



**CITY COUNCIL MEETING  
AGENDA**

**February 11, 2026  
7:00 PM  
Civic Center**

The Granite Falls City Council will hold its meeting in person. Comments in this meeting are encouraged and may be emailed to the city clerk in advance of the meeting or given in person.

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- 1. CALL TO ORDER**
- 2. FLAG SALUTE**
- 3. ROLL CALL**
- 4. NEW BUSINESS**
- 5. CURRENT BUSINESS**
  - 5.a. Critical Area Regulations Update - Granite Falls Municipal Code 19.07.020**
- 6. ADJOURNMENT**

The City of Granite Falls strives to provide access and services to all members of the public.



## CITY COUNCIL AGENDA BILL

**Subject:** 5.a.

**Originating Dept.:** Planning Department

**Action Recommended:**

**Approval(s):**

**Meeting Date:** February 11, 2026

**Date Submitted:**

**Exhibit(s):**

1. City Council Staff Report
2. Attachment A - GFMC 19.07.020  
Amendment Package
3. Attachment B - BAS
4. Attachment C - SEPA DNS

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**Budgeted Amount:**

**BARS Code:**

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**Summary Statement:**

The City of Granite Falls is in the process of amending GFMC 19.07.020, Critical Areas Regulations to comply with applicable state law and to reflect Best Available Science (BAS). A Best Available Science document has been prepared by Herrera, which is included as Attachment B.

A SEPA Determination of Nonsignificance was issued on February 4, 2026, with a 14-day public comment period which will end on February 18, 2026.

The proposed code amendments were sent to the Department of Commerce on January 30, 2026, with a request for expedited review. If the request for expedited review is denied, the 60-day review period will apply, which will end on March 31, 2026.

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**Background:**

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**Recommended Motion:**

# City Council Staff Report

**Subject:** Proposed Amendments to GFMC 19.07.020, Critical areas regulations

**Date of Staff Report:** February 3, 2026

**Date of Meeting:** February 11, 2026

**Consultant Contacts:** Anisa Thaci, AICP  
AHBL, Contract City Planner

Jeff Parsons, PHD, PE  
Herrera Environmental Consultants

## Summary

The City of Granite Falls is in the process of amending GFMC 19.07.020, Critical Areas Regulations to comply with applicable state law and to reflect Best Available Science (BAS). A Best Available Science document has been prepared by Herrera, which is included as Attachment B.

A SEPA Determination of Nonsignificance was issued on February 4, 2026, with a 14-day public comment period which will end on February 18, 2026 (Attachment C).

The proposed code amendments were sent to the Department of Commerce on January 30, 2026, with a request for expedited review. If the request for expedited review is denied, the 60-day review period will apply, which will end on March 31, 2026. A Planning Commission Study Session was held on February 10, 2026.

Below is a summary of proposed amendments, which are shown in their entirety in Attachment A.

## Suggested Amendments

- General edits
  - Proposed revisions throughout to include best available science references.
  - Proposed revisions throughout to ensure that the appropriate person is responsible for the approval or determination of compliance (such as requiring that adequate landslide hazard area buffers are determined by a licensed geotechnical engineer, rather than the city designated official).
- GFMC 19.07.020(A)(2) - Definitions
  - Proposed adding definitions for clarity and consistency with best available science, including:

- “Best available science”
    - “Channel migration hazard area”
    - “Fish habitat”
    - “Functions”
    - “Values”
  - Proposed revising existing definitions for clarity and consistency with best available science, including:
    - “Fish and wildlife habitat conservation areas”
    - “Geologic hazard areas”
- GFMC 19.07.020(D) – Reasonable Use Exception
  - Proposed language clarifying that reasonable use exceptions require a Type II review. The required permit type is not changing; however, the existing code section does not specify the permit type for a reasonable use exception (GFMC 19.07.020(D)(2)).
  - Proposed adding limits, such as not allowing for a reasonable use exception in the case that the inability to derive reasonable economic use is the result of the applicant’s actions or in the case that the city can demonstrate that the applicant had knowledge of existing conditions prior to the applicant’s acquisition of the subject property (GFMC 19.07.020(D)(5) and (6)).
- GFMC 19.07.020(I)(3) – Geologically Hazardous Areas
  - Proposed adding channel migration hazards as a designated geologically hazardous area (GFMC 19.07.020(I)(3)(a)(iv)).
  - Proposed language that exempts the construction of wood frame structures less than 5,000 square feet and all prefabricated structures less than 2,000 square feet located within seismic hazard areas from being required to provide a geotechnical report. However, these structures require a geotechnical report when located within a landslide hazard area (GFMC 19.07.020(I)(3)(c)(viii)).
- GFMC 19.07.020(I)(4) – Landslide Hazard Areas
  - Proposed language to clarify the minimum reduced buffer allowed for a landslide hazard area. The proposed minimum buffer is 10 feet, as compared to the existing code which did not specify a minimum buffer (GFMC 19.07.020(I)(4)(b)).
- GFMC 19.07.020(I)(6) – Seismic Hazard Areas
  - Proposed additional language to clarify requirements for seismic hazard areas, including specific content requirements for the geotechnical report.
- GFMC 19.07.020(I)(7) – Channel Migration Hazard Areas

- Proposed standards for channel migration hazard areas.
- GFMC 19.07.020(J)(2) – Wetlands
  - Proposed updated buffers for wetlands, based on Department of Ecology recommended buffer widths depending on whether minimization measures are utilized (GFMC 19.07.020(J)(2)(c)(i)).
  - Proposed additional minimization measures listed in Table 3.
  - Proposed revisions to mitigation ratio requirements, and added ratio requirements for rehabilitation and preservation in Table 4 (GFMC 19.07.020(J)(2)(e)(iii)).
  - Proposed a new subsection allowing for the use of wetland mitigation banks in certain circumstances for wetlands (GFMC 19.07.020(J)(2)(h)).
- GFMC 19.07.020(J)(5) – Fish and Wildlife Habitat Buffer Areas
  - Proposed revised stream buffer widths for fish and wildlife habitat areas to require that the site potential tree height is utilized, or 150 feet, whichever is less (GFMC 19.07.020(J)(5)(a)(i)).
- GFMC 19.07.020(J)(7) – Fish and Wildlife Mitigation Standards, Criteria and Plan Requirements
  - Proposed additional language for the requirements for mitigation for fish and wildlife habitat areas, including the preference for off-site mitigation within the same watershed (as opposed to on-site mitigation) when the results can achieve greater benefits or functions than on-site mitigation, or would restore or enhance functions that are limiting or important to the health of the watershed (GFMC 19.07.020(J)(7)(a)(ii)).
  - Proposed a new subsection to allow for mitigation banks in certain circumstances for fish and wildlife habitat areas (GFMC 19.07.020(J)(7)(b)).
- GFMC 19.07.020(10) – Aquifer Recharge Areas
  - Proposed new language stating that certain uses are prohibited within a sole source aquifer recharge area (GFMC 19.07.020(10)(b)).
  - Proposed a new subsection which clarifies when a Hydrogeologic Assessment is required (GFMC 19.07.020(10)(c)).
  - Proposed revisions to the requirements for the contents of a Hydrogeologic Assessment for clarity (GFMC 19.07.020(10)(d)).
- GFMC 19.07.020(11) – Flood Hazard Areas
  - Proposed additional language to reference GFMC 19.07.035, Flood damage prevention to ensure compliance with both sections.

## **Items for Discussion**

- Staff will be available to discuss any of the proposed code changes.

## **Attachments**

- A. Proposed Amendments to GFMC 19.07.020
- B. Best Available Science, prepared by Herrera, dated December 2025
- C. SEPA Determination of Nonsignificance issued February 4, 2026

# 19.07.020 Critical areas regulations.

## (A) General Provisions – Definitions.

(1) Purpose and Intent. The purpose of this critical areas section is to identify environmentally critical areas and to protect these areas without violating any citizen’s constitutional rights. Landslide, erosion, and seismic hazards, wetlands, aquifer recharge areas, critical habitats and flood hazard areas constitute critical areas that are of special concern to Granite Falls. The city finds that these critical areas perform a variety of valuable and beneficial biological and physical functions that benefit the city and its residents; certain critical areas may also pose a threat to human safety or to public and private property. By limiting development and alteration of these critical areas, this chapter seeks to:

- (a) Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to flooding, erosion, volcanic eruptions, landslides, seismic events, or steep slope failures;
- (b) Protect unique, fragile and valuable elements of the environment, including wildlife and its habitat;
- (c) Mitigate unavoidable impacts to environmentally critical areas by regulating alterations in and adjacent to critical areas;
- (d) Prevent cumulative adverse environmental impacts to water quality and wetlands;
- (e) Meet the requirements of the Washington Growth Management Act with regard to the protection of critical area lands;
- (f) Coordinate environmental review and permitting of proposals to avoid duplication and delay;
- (g) Assure that best available sciences are incorporated into the following regulations. In order to accomplish this, best available sciences were reviewed in the process of developing the critical areas regulations and used to establish its components.

## (2) Definitions.

“Alteration” means any human-induced activity that changes the existing condition of a critical area. Alterations include but are not limited to: grading; filling; dredging; draining; channelizing; clearing or removing vegetation; discharging pollutants; paving;

construction; demolition; or any other human activity that changes the existing landforms, vegetation, hydrology, wildlife, or wildlife habitat of a critical area.

"Anadromous fish" means species, such as salmon, which are born in fresh water, spend a large part of their lives in the sea, and return to fresh water rivers and streams to procreate.

"Applicant" means the person, party, firm, corporation, or other entity that proposes any activity that could affect a critical area.

"Aquifer" means a saturated geologic formation that will yield a sufficient quantity of water to serve as a private or public water supply.

"Aquifer recharge areas" means areas where the prevailing geologic conditions allow infiltration rates which create a high potential for contamination of ground water resources or contribute significantly to the replenishment of potable ground water. Aquifer recharge areas are classified as follows:

(a) "High significance aquifer recharge areas" means areas with slopes of less than 15 percent that are underlain by coarse alluvium or sand and gravel.

