed.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

This non-project proposal is intended to comply with the Growth Management Hearings Board Final Decision and Order concerning case No. 21-2-0002c with regard to stream buffers and has been developed in consultation with Washington Department of Fish and Wildlife. No conflicts with local, state, or federal laws or requirements are anticipated.