(b) "Moderate significance aquifer recharge areas" means:

(i) Areas with slopes of less than 15 percent that are underlain by fine alluvium, silt, clay, glacial till, or deposits from the Electron Mudflow; and

(ii) Areas with slopes of 15 percent to 30 percent that are underlain by sand and gravel.

(c) "Low significance aquifer recharge areas" means:

(i) Areas with slopes of 15 percent to 30 percent that are underlain by silt, clay, or glacial till; and

(ii) Areas with slopes greater than 30 percent.

"Base flood" means a flood having a one percent chance of being equaled or exceeded in any given year; also referred to as the "100-year flood."

"Best available science" means current scientific information derived from a valid scientific process as defined by WAC 365-195-900 through WAC 365-195-925 and applied to the process for designating, protecting, or restoring critical areas.

“Bog/fen” means a wetland with limited drainage generally characterized by extensive peat deposits and acidic waters with a pH of 5 or less for bogs and 5.5 or greater for fens. Vegetation includes sedges, sphagnum moss, shrubs and trees.

“Buffer” or “buffer area” means a naturally vegetated and undisturbed or revegetated zone surrounding a critical area that protects the critical area from adverse impacts to its integrity and value, or is an integral part of the resource’s ecosystem.

“Channel Migration Hazard Area, Moderate” means a portion of the channel migration zone, as shown on Snohomish County's channel migration zone maps, that lies between the severe channel migration hazard area and the outer boundaries of the channel migration zone.

“Channel Migration Hazard Area, Severe” means a portion of the channel migration zone, as shown on Snohomish County's channel migration zone maps, that include the present channel. The total width of the severe channel migration hazard area equals one hundred years times the average annual channel migration rate, plus the present channel width.

“Channel migration zone (CMZ)” means the lateral extent of likely movement along a stream or river during the next one hundred years as determined by evidence of active stream channel migration movement over the past one hundred years.

“City” means the city of Granite Falls.

“City clerk” means the city clerk of the city of Granite Falls.

“Clearing” means the removal of timber, brush, grass, ground cover, or other vegetative matter from a site that exposes the earth’s surface of the site or any actions that disturb the existing ground surface.

“Critical areas” includes wetlands, critical habitat areas, moderate and high erosion hazard areas, high seismic hazard areas, moderate and high landslide hazard areas, moderate and high volcanic hazard areas, aquifer recharge areas of moderate and high significance, and flood hazard areas.

“Critical geologic hazard areas” means lands or areas subject to high or severe risks of geologic hazard.

“Critical habitat” means those habitat areas which meet any of the following criteria:

- (a) The documented presence of species listed by the federal government or state of Washington as endangered or threatened;

(b) Those streams identified as “shorelines of the state” under the city of Granite Falls’ shoreline master program; and

(c) Those wetlands identified as Class I wetlands, as defined in this chapter.

“Development right” means any specific right to use real property which inures to an owner of real property through the common law, statutory law of real property, the United States and Washington Constitutions and as further defined and delineated herein.

“Epicenter” means the location on the surface of the earth directly above the place where an earthquake originates.

“Erosion” means a process whereby wind, rain, water, and other natural agents mobilize and transport soil particles.

“Erosion hazard areas” means those lands susceptible to the wearing away of their surface by water, wind or gravitational creep. Erosion hazard areas are classified as low, moderate or high risk based on slope inclination and soil types as identified by the U.S. Department of [Natural Resources Agriculture Soil Conservation Service Soil Survey \(SCSNRCS\)](#):

(a) “Low risk” means all sites classified with soil types designated by SCS as having no or slight erosion hazard.

(b) “Moderate risk” means all sites classified with soil types designated as moderate hazard.

(c) “High risk” means all sites classified with soil types designated as severe or very severe erosion hazard.

“Existing and ongoing agriculture” means those activities conducted on lands defined in RCW [84.34.020\(2\)](#), and those existing activities involved in the production of crops or livestock. Activities may include the operation and maintenance of farm and stock ponds or drainage ditches; operation and maintenance of existing ditches or irrigation systems; changes from one type of agricultural activity to another agricultural activity; and normal maintenance, repair, and operation of existing serviceable structures, facilities, or improved areas. Activities which bring a nonagricultural area into agricultural use are not part of an ongoing operation. An operation ceases to be ongoing when the area on which it is conducted is converted to a nonagricultural use or has lain idle for more than five years.

“Facultative wetland plants” means plants that occur usually (estimated probability greater than 67 percent to 99 percent) in wetlands, but also occur (estimated probability one percent to 33 percent) in nonwetlands.

“Fish and wildlife habitat conservation areas” means 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. ~~land managed to maintain 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. This does not mean maintaining all individuals of all species at all times, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term.~~ Fish and wildlife habitat conservation areas do 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.

“Fish habitat” or “habitat that supports fish life” means habitat, which is used by fish life at any life stage at any time of the year including potential habitat likely to be used by fish life, which could reasonably be recovered by restoration or management and includes off-channel habitat.

“Flood hazard areas” means those areas subject to inundation by the base flood. These areas consist of the following components, as determined by the city:

- (a) “Floodplain” means the total area subject to inundation by the base flood.
- (b) “Flood fringe” means that portion of the floodplain outside the floodway which is generally covered by flood waters during the base flood. It is generally associated with standing water rather than rapidly flowing water.
- (c) “Floodway” means the channel of the stream and that portion of the adjoining floodplain that is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.

“Forested wetland” means a regulated wetland with at least 30 percent of the surface area covered by woody vegetation greater than 20 feet in height and four inches dbh.

“Functions ” means the products, physical and biological conditions, and environmental qualities of an ecosystem that result from interactions among ecosystem processes and ecosystem structures. Ecosystem functions include, but are not limited to, sequestered

carbon, attenuated peak streamflows, aquifer water level, reduced pollutant concentrations in surface and ground waters, cool summer in-stream water temperatures, and fish and wildlife habitats.

“Geologic hazard areas” means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, as designated by (WAC 365-190-120(1)), are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns. ~~lands or areas characterized by geologic, hydrologic, and topographic conditions that render them susceptible to potentially significant or severe risk of landslides, erosion, or volcanic or seismic activity.~~

“Grading” means any excavating, filling, clearing, leveling, or contouring of the ground surface by human or mechanical means.

“Ground water” means all water found beneath the ground surface, including slow-moving subsurface water present in aquifers and recharge areas.

“Growing season” means the portion of the year when soil temperatures at 19.7 inches below the surface are higher than biological zero (five degrees Celsius), approximately March 15th to October 15th.

“Hazardous substance(s)” means any liquid, solid, gas or sludge, including any materials, substance, product, commodity or waste, regardless of quantity, that exhibits any of the characteristics of hazardous waste; and including waste oil and petroleum products.

“Hazardous substance processing or handling” means the use, storage, manufacture or other land use activity involving hazardous substances, but does not include individually packaged household consumer products or quantities of hazardous substances of less than five gallons in volume per container.

“Hazardous waste” means all dangerous waste and extremely hazardous waste as designated pursuant to Chapter [70.105](#) RCW and Chapter [173-303](#) WAC.

(a) “Dangerous waste” means any discarded, useless, unwanted, or abandoned substances including, but not limited to, certain pesticides, or any residues or containers of such substances which are disposed of in such quantity or concentration as to pose a substantial present or potential hazard to human health, wildlife, or the environment because such wastes or constituents or combinations of such wastes:

(i) Have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or

(ii) Are corrosive, explosive, flammable, or may generate pressure through decomposition or other means;

(b) "Extremely hazardous waste" means any waste which:

(i) Will persist in a hazardous form for several years or more at a disposal site and which in its persistent form presents a significant environmental hazard and may be concentrated by living organisms through a food chain or may affect the genetic makeup of humans or wildlife; and

(ii) Is disposed of at a disposal site in such quantities as would present an extreme hazard to humans or the environment.

"Hazardous waste treatment and storage facility" means a facility that treats and stores hazardous waste and is authorized pursuant to Chapter [70.105](#) RCW and Chapter [173-303](#) WAC. It includes all contiguous land and structures used for recycling, reusing, reclaiming, transferring, storing, treating, or disposing of hazardous waste.

"Hydric soils" means a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric soils occur in areas having positive indicators of hydrophilic action.

"Hydrophyte" means any plant growing in water or on a substrate that is at least periodically deficient in oxygen during some part of the growing season, from approximately March 15th to October 15th, as a result of excessive water content.

"Hydrophytic vegetation" means any plant growing in water or on a substrate that is at least periodically deficient in oxygen during some part of the growing season as a result of excessive water content. A site may be considered to have hydrophytic vegetation when more than 50 percent of the dominant plant species on the site are obligate or facultative wetland plants.

"Impervious surface" means any material that substantially reduces or prevents the infiltration of stormwater into previously undeveloped land. Impervious surfaces include, but are not limited to, roofs and streets, sidewalks and parking lots paved with asphalt, concrete, compacted rock, compacted sand, limerock or clay.

"Lahars" means mudflows and debris flows originating from the slopes of a volcano.

"Landslide" means episodic downslope movement of a mass of soil or rock.

"Landslide hazard areas" means areas that, due to a combination of slope inclination, relative soil permeability and hydrologic factors, are susceptible to varying risks of land

sliding. Landslide hazards are classified as Classes I through III based on the degree of risk as follows:

(a) Class I/high risk: Areas of greater than 30 percent slope with soils designated by SCS as moderate, severe or very severe erosion hazard.

(b) Class II/moderate risk: Areas of 15 percent to 30 percent slopes with soils designated by the SCS as moderate or severe erosion hazard.

(c) Class III/low risk: Areas with slopes less than 15 percent.

“Liquefaction” means a process by which a water-saturated granular (sandy) soil layer loses strength because of ground shaking commonly caused by an earthquake.

“Lot slope” means a measurement by which the average slope of the lot is calculated as a percentage. The lowest elevation of the lot is subtracted from the highest elevation, and the resulting number is divided by the horizontal distance between these two points. The resulting product is multiplied by 100.

“Magnitude” means a quantity characteristic of the total energy released by an earthquake. Commonly, earthquakes are recorded with magnitudes from zero to eight.

“Mitigation” means avoiding, minimizing, reducing, rectifying, eliminating, or compensating for adverse impacts.

“Native vegetation” means plant species that are indigenous and naturalized to the Granite Falls region and which can be expected to naturally occur on a site. Native vegetation does not include noxious weeds.

“Noxious weed” means any plant which, when established, is highly destructive, competitive, or difficult to control by cultural or chemical practices. The state noxious weed list in Chapter [16-750](#) WAC is the officially adopted list of noxious weeds by the State Noxious Weed Control Board.

“Obligate wetland plants” means plants that occur almost always (estimated probability greater than 99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated probability less than one percent) in nonwetlands.

“Qualified professional or consultant” means a person with experience, training and expertise that are appropriate for the relevant sensitive area subject in accordance with WAC [365-195-905](#)(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, soil science, engineering, environmental studies, fisheries, geology, geomorphology or a related field and related work experience and meet the following criteria:

(a) A qualified professional for wetlands must have a degree in biology, ecology, soil science, botany or a closely related field and a minimum of five years of professional experience in wetland identification and assessment in the Pacific Northwest.

(b) A qualified professional for geologically hazardous areas must be a professional engineering geologist or geotechnical engineer, licensed by the state of Washington.

(c) A qualified professional for fish and wildlife conservation areas must have a degree in wildlife biology, zoology, ecology, fisheries, or a closely related field and a minimum of two years of professional experience.

(d) A "qualified professional for sensitive aquifer recharge areas" means a Washington State licensed hydro-geomorphologist, geologist, engineer or other scientist with a minimum of two years of professional experience in preparing hydrogeologic assessments in Washington.

"Receiving parcel" means a parcel of land on which a development right is used.

"Recessional outwash geologic unit" means sand and gravel materials deposited by melt water streams from receding glaciers.

"Seismic hazard areas" means areas that, due to a combination of soil and ground water conditions, are subject to severe risk of ground shaking, subsidence, or liquefaction of soils during earthquakes. These areas are typically underlain by soft or loose saturated soils, have a shallow ground water table and are typically located on the floors of river valleys.

"Sending parcel" means a parcel of land from which a development right has been severed, in accordance with this chapter.

"Sever" means the removal or separation of some specified right or use from the "bundle of rights" possessed by an owner of real property. The term connotes a removal or separation in perpetuity as distinguished from a restriction or limitation which may be overridden, deleted or subject to a time limitation.

"Slope" means an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance.

"Streams". Streams shall be classified according to the stream type system as provided in WAC [222-16-030](#), Stream Classification System, as amended. Streams are called Type S, Type F, Type Np, and Type Ns.

“Temporary erosion control” means on-site and off-site control measures that are needed to control conveyance or deposition of earth, turbidity, or pollutants during development, construction, or restoration.

“Utility line” means pipe, conduit, cable or other similar facility by which services are conveyed to the public or individual recipients. Such services shall include, but are not limited to, water supply, electric power, gas, communications and sanitary sewers.

“Values” means the cultural, social, economic, and ecological benefits attributed to ecosystem functions.

“Wetlands” means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from 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 created to mitigate conversion of wetlands.

(B) Applicability.

(1) Prior to fulfilling the requirements of this title, Granite Falls shall not grant any approval or permission to alter the condition of any land, water or vegetation, or to construct or alter any structure or improvement including, but not limited to, the following:

- (a) Building permit.
- (b) Conditional use permit.
- (c) Shoreline substantial development permit.
- (d) Shoreline variance.
- (e) Short subdivision.
- (f) Subdivision.
- (g) Variance.

(h) Rezone.

(i) Any other adopted permit or required approval not expressly exempted by this chapter.

(2) Granite Falls shall perform a critical areas review for any Granite Falls permit approval requested for a proposal on a site which includes or is adjacent to one or more critical areas unless otherwise provided in this chapter. As part of all applications, Granite Falls shall verify the information submitted by the applicant to:

(a) Confirm the nature and type of the critical areas and evaluate any required critical areas study.

(b) Determine whether the development proposal is consistent with this chapter.

(c) Determine whether any proposed alterations to critical areas are necessary.

(d) Determine if the mitigation plans proposed by the applicant are sufficient to protect the public health, safety and welfare consistent with the goals, purposes, objectives and requirements of this chapter.

(C) Exemptions. The following activities shall be exempt from the provisions of this chapter:

(1) Agricultural Activities. Existing and ongoing agricultural activities, provided no alteration of flood storage capacity or conveyance occurs.

(2) Damaged Structures. Remodeling of structures in existence on the effective date hereof. When such structures are damaged by fire, explosion, or other unforeseen circumstances, they may be reconstructed or replaced within one year; provided, that the new construction or related activity does not further intrude into a critical area or established buffer and is subject to flood hazard areas reconstruction restrictions.

(3) Artificially Created Wetlands. Activities involving artificially created wetlands or streams intentionally created from nonwetland sites, including, but not limited to, grass-lined swales, irrigation and drainage ditches, detention facilities, and landscape features, except wetlands, streams, or swales that provide critical habitat for anadromous fish, and artificial wetlands created as part of a mitigation requirement, which do not qualify for exemption.

(4) Existing Roads. Maintenance, operation and reconstruction of existing roads, streets, utilities and associated structures.

(5) Emergency Activities. Emergency activities necessary to prevent an immediate threat to public health, safety, or property.

(D) Reasonable Use Exception.

(1) Allowing Exception. If the application of this chapter would deny all reasonable use of the property, development may be allowed which is consistent with the general purposes of this chapter and the public interest.

(2) Application for Exception. An application for a critical areas reasonable use exception shall be filed with the city clerk and shall be heard by reviewed by the designated official as a Type II Review ~~the hearing examiner~~. The ~~hearing examiner~~ designated official shall issue a final decision on an application for a reasonable use exception.

(3) Determination – Conditions. In order to approve a reasonable use exception, the hearing examiner must determine that:

(a) Application of this chapter would deny all reasonable use of the property; and

(b) There is no other reasonable use with less impact on the critical area; and

(c) The proposed development does not pose an unreasonable threat to the public health, safety or welfare on or off the development proposal site; and

(d) Any alterations permitted to these critical areas shall be the minimum necessary to allow for reasonable use of the property.

(4) Alterations. Any authorized alteration of a critical area under this section shall be subject to conditions established by the city of Granite Falls and shall require mitigation under an approved mitigation plan.

(5) The inability to derive reasonable economic use is not the result of the applicant's actions or that of a previous property owner, including, but not limited to, segregating or dividing the property in a manner that created an undevelopable condition, or exacerbating an existing condition to such a degree that reasonable economic use is no longer possible under the terms of this chapter.

(6) No reasonable use application shall be approved if the city can demonstrate, by a preponderance of the evidence, that the applicant had actual or constructive knowledge of existing conditions, at any time prior to the applicant's acquisition of the subject property, that would significantly lessen the applicant's distinct, investment-backed expectations in acquiring the subject property.

(E) Relationship to Other Regulations.

(1) These critical areas regulations shall apply as an overlay and in addition to zoning, land use and other regulations established by the city. In the event of any conflict between

these regulations and any other regulations of the city, the regulations that provide greater protection to environmentally critical areas shall apply.

(2) Areas characterized by particular critical areas may also be subject to other regulations established by this chapter due to overlap or multiple functions of some critical resources or critical areas. Wetlands, for example, may be defined and regulated according to the wetland and habitat provisions of this chapter. In the event of any conflict between regulations for any particular critical areas in this chapter, the regulations which provide greater protection to environmentally critical areas shall apply.

(F) Variances. Variances from the standards of this chapter may be authorized by the hearing examiner in accordance with the procedures set forth in GFMC [19.04C.055](#). In granting such a variance, hearing examiner shall find:

(1) Because of the special circumstances applicable to the subject property, including size, shape, topography, location or surroundings, or the size or nature of the critical area, the strict application of this title would deprive the property owner of reasonable use of their property;

(2) The granting of the variance is the minimum necessary to accommodate the development proposal and will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the property is situated, or contrary to the goals and purposes of this chapter.

(G) Other General Requirements.

(1) A record of notice shall be placed on the title of any property subject to these critical areas regulations in the development review process.

(2) A notice shall be provided to any adjacent property that may be impacted by critical areas buffers as required in this chapter.

(H) Critical Area Determinations.

(1) Special Studies Required.

(a) When an applicant submits an application for any alteration proposal, the application shall indicate whether any environmentally critical area or buffer is located on the site. The designated official shall visit the subject property and review the information submitted by the applicant along with any other available information. If the designated official determines that the site potentially includes, is adjacent to, or could have probable significant adverse impacts to critical areas, the designated official shall notify the applicant that a special study(ies) is required. Any decision to require a critical area study pursuant to this chapter may be appealed to

the hearing examiner upon filing a notice of appeal with the city clerk within 10 working days after the date of the designated official's decision.

(2) Waivers from Study Requirements. The designated official may waive the requirement for a special study if there is substantial proof showing that:

- (a) There will be no alteration of the critical areas or required buffer; and
- (b) The alteration proposal will not impact the critical areas in a manner contrary to the purpose, intent and requirements of this chapter; and
- (c) The minimum standards required by this chapter are met.

(3) Exceptions to Study Requirements. No special study is required for the following alteration proposals:

- (a) Alterations that are exempt from the provisions of this chapter as set forth in subsection (C) of this section; and
- (b) A residential building permit for a lot that was subject to a previous special study of critical areas; provided, that the previous special study adequately identified the impacts associated with the current alteration proposal.

(4) Contents of Special Study.

(a) Best available science shall be used in the special study and the Washington Department of Fish and Wildlife PHS database shall be consulted in the preparation of the study.

(b) Wetlands Special Study. Required wetland studies shall be conducted by a qualified wetlands biologist.

(i) A map, of a scale no smaller than one inch equals 200 feet, and five-foot contours of the surveyed wetland boundary as determined by following the methods described in the "Washington State Wetlands Identification and Delineation Manual" (Publication No. 96-94), March 1997, and as revised.

(ii) The site plan for the proposed activity at the same scale as the wetland map, showing the extent of the proposed activity in relationship to the surveyed wetland.

(iii) A written analysis of the existing wetland type/classification including existing vegetation, soils, and hydrology (source of water in the system, relative water quality, seasonality of presence of water, if applicable). The existing

wetland shall be classified according to subsection (I)(2) of this section. The written analysis must also classify wetlands according to the adopted Ecology's "Washington State [Wetland Rating System for Western Washington \(Ecology Publication #23-06-009\)](#) ~~[Wetland Rating System for Western Washington – 2014 Update](#)~~ (Ecology Publication No. 04-06-025), October 2014, and as revised. All date forms must be submitted for review.

(c) Landslide Hazard Special Study. Required landslide hazard studies shall be prepared by a professional engineer licensed by the state of Washington with expertise in geotechnical engineering.

(i) A contour map of the proposed site, at a scale no smaller than one inch equals 100 feet and five-foot contours. The site and the extent of the critical landslide hazard area as determined by the criteria in subsection (J)(3) of this section shall be clearly delineated.

(ii) A discussion of surface and subsurface geologic conditions of the site.

(iii) Review of site history regarding landslides.

(iv) A description of how the proposed development will or will not impact each of the following on the subject area and adjoining property:

- A. Slope stability;
- B. Drainage;
- C. Springs or seeps or any other surface water;
- D. Existing vegetation.

(v) Recommended surface water management controls during construction.

(d) Critical Erosion Hazard Area Special Studies. Required critical erosion hazard studies shall be prepared by a professional engineer licensed by the state of Washington.

(i) A map, of a scale no smaller than one inch equals 200 feet, of the site and the extent of the critical erosion hazard area as determined by the criteria in subsection (J)(4) of this section.

(ii) Review site history regarding erosion.

(iii) Identification of surface water management, erosion, and sediment controls appropriate to the site and proposal.

(e) Seismic Hazard Area Special Studies. Required critical seismic hazard studies shall be prepared by a professional engineer licensed by the state of Washington.

(i) A map, of a scale no smaller than one inch equals 200 feet, and five-foot contours, of the site and the extent of the seismic hazard area as determined by the criteria in subsection (J)(5) of this section.

(ii) Discussion of the potential impacts from the proposed development, and specific measures designed to mitigate any potential adverse impacts of the proposal.

(f) Critical Habitat Special Studies.

(i) Required critical habitat studies shall be prepared by a qualified biologist with expertise in wildlife habitats.

(ii) A map of a scale no smaller than one inch equals 200 feet of the site and the extent of the critical habitat area as determined by the criteria in subsection (J)(6) of this section.

(g) Aquifer Recharge Area Special Studies.

(i) Required critical aquifer recharge area studies shall be prepared by a geologist or individual with experience preparing hydrogeologic assessments.

(ii) A map of a scale no smaller than one inch equals 200 feet of the site and the extent of the high significance aquifer recharge area as determined by the criteria in subsection (J)(13) of this section.

(l) Critical Areas Classifications.

(1) Scope. To promote consistent application of the standards and requirements of this title, critical areas within the city shall be rated and classified according to their characteristics, function and value, and/or their sensitivity to disturbance.

(2) Wetlands Classification and Delineation. Wetlands shall be designated Category I, Category II, Category III and Category IV, according to Ecology's [Wetland Rating System for Western Washington \(Ecology Publication #23-06-009\)](#), [Washington State Wetland Rating System for Western Washington – 2014" \(Ecology Publication No. 04-06-025\), October 2014, and as revised](#). Identification of wetlands and delineation of their boundaries pursuant to this chapter shall be done by a qualified wetland professional in accordance

with the approved federal wetland delineation manual, the most current version of the "Washington State Wetland Rating System for Western Washington," and applicable regional supplements.

(3) Geologically Hazardous Areas.

(a) Designation. The following are considered geologically hazardous areas and shall not be altered except as otherwise provided by this chapter:

- (i) Slopes of 40 percent or greater;
- (ii) Landslide hazard areas;
- (iii) Seismic hazard areas;
- (iv) Erosion hazard areas when associated with other environmentally sensitive areas;
- (iv) Channel migration hazard
- ~~(v) Other areas which the city has reason to believe are geologically hazardous.~~

(b) Protective Requirements.

- (i) Development proposals on properties which are designated as or which the city has reason to believe are geologically hazardous areas shall have a standard buffer of 25 feet from the top, toe and sides of such areas, or as specified in subsections (1)(4) and (1)(7).
- (ii) The setback buffer requirement listed in subsection (1)(3)(b)(i) of this section may be increased by the city when necessary to protect public health, safety and welfare, based upon information contained in a geotechnical report or for other reasons related to the geologically hazardous conditions of the lot.
- (iii) The setback buffers required by this subsection shall be maintained in native vegetation to provide additional soil stability and erosion control. If the buffer area has been cleared, it shall be replanted with native vegetation.

(c) Permitted Alterations. Unless associated with another environmentally sensitive area, the designated official may allow alterations of an area identified as a geologically hazardous area or the standard buffers listed in subsection (1)(3)(b) of this section if he/she approves a geotechnical report which demonstrates that:

- (i) The proposed development will not create a hazard to the subject property, surrounding properties, or rights-of-way, erosion or sedimentation to off-site properties or bodies of water;
- (ii) The proposal addresses the existing geological constraints of the site, including an assessment of soils and hydrology;
- (iii) The proposed method of construction will reduce erosion potential, landslide and seismic hazard potential, and will improve or not adversely affect the stability of slopes;
- (iv) The proposal uses construction techniques which minimize disruption of existing topography and natural vegetation;
- (v) The proposal is consistent with the purposes and provisions of this chapter;
- (vi) The proposal mitigates all impacts identified in the geotechnical report; and
- (vii) All utilities and access roads or driveways to and within the site are located so as to require the minimum amount of modifications to slopes, vegetation or geologically hazardous areas.

(viii) The construction of wood frame structures less than 5,000 square feet and all prefabricated structures less than 2,000 square feet located within seismic hazard areas do not require a geotechnical report. These structures shall require a geotechnical report when located within a landslide hazard area.

(d) Additional Requirements. As part of any approval of development on or adjacent to geologically hazardous areas or within the standard buffers required by subsection (l)(3)(b) of this section, the city may require:

- (i) An environmentally critical area protective covenant or tract for the area approved for alteration or any geologically hazardous area not approved for alteration;
- (ii) The presence of the geotechnical consultant on the site to supervise during clearing, grading, filling and construction activities which may affect geologically hazardous areas, and provide the city with certification that the construction is in compliance with his/her recommendations and has met with his/her approval, and other relevant information concerning the geologically hazardous conditions of the site;
- (iii) Vegetation and other soil-stabilizing structures or materials be retained or provided.

(34) Landslide Hazard Areas. Development proposals on sites containing Class I and Class II landslide hazards shall meet the following requirements:

(a) Essential public facilities shall not be sited within a geologically hazardous area or its buffers.

(b) Buffer Requirement. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the city designated official a geotechnical engineer licensed by the state of Washington to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a landslide hazard special study. The buffer shall be equal to the height of the slope or 50 feet, whichever is greater. The buffer may be reduced to a minimum of 10 feet when a qualified professional demonstrates to the city designated official's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area. The buffer may be increased where the city designated official determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.

(c) Alterations. Alterations of a landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:

(i) The development will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions;

(ii) The development will not decrease slope stability on adjacent properties;  
and

(iii) Such alterations will not adversely impact other critical areas.

(d) Impervious Surface Ratio. An impervious surface ratio is a measurement of the amount of the site that is covered by any material that substantially reduces or prevents the infiltration of stormwater into previously undeveloped land. Impervious surfaces include, but are not limited to, roofs and streets, sidewalks and parking lots paved with asphalt, concrete, compacted sand, rock, compacted rock, limerock or clay. The maximum impervious surface ratios for Class I and Class II landslide hazard areas are set forth in Table 3 of this subsection.

(e) Native Vegetation. Native vegetation is plant species that are indigenous and naturalized to the Granite Falls region and which can be expected to naturally occur on a site. Native vegetation does not include noxious weeds. The minimum percentage of native vegetation that must be retained on sites including Class I or Class II landslide hazard areas is set forth in Table 4 of this section.

Table 4

**Impervious Surface and Native Vegetation Requirements for Landslide Hazard Areas**

<b>Landslide Hazard Class</b>	<b>Maximum Impervious Surface Ratio</b>	<b>Minimum Percentage of Native Vegetation Retained</b>
Class II	0.30	65%
Class I	0.20	75%

(f) Development Design.

- (i) Structures and improvements shall be clustered to retain as much open space as possible and to preserve the natural topographic features of the site.
- (ii) Structures and improvements shall conform to the natural contour of the slope.
- (iii) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation.
- (iv) The use of retaining walls which allow the maintenance of existing natural slope area is preferred over graded artificial slopes.

(g) Additional Standards for Class I Landslide Hazards.

- (i) Alteration of Class I landslide hazard areas is permitted only if the development proposal can be designed so that the landslide hazard to the project and the adjacent property is eliminated or mitigated and the development proposal on that site is certified as safe by a geotechnical engineer licensed in the state of Washington.
- (ii) Development or alteration shall be prohibited on parcels with a lot slope of greater than 40 percent.

(45) Erosion Hazard Areas. Alteration of a site containing a critical erosion hazard area shall meet the following requirements:

- (a) All alteration proposals shall submit an erosion control plan consistent with this section prior to receiving approval.
- (b) Clearing on erosion hazard areas is allowed from April 1st to November 1st only.

(c) Only that clearing necessary to install temporary sedimentation and erosion control measures shall occur prior to clearing for roadways or utilities.

(d) Clearing limits for roads, water, wastewater, and stormwater utilities, and temporary erosion control facilities shall be marked in the field and approved by designated official prior to any alteration of existing native vegetation.

(e) The authorized clearing for roads and utilities shall be the minimum necessary to accomplish project-specific engineering designs and shall remain within approved rights-of-way.

(f) All trees and understory shall be retained on lots or parcels; provided, that understory damaged during approved clearing operations may be pruned or replaced.

~~(5) Seismic Hazard Areas. Development proposals on sites containing mapped seismic hazard areas may make alterations to a seismic hazard area only when the applicant demonstrates and the designated official concludes that:~~

~~(a) Evaluation of site-specific subsurface conditions shows that the site is not located in a seismic hazard area; or~~

~~(b) Mitigation is implemented which renders the proposed development as safe as if it were not located in a seismic hazard area, as certified by a geotechnical engineer licensed by the state of Washington.~~

(6) Seismic Hazard Areas.

(a) For all nonexempt activities, except the construction of wood frame structures less than 5,000 square feet and all prefabricated structures less than 2,000 square feet, proposed within seismic hazard areas, a geotechnical report prepared by a professional engineer, geologist, or engineering geologist licensed by the state of Washington with expertise in geotechnical engineering shall be submitted.

(b) The geotechnical report shall address the existing geologic, topographic and hydrologic conditions on a site, including an evaluation of the ability of the soil and structure to withstand the anticipated earthquake ground shaking and subsequent effects.

(c) The geotechnical report shall include a discussion of the mitigation measures which can be taken to reduce seismic risks associated with the underlying surficial geology.

(d) The geotechnical report shall include an evaluation of the effectiveness of the proposed mitigation measures as certified by a geotechnical engineer licensed by the state of Washington.

(e) The development proposal may be approved, approved with conditions, or denied based on the City's evaluation of the ability of the proposed mitigation measures to reduce seismic risks associated with the underlying surficial geology.

(f) The development may be approved subject to additional review of the architectural and structural drawings by the building official for conformance with the geotechnical report and recommendations.

(g) Should an applicant question the presence of seismic hazard areas on-site, the applicant may submit a geotechnical assessment sufficient to demonstrate to the building official's satisfaction, that the site is not located in a seismic hazard area. If the building official determines that the site is not in a seismic hazard area, the provisions of this section may be waived.

(7) Channel Migration Hazard Areas. Activities on sites containing channel migration hazard areas shall meet the following requirements:

(a) Sites within the 100-year floodplain of the North Fork Stillaguamish River or the Pilchuck River, shall have a minimum 50-foot buffer from the channel migration zone. The floodways for the North Fork Stillaguamish River and the Pilchuck River are as mapped by FEMA on map 53061C0755F, dated June 19, 2020 shall be used as a surrogate for the channel migration zone. If the floodway is mapped differently in the future by FEMA, the map with the largest area mapped as floodway shall be used as a surrogate for the channel migration zone.

(b) For sites located within the 100-year floodplain of the North Fork Stillaguamish River or the Pilchuck River, applicants shall identify the channel migration zone on the site plan, as delineated by a licensed engineer or qualified professional with geomorphology or related training.

(48) Fish and Wildlife Habitat Classification. Fish and wildlife habitat areas shall be classified as critical or secondary according to the criteria in this section. Critical habitats are those habitat areas which meet any of the following criteria:

(a) The documented presence of species listed by the federal government, state of Washington and the Washington State Department of Fish and Wildlife priority species and habitats (PHS) database as endangered, threatened, sensitive or critical.

(b) Those streams identified as "shorelines of the state" under the city's shoreline master program.

(c) Those wetlands identified as Category I wetlands, as defined in this chapter.

(59) Aquifer Recharge Classification. Aquifer recharge areas are classified as high, moderate, or low significance aquifer recharge areas according to the following criteria:

(a) High Significance Aquifer Recharge Areas. High significance aquifer recharge areas are areas with slopes of less than 15 percent that are underlain by coarse alluvium or sand and gravel.

(b) Moderate Significance Aquifer Recharge Areas. Moderate significance aquifer recharge areas are:

(i) Areas with slopes of less than 15 percent that are underlain by fine alluvium, silt, clay, glacial till, or deposits from the Electron Mudflow; and

(ii) Areas with slopes of 15 percent to 30 percent that are underlain by sand and gravel.

(c) Low Significance Aquifer Recharge Areas. Low significance aquifer recharge areas are:

(i) Areas with slopes of 15 percent to 30 percent that are underlain by silt, clay, or glacial till; and

(ii) Areas with slopes greater than 30 percent. Low significance aquifer recharge areas are not designated critical areas and are exempt from critical areas review requirements.

(610) Flood Hazard Classification. Flood hazard areas consist of the following components, as determined by the city:

(a) Floodplain. The total area subject to inundation by the base flood.

(b) Flood Fringe. That portion of the floodplain outside the floodway which is generally covered by flood waters during the base flood. It is generally associated with standing water rather than rapidly flowing water.

(c) Floodway. The channel of the stream and that portion of the adjoining floodplain that is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.

(j) Performance Standards for Critical Areas.

(1) General Requirements. All boundaries of critical areas established by the requirements of this chapter shall be clearly marked prior to any construction activities. All wetland and habitat buffers shall be permanently signed prior to final approval.

(2) Wetlands.

(a) Allowed Activities within Wetlands. The following uses shall be allowed within a wetland, provided they are conducted using best management practices:

- (i) Outdoor recreational activities, including fishing, bird watching, hiking, swimming, and canoeing.
- (ii) The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops.
- (iii) Existing and ongoing agricultural activities, as defined in this chapter.
- (iv) The maintenance of drainage ditches.
- (v) Nature Trails. Trails in wetlands or buffers should be limited to permeable surfaces no more than five feet in width for pedestrian use only. Trails should be located only in the outer 25 percent of a wetland buffer, and should be located to avoid removal of significant trees (over 18 inches diameter).
- (vi) Utility lines.

(b) Allowed Activities within Wetland Buffers. In addition to those activities allowed in subsection (1)(2)(a) of this section, the following activities are allowed within wetland buffers; provided, that buffer impacts are minimized and that disturbed areas are immediately restored:

- (i) Normal maintenance and repair of existing serviceable structures or improved areas. Maintenance and repair does not include modifications that change the character, scope or size of the original structure or improved area.
- (ii) Vegetation-lined swales or other vegetated low impact facilities designed for stormwater management; provided, that they are placed within the outer 25 percent of the buffer of Category III wetlands only.

(c) Required Buffers.

- (i) Buffer Requirements. The standard buffer widths in Table 1 shall be required for wetlands based on the wetland category, the level of impacts from adjacent land uses, and the functions or special characteristics of the wetland class of

wetland as outlined in subsection (j)(2) of this section. The city may allow buffer averaging as set forth in subsection (j)(2)(c)(iv) of this section. The standard buffers in Table 1 below are required when the minimization measures listed in Table 3 are not implemented.

**Table 1**

**Wetland Buffer Width Requirements Without Minimization Measures**

Wetland Category	Habitat score 3-5 (corridor not required)	Habitat score 6-7 points	Habitat score 8-9 points	Required Buffer Width based on special characteristics
Category I or II: Based on rating of wetland functions (and not listed below) <u>Category I</u>	100	150	300	<u>N/A</u> 150 feet
Category I: Bogs and Wetlands of High Conservation Value <u>Category II</u>	N/A	N/A	300	250 75 feet
Category I: Forested <u>Category III</u>	100	150	300	<u>N/A</u> 60 feet
Category III: All types <u>Category IV</u>	80	150	300	<u>N/A</u> 40 feet
<u>Category IV</u>	50	50	50	<u>N/A</u>

(ii) Buffer Requirements. The buffer widths in Table 2 shall be required for wetlands based on the wetland category, the level of impacts from adjacent land uses, and the functions or special characteristics of the wetland. The city may allow buffer averaging as set forth in subsection (j)(2)(c)(iv) of this section. The standard buffers in Table 2 below are required when a habitat corridor and the minimization measures listed in Table 3 are implemented.

**Table 2**

**Wetland Buffer Width Requirements With Minimization Measures**

<b>Wetland Category</b>	<b>Habitat score 3-5 points (corridor not required)</b>	<b>Habitat score 6-7 points</b>	<b>Habitat score 8-9 points</b>	<b>Required Buffer Width based on special characteristics</b>
<u>Category I or II: Based on rating of wetland functions (and not listed below)</u>	<u>75</u>	<u>110</u>	<u>225</u>	<u>N/A</u>
<u>Category I: Bogs and Wetlands of High Conservation Value</u>	<u>N/A</u>	<u>N/A</u>	<u>225</u>	<u>190</u>
<u>Category I: Forested</u>	<u>75</u>	<u>110</u>	<u>225</u>	<u>N/A</u>
<u>Category III: All types</u>	<u>60</u>	<u>110</u>	<u>225</u>	<u>N/A</u>
<u>Category IV: All types</u>	<u>40</u>	<u>40</u>	<u>40</u>	<u>N/A</u>

(#iii) Removal of Vegetation within the Buffer. Removal or alteration of existing vegetation in the buffer areas shall be prohibited except as provided for in subsections (J)(2)(a) and (J)(8) of this section. Any disturbance of the buffer area shall be replanted with a diverse plant community of native vegetation appropriate for the site and approved by the designated official.

(#iv) Increased Wetland Buffer Area Width. Buffer widths shall be increased on a case-by-case basis as determined by the designated official when a larger buffer is necessary to protect wetland functions and values. This determination shall be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the wetland. The documentation must include but not be limited to the following criteria:

A. 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 essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or

B. The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or

C. The adjacent land has minimal vegetative cover or slopes greater than 30 percent.

**Table 23**

**Required Measures to Minimize Impacts to Wetlands**

(Measures are required, where applicable to a specific proposal.)

<b>Type of Disturbance</b>	<b>Required Measures to Minimize Impact</b>
Lights	<ul style="list-style-type: none"> <li>• <u>Direct lights down and away from the wetland.</u></li> <li>• <u>Only use lighting where necessary for public safety and keep lights off when not needed.</u></li> <li>• <u>Use motion-activated lights.</u></li> <li>• <u>Use full cut-off filters to cover light bulbs and direct light only where needed.</u></li> <li>• <u>Limit use of blue-white colored lights in favor of red-amber hues.</u></li> <li>• <u>Use lower-intensity LED lighting.</u></li> <li>• <u>Dim light to the lowest acceptable intensity.</u></li> </ul>
Noise	<ul style="list-style-type: none"> <li>• <u>Orient noise-generating activities away from wetland edge.</u></li> <li>• <u>Plant a strip of dense shrub vegetation adjacent to wetland buffer.</u></li> </ul>
Toxic runoff	<ul style="list-style-type: none"> <li>• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered.</li> </ul>

Type of Disturbance	Required Measures to Minimize Impact
	<ul style="list-style-type: none"> <li>Establish covenants limiting use of pesticides and herbicides within 150 feet of wetland buffer.</li> <li><u>Apply integrated pest management.</u></li> </ul>
Stormwater runoff	<ul style="list-style-type: none"> <li>Retrofit stormwater detention and treatment for roads and existing adjacent development.</li> <li>Prevent channelized flow from lawns that directly enters the buffer.</li> <li><u>Infiltrate or treat, detain, and disperse new runoff from impervious surfaces and lawns.</u></li> </ul>
Change in water regime	<ul style="list-style-type: none"> <li><u>Apply appropriate stormwater management to infiltrate, treat, detain, and disperse runoff appropriately and only into outer edge of buffer, if allowed.</u></li> </ul>
Pets and human activity	<ul style="list-style-type: none"> <li>Use <u>privacy split rail</u> fencing or plant dense native vegetation to delineate buffer edge and to discourage entry into buffer by humans and pets.</li> <li>Place wetland and buffer in a NGPA or tract.</li> <li><u>Signs shall be posted along the buffer boundary at a minimum</u></li> </ul>

Type of Disturbance	Required Measures to Minimize Impact
	<p><u>rate of one every 100 lineal feet or one per lot, whichever is closer.</u></p> <ul style="list-style-type: none"> <li>• <u>When platting new subdivisions, locate greenbelts, stormwater facilities, and other lower-intensity uses adjacent to wetland buffers.</u></li> </ul>
Dust	<ul style="list-style-type: none"> <li>• <u>Use best management practices to control dust.</u></li> </ul>
Disruption of corridors or connections	<ul style="list-style-type: none"> <li>• <u>Maintain connections to off-site areas that are undisturbed.</u></li> <li>• <u>Restore corridors or connections to off-site habitats by replanting.</u></li> </ul>

(iv) Buffer Averaging. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

A. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower-rated area.

B. The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.

C. The total area of the buffer after averaging is equal to the area required without averaging.

D. The buffer at its narrowest point is never less than either 75 percent of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

(vi) Measurement of Wetland Buffers. All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the target category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Existing lawns, walkways, driveways, and other mowed or paved areas will not be considered to be buffers or included in buffer area calculations.

(d) Wetland Mitigation and Restoration.

(i) Mitigation. All adverse impacts to wetlands shall be mitigated to the extent feasible and reasonable. Mitigation actions by an applicant or property owner shall occur in the following preferred sequence:

- A. Avoiding the impact altogether by not taking certain actions or parts of actions;
- B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- E. Compensating for the impact by replacing or providing substitute resources or environments; and/or
- F. Monitoring the impact and taking appropriate corrective measures.

(e) Monitoring Program and Contingency Plan. A monitoring program shall be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met.

(i) A contingency plan shall be established for indemnity in the event that the mitigation project is inadequate or fails. In addition to the bonding requirements in the development guidelines for public works standards, the applicant shall submit a performance and maintenance bond or other acceptable security device for financial guarantee(s). These devices are required to ensure the applicant's compliance with terms of the mitigation agreement. The amount of the performance and maintenance bond shall equal 150 percent

of the cost of the mitigation project for a minimum of five years. The bond may be reduced in proportion to work successfully completed over the period of the bond if performance standards are meeting or exceeding goals. The bonding period shall coincide with the monitoring period.

(ii) Monitoring programs prepared to comply with this section shall reflect the following guidelines:

A. Scientific procedures shall be used to establish the success or failure of the project.

B. For vegetation determinations, permanent sampling points shall be established.

C. Vegetative success shall, at a minimum, equal 80 percent survival of planted trees and shrubs and 80 percent cover of desirable understory or emergent plant species at the end of the required monitoring period or the performance standards set forth in the mitigation plan. Additional standards for vegetative success, including, but not limited to, minimum survival standards following the first growing season, may be required after consideration of a report prepared by a qualified consultant.

D. For hydrology determinations, permanent sampling points or wells shall be established.

E. Hydrology success shall, at a minimum, show 14 consecutive days of saturation to the surface during the growing season or the performance standard set forth in the mitigation plan.

F. Monitoring reports on the current status of the mitigation project shall be submitted to the city.

G. The reports are to be prepared by a qualified consultant and reviewed by the city or a consultant 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, and shall be produced on the following schedule: at the time of construction; 30 days after planting; early in the growing season of the first year; at the end of the growing season of the first year; twice during the second year; and annually thereafter.

H. Monitoring programs shall be established for a minimum of five years.

I. If necessary, failures in the mitigation project shall be corrected.

J. Dead or undesirable vegetation shall be replaced with appropriate plantings.

K. Damage caused by erosion, settling, or other geomorphological processes shall be repaired.

L. The mitigation project shall be redesigned (if necessary) and the new design shall be implemented and monitored.

(iii) Mitigation Ratios.

A. Equivalent Areas. Where wetland alterations are permitted by the city, the applicant shall create or enhance wetland areas to compensate for wetland losses. Equivalent areas shall be determined according to acreage, function, type, location, timing factors and projected success of restoration or creation.

B. Acreage Replacement Ratio. When creating or enhancing wetlands, the following acreage replacement ratios shall be used where the first number specifies the acreage of replacement wetlands and the second number specifies the acreage of wetlands altered:

Table 3-4

Acreage Replacement Ratio

Wetland Type	Wetland Creation Replacement Ratio (Area)	Rehabilitation	Preservation	Wetland Enhancement Ratio (Area)
Category I	6:1	12:1	24:1	24:1 15:1
Category II	3:1	6:1	12:1	12:1 10:1
Category III	2:1	4:1	8:1	8:1 6:1
Category IV	1.5:1 1.5:1	3:1	6:1	6:1 4:1

Note: Ratios for creation, rehabilitation, preservation, and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1a, Wetland Mitigation in Washington State - Part 1: Agency Policies and Guidance - Version 2, (Ecology Publication #21-06-003, Olympia, WA, April 2021 or as revised).

(f) Increased Replacement Ratios. The designated official may increase the ratios under the following circumstances:

(i) Uncertainty exists as to the probable success of the proposed restoration or creation;

(ii) A significant period of time will elapse between impact and replication of wetland functions;

(iii) Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted;

(iv) The impact was an unauthorized impact; or

(v) Where mitigation is to occur off site.

(g) Restoration. Restoration is required when a wetland or its buffer has been altered in violation of this title. The following minimum performance standards shall be met for the restoration of a wetland; provided, that if it can be demonstrated by the applicant that greater functional and habitat values can be obtained, these standards may be modified:

(i) The original wetland configuration should be replicated including depth, width, and length at the original location;

(ii) The original soil types and configuration shall be replicated;

(iii) The wetland and buffer areas shall be replanted with native vegetation which replicates the original in species, sizes and densities; and

(iv) The original functional values shall be restored, including water quality and wildlife habitat functions.

(h) Wetland Mitigation Banks.

Wetland mitigation banks are a site where wetlands are restored, created, enhanced or, in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

(i) Credits from a wetland bank may be approved for use as compensation for unavoidable impacts to wetlands when:

(a) The bank is certified under Chapter 173-700 WAC;

(b) The community designated official determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

(€C) The proposed use of credits is consistent with the terms and conditions of the bank's certification.

(2ii) Replacement ratios for projects using bank credits shall be consistent with the terms and conditions of the bank's certification.

(3iii) Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, bank service areas may include portions of more than one adjacent drainage basin for specific wetland functions.

~~(3) Landslide Hazard Areas. Development proposals on sites containing Class I and Class II landslide hazards shall meet the following requirements:~~

~~(a) Essential public facilities shall not be sited within a geologically hazardous area or its buffers.~~

~~(b) Buffer Requirement. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the city designated official to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a landslide hazard special study. The buffer shall be equal to the height of the slope or 50 feet, whichever is greater. The buffer may be reduced when a qualified professional demonstrates to the city designated official's satisfaction that the reduction will adequately protect the proposed development, adjacent developments, and uses and the subject critical area. The buffer may be increased where the city designated official determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.~~

~~(c) Alterations. Alterations of a landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:~~

~~(i) The development will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions;~~

~~(ii) The development will not decrease slope stability on adjacent properties;  
and~~

~~(iii) Such alterations will not adversely impact other critical areas.~~

~~(d) Impervious Surface Ratio. An impervious surface ratio is a measurement of the amount of the site that is covered by any material that substantially reduces or~~

prevents the infiltration of stormwater into previously undeveloped land. Impervious surfaces include, but are not limited to, roofs and streets, sidewalks and parking lots paved with asphalt, concrete, compacted sand, rock, compacted rock, limerock or clay. The maximum impervious surface ratios for Class I and Class II landslide hazard areas are set forth in Table 3 of this subsection.

(e) Native Vegetation. Native vegetation is plant species that are indigenous and naturalized to the Granite Falls region and which can be expected to naturally occur on a site. Native vegetation does not include noxious weeds. The minimum percentage of native vegetation that must be retained on sites including Class I or Class II landslide hazard areas is set forth in Table 4 of this section.

**Table 4**  
**Impervious Surface and Native Vegetation Requirements for Landslide Hazard Areas**

<b>Landslide Hazard Class</b>	<b>Maximum Impervious Surface Ratio</b>	<b>Minimum Percentage of Native Vegetation Retained</b>
Class II	0.30	65%
Class I	0.20	75%

(f) Development Design.

(i) Structures and improvements shall be clustered to retain as much open space as possible and to preserve the natural topographic features of the site.

(ii) Structures and improvements shall conform to the natural contour of the slope.

(iii) Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation.

(iv) The use of retaining walls which allow the maintenance of existing natural slope area is preferred over graded artificial slopes.

(g) Additional Standards for Class I Landslide Hazards:

(i) Alteration of Class I landslide hazard areas is permitted only if the development proposal can be designed so that the landslide hazard to the project and the adjacent property is eliminated or mitigated and the

development proposal on that site is certified as safe by a geotechnical engineer licensed in the state of Washington.

(ii) Development or alteration shall be prohibited on parcels with a lot slope of greater than 40 percent.

(4) Erosion Hazard Areas. Alteration of a site containing a critical erosion hazard area shall meet the following requirements:

(a) All alteration proposals shall submit an erosion control plan consistent with this section prior to receiving approval.

(b) Clearing on erosion hazard areas is allowed from April 1st to November 1st only.

(c) Only that clearing necessary to install temporary sedimentation and erosion control measures shall occur prior to clearing for roadways or utilities.

(d) Clearing limits for roads, water, wastewater, and stormwater utilities, and temporary erosion control facilities shall be marked in the field and approved by designated official prior to any alteration of existing native vegetation.

(e) The authorized clearing for roads and utilities shall be the minimum necessary to accomplish project-specific engineering designs and shall remain within approved rights-of-way.

(f) All trees and understory shall be retained on lots or parcels; provided, that understory damaged during approved clearing operations may be pruned or replaced.

(5) Seismic Hazard Areas. Development proposals on sites containing mapped seismic hazard areas may make alterations to a seismic hazard area only when the applicant demonstrates and the designated official concludes that:

(a) Evaluation of site-specific subsurface conditions shows that the site is not located in a seismic hazard area; or

(b) Mitigation is implemented which renders the proposed development as safe as if it were not located in a seismic hazard area, as certified by a geotechnical professional engineer licensed by the state of Washington.

(6) Critical Habitat Areas.

(a) All development sites containing wetlands shall conform to the wetland development performance standards set forth in subsection (J)(2) of this section.

(b) All development sites adjacent to the South Fork of the Stillaguamish or Pilchuck Rivers shall retain a 150-foot buffer of native vegetation measured from the ordinary high water mark of the river.

(c) Where nonfish species have been classified as endangered or threatened by the federal government or Department of Wildlife, the applicant shall provide a special study identifying the required habitat and recommending appropriate buffers based on the [state Washington Department of Fish and Wildlife's Priority Habitats and Species \(PHS\) program list and mapping resources](#) [Department of Wildlife priority habitat and species management recommendations](#).

(d) For all fish and wildlife habitat areas that have been classified as endangered or threatened by the federal government, the applicant will provide a special study identifying the specified habitat based on the Department of Fish and Wildlife's (DFW) priority habitats and species program.

(e) For all fish and wildlife that have been identified as "sensitive," the applicant will identify the species and note its presence in the SEPA documents and critical areas study.

(74) Classification of Fish and Wildlife Habitat Areas.

(a) Streams. Streams shall be classified according to the stream type system as provided in WAC [222-16-030](#), Stream Classification System, as amended.

(i) Type S Stream. Those streams, within their ordinary high water mark, as inventoried as "shorelines of the state" under Chapter [90.58](#) RCW and the rules promulgated pursuant thereto.

(ii) Type F Stream. Those stream segments within the ordinary high water mark that are not Type S streams, and which are demonstrated or provisionally presumed to be used by the salmonid fish. Stream segments which have a width of two feet or greater at the ordinary high water mark and have a gradient of 16 percent or less for basins less than or equal to 50 acres in size, or have a gradient of 20 percent or less for basins greater than 50 acres in size, are provisionally presumed to be used by salmonid fish. A provisional presumption of salmonid fish use may be refuted at the discretion of the designated official where any of the following conditions are met:

A. It is demonstrated to the satisfaction of the city that the stream segment in question is upstream of a complete, permanent, natural fish passage barrier, above which no stream section exhibits perennial flow;

B. It is demonstrated to the satisfaction of the city that the stream segment in question has confirmed, long-term, naturally occurring water quality parameters incapable of supporting salmonid fish;

C. Sufficient information about geomorphic region is available to support departure from the characteristics described above for the presumption of salmonid fish use, as determined in consultation with the Washington Department of Fish and Wildlife, the Department of Ecology, affected tribes, or others;

D. The Washington State Department of Fish and Wildlife has issued a hydraulic project approval pursuant to RCW [77.55.100](#), which includes a determination that the stream segment in question is not used by salmonid fish;

E. No salmonid fish are discovered in the stream segment in question during a stream survey conducted according to the protocol provided in the Washington Forest Practices Board Manual, Section 13, Guidelines for Determining Fish Use for the Purpose of Typing Waters under WAC [222-16-031](#); provided, that no unnatural fish passage barriers have been present downstream of said stream segment over a period of at least two years.

(iii) Type Np Stream. Those stream segments within the ordinary high water mark that are perennial and are not Type S or Type F streams. However, for the purposes of clarification, Type Np streams include intermittent dry portions of the channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see Washington Forest Practices Board Manual, Section 23), then said point shall be determined by a qualified professional selected or approved by the city.

(iv) Type Ns Stream. Those stream segments within the ordinary high water mark that are not Type S, Type F, or Type Np streams. These include seasonal streams in which surface flow is not present for at least some portion of a year of normal rainfall and that are not located downstream from any Type Np stream segment.

(85) Fish and Wildlife Habitat Buffer Areas.

(a) The establishment of buffer areas shall be required for regulated activities in or adjacent to habitat areas. Buffers shall consist of an undisturbed area of native vegetation established to protect the integrity, functions and values of the affected habitat. Activities within buffers should not result in any net loss of the functions and values associated with streams and their buffers.

(i) The following buffer widths are established:

**Table 5-**

**Fish and Wildlife Habitat Buffer Widths**

<b>Streams</b>	<b>Buffer</b>	
Type S	150 feet	
Pilchuck River		
Stillaguamish River		
Type F	100 feet	
Drainage from Lake Gardner below dam		
Type Np	75 feet	
To be identified by applicant		
Type Ns	50 feet	
To be identified by applicant		

(i) Fish and wildlife habitat buffers shall be the site potential tree height, as depicted on the Washington Department of Fish and Wildlife (WDFW) Site-Potential Tree Height (SPTH) Mapping Tool, or 150 feet, whichever is less.

(ii) Federal, State and Local Habitats and Species.

A. Except for waters subject to subsection (J)(8)(a) of this section, and bald eagles subject to subsection (J)(8)(a)(ii)(B) of this section, the establishment of buffer areas may be required for regulated activities in or adjacent to federal, state and local species and habitat areas as designated pursuant to this section. Buffers shall consist of an undisturbed area of native vegetation established to protect the integrity, functions and values of the affected habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby. Buffers shall be determined by the department based on information in the biological/habitat report, supplemented by its own investigations, the intensity and design of the proposed use, and adjacent uses and activities. Buffers are not intended to be established or to function independently of the habitat they are established to protect. Buffers shall be measured from the edge of the habitat area.

B. Bald eagle habitat shall be protected pursuant to the federal Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act [Washington State Bald Eagle Protection Rules \(WAC 232-12-292\)](#).

(b) Where existing buffer area plantings provide minimal vegetative cover and cannot provide the minimum water quality or habitat functions, buffer enhancement shall be required. Where buffer enhancement is required, a plan shall be prepared that includes plant densities that are not less than five feet on center for shrubs and 10 feet on center for trees. Monitoring and maintenance of plants shall be required in accordance with this section. Existing buffer vegetation is considered "inadequate" and will require enhancement through additional native plantings and removal of nonnative plants when:

(i) Nonnative or invasive plant species provide the dominate cover;

(ii) Vegetation is lacking due to disturbance and stream resources could be adversely affected; or

(iii) Enhancement planting in the buffer could significantly improve buffer functions. If, according to the buffer enhancement plan, additional buffer mitigation is not sufficient to protect the habitat, the city shall require larger buffers where it is necessary to protect habitat functions based on site-specific characteristics.

(c) Measurement of Buffers.

(i) Stream Buffers. All buffers shall be measured from the ordinary high water mark as identified in the field or, if that cannot be determined, from the top of the bank. In braided channels and alluvial fans, the ordinary high water mark or top of bank shall be determined so as to include the entire stream feature;

(ii) Combination Buffers. Any stream adjoined by a wetland or other adjacent habitat area shall have the buffer which applies to the wetland or other habitat area unless the stream buffer requirements are more expansive.

(d) Buffer widths may be modified by averaging buffer widths as set forth herein:

(i) Buffer width averaging shall be allowed only where the applicant demonstrates to the designated official that the average will not impair or reduce habitat, water quality purification and enhancement, stormwater detention, ground water recharge, shoreline protection and erosion protection and other functions of the stream and buffer, that the lower intensity land uses would be located adjacent to areas where the buffer width is reduced, and that the total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging.

(ii) Notwithstanding the reductions permitted in subsection (J)(8)(d)(i) of this section, buffer widths shall not be reduced by more than 25 percent of the required buffer.

(e) The buffer width stated in subsection (J)(8)(a)(i) of this section shall be increased in the following circumstances:

(i) When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse habitat impacts; or

(ii) When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or

(iii) When the minimum buffer for a habitat extends into an area with a slope of greater than 25 percent, the buffer shall be the greater of:

A. The minimum buffer for that particular habitat; or

B. Twenty-five feet beyond the point where the slope becomes 25 percent or less.

(f) The designated official may authorize the following low impact uses and activities, provided they are consistent with the purpose and function of the habitat buffer ~~and~~, do not detract from its integrity, and are determined by a qualified scientific professional to have no detrimental impact. The uses and activities may be permitted within the buffer depending on the sensitivity of the habitat involved. To the extent reasonably practicable, examples of uses and activities which may be permitted in appropriate cases include pedestrian trails, viewing platforms, interpretive signage, utility easements and the installation of underground utilities pursuant to best management practices. Uses permitted within the buffer shall be located in the outer 25 percent of the buffer.

(g) Trails and Open Space. For walkways and trails, associated open space in critical buffers located on public property or on private property where easements or agreements have been granted for such purposes, all of the following criteria shall be met:

(i) The trail, walkway and associated open space shall be consistent with the comprehensive parks, recreation, and open space master plan. The city may allow private trails as a part of the ~~approval~~-site plan, subdivision or other land use permit approvals.

(ii) Trails and walkways shall be located in the outer 25 percent of the buffer, i.e., the portion of the buffer that is farther away from the critical area. Exceptions to this requirement may be made for:

A. Trail segments connecting to existing trails where an alternative alignment is not practical.

B. Public access points to water bodies spaced periodically along the trail.

(iii) Enhancement of the buffer area is required where trails are located in the buffer. Where enhancement of the buffer area adjacent to a trail is not feasible due to existing high quality vegetation, additional buffer area or other mitigation may be required.

(iv) Trail widths shall be a maximum width of 10 feet. Trails shall be constructed of permeable materials; provided, that impervious materials may be allowed if pavement is required for handicapped or emergency access, or safety, or is a designated nonmotorized transportation route or makes a connection to an already dedicated trail, or reduces potential for other environmental impacts.

(h) Allowed Activity – Utilities in Streams. New utility lines and facilities may be permitted to cross water bodies in accordance with an approved supplemental stream/lake study if they comply with the following criteria:

(i) Fish and wildlife habitat areas shall be avoided to the maximum extent possible; and

(ii) The utility is designed consistent with one or more of the following methods:

A. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone; or

B. The utilities shall cross at an angle greater than 60 degrees to the centerline of the channel in streams perpendicular to the channel centerline; or

C. Crossings shall be contained within the footprint of an existing road or utility crossing; and

(iii) New utility routes shall avoid paralleling the stream or following a down-valley course near the channel; and

(iv) The utility installation shall not increase or decrease the natural rate of shore migration or channel migration; and

(v) Seasonal work windows are determined and made a condition of approval; and

(vi) Mitigation criteria of this section are met.

(i) Stormwater management facilities, such as biofiltration swales, may be located within the outer 25 percent of buffers only if they will have no negative effect on the functions and purpose the buffers serve for the fish and wildlife habitat areas, as determined by a qualified scientific professional. Stormwater detention ponds shall not be allowed in fish and wildlife habitat areas or their required buffers.

(j) For subdivisions and short subdivisions, the applicable wetland and associated buffer requirements for any development or redevelopment of uses specifically identified in, and approved as part of, the original subdivision or short subdivision application shall be those requirements in effect at the time that the complete subdivision application was filed; provided, that for subdivisions this provision shall be limited to final plats reviewed and approved under Chapter [19.05](#) GFMC or as amended at the time of final plat approval. However, at the discretion of the designated official a buffer enhancement plan may be required in accordance with subsection (j)(8)(b)(iii) of this section if the wetland or buffer has become degraded or is currently not functioning or if the wetland and/or buffer may be negatively affected by the proposed new development.

(k) Minor additions or alterations such as decks and small additions less than 120 square feet, interior remodels, or tenant improvements which have no impact on the habitat or buffer shall be exempt from the buffer enhancement requirements.

(l) Required buffers shall not deny all reasonable use of property. A variance from buffer width requirements may be granted by the hearing examiner upon a showing by the applicant that:

(i) There are special circumstances applicable to the subject property or to the intended use such as shape, topography, location or surroundings that do not apply generally to other properties and which support the granting of a variance from the buffer width requirements; and

(ii) Such buffer width variance is necessary for the preservation and enjoyment of a substantial property right or use possessed by other similarly situated property but which because of special circumstances is denied to the property in question; and

(iii) The granting of such buffer width variance will not be materially detrimental to the public welfare or injurious to the property or improvement; and

(iv) The granting of the buffer width variance will not materially affect the subject habitat area; and

(v) If a variance application for stream buffers is merged with a pending shoreline development permit application, the applicant shall pay the city a single fee equal to the amount of the shoreline permit; and

(vi) No variance from stream buffers shall be granted which is inconsistent with the policies of the Shoreline Management Act of the state of Washington and the city's shoreline master program of the city of Granite Falls; and

(vii) Best available science, as set forth in this section, shall be taken into consideration in the granting of a buffer width variance.

(96) Fish and Wildlife Habitat Alteration and Mitigation. After careful consideration of the potential impacts and a determination that impacts are unavoidable, unavoidable impacts to streams, associated fish buffers and wildlife habitat not exempt under this section, granted a variance under this section, or meeting the criteria for a reasonable use exemption shall be mitigated as follows:

(a) Adverse impacts to habitat functions and values shall be mitigated to the extent feasible and reasonable. Mitigation actions by an applicant or property owner shall occur in the following preferred sequence:

(i) Avoiding the impact altogether by not taking a certain action or parts of actions;

(ii) Minimizing impacts by limiting the degree of magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(iii) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

(iv) Reducing or eliminating the impact over time by preservation and maintenance operations;

(v) Compensating for the impact by replacing or providing substitute resources or environments;

(vi) Monitoring the impact and taking appropriate corrective measures in accordance with this section.

(b) Where impacts cannot be avoided, the applicant or property owner shall implement other appropriate mitigation actions in compliance with the intent, standards and criteria of this section. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal, and implementation of the performance standards listed in this section.

(c) Alteration of habitat and their buffers may be permitted by the designated official subject to the following standards:

(i) Type S Streams. Alterations of Type S streams shall be avoided, subject to the reasonable use provisions of this chapter and conformance with the city of Granite Falls shoreline management master program. Access to the shoreline will be permitted for water-dependent and water-oriented uses subject to the mitigation sequence referred to in subsections (j)(9)(a) and (b) of this section;

(ii) Type F, Np and Ns Streams. Alterations of Type F, Np and Ns streams may be permitted; provided, that the applicant mitigates adverse impacts consistent with the performance standards and other requirements of this chapter; and provided, that no overall net loss will occur in stream functions and fish habitat;

(iii) Relocation of a stream may occur only when it is part of an approved mitigation or rehabilitation plan, and will result in equal or better habitat and water quality, and will not diminish the flow capacity of the stream.

(407) Fish and Wildlife Mitigation Standards, Criteria and Plan Requirements.

(a) Location and Timing of Mitigation.

(i) Mitigation shall be provided on site, except where on-site mitigation is not scientifically feasible or practical due to physical features of the property. The burden of proof shall be on the applicant to demonstrate that mitigation cannot be provided on site.

(ii) When mitigation cannot be provided on site, mitigation shall be provided in the immediate vicinity of and within the same watershed as the permitted activity on property owned and controlled by the applicant, where practical and beneficial to the fish and wildlife habitat resources. When possible, this means within the same watershed as the location of the proposed project. Off-site mitigation within the same watershed will be preferred to on-site mitigation when the results can achieve greater benefits or functions than on-site mitigation, or would restore or enhance functions that are limiting or important to the health of the watershed.

(iii) In-kind mitigation, as defined in this section, shall be provided except when the applicant demonstrates and the designated official concurs the greater functional and habitat value can be achieved through out-of-kind mitigation, as defined in this section.

(iv) Only when it is determined by the designated official that subsections (J)(10)(a)(i), (ii) and (iii) of this section are inappropriate or impractical shall off-site out-of-kind mitigation be considered.

(v) Any agreed-upon proposal shall be completed before initiation of other permitted activities, unless a phased or concurrent schedule has been approved by the designated official.

(b) Wetland Mitigation Banks. Wetland mitigation banks are a site where wetlands are restored, created, enhanced or, in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

(i) Credits from a wetland bank may be approved for use as compensation for unavoidable impacts to wetlands when:

(A) The bank is certified under Chapter 173-700 WAC;

(B) The community designated official determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

(C) The proposed use of credits is consistent with the terms and conditions of the bank's certification.

(ii) Replacement ratios for projects using bank credits shall be consistent with the terms and conditions of the bank's certification.

(iii) Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, bank service areas may include portions of more than one adjacent drainage basin for specific wetland functions.

~~(118)~~ Fish and Wildlife Habitat Performance Standards and Incentives.

(a) The habitat performance standards and criteria contained in this section shall be incorporated into plans submitted for regulated activities. It is recognized that in specific situations, all the listed standards may not apply or be feasible to implement

or individual standards may conflict, in which case the standard(s) most protective of the environment shall apply.

- (i) Consider habitat in site planning and design;
- (ii) Locate buildings and structures in a manner that preserves and minimizes adverse impacts to important habitat areas;
- (iii) Integrate retained habitat into open space and landscaping;
- (iv) Where possible, consolidate habitat and vegetated open space in contiguous blocks;
- (v) Locate habitat contiguous to other habitat areas, open space or landscaped areas to contribute to a continuous system or corridor that provides connections to adjacent habitat areas and allows movement of wildlife;
- (vi) Use native species in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers;
- (vii) Emphasize heterogeneity and structural diversity of vegetation in landscaping, and food-producing plants beneficial to wildlife and fish;
- (viii) Remove and control any noxious or undesirable species of plants and animals;
- (ix) Preserve significant trees and snags, preferably in groups, consistent with achieving the objectives of these standards;
- (x) Buffers shall be surveyed, staked, and fenced with erosion control and/or clearing limits fencing prior to any construction work, including grading and clearing, that may take place on the site; and
- (xi) Temporary and erosion sedimentation controls, pursuant to an approved plan, shall be implemented during construction.

(b) A landscape plan shall be submitted consistent with the requirements, goals, and standards of this chapter. The plan shall reflect the report prepared pursuant to this section.

(c) As an incentive to encourage preservation of secondary and tertiary habitat, as those terms are defined in this chapter, the net amount of landscaping required by the city of Granite Falls may be reduced by one-quarter acre for each one acre of secondary or tertiary habitat and buffer preserved on the site; however, that amount

cannot exceed 50 percent of the amount of required landscaping. The reduction shall be calculated on the basis of square feet of habitat preserved or enhanced and square feet of landscaping required. Habitat and habitat buffer that is enhanced by the applicant may also qualify for this reduction. Preservation of secondary or tertiary habitat shall be assured by the execution of an easement or other protective device acceptable to the city of Granite Falls.

(129) Fish and Wildlife Habitat Monitoring Program and Contingency Plan.

(a) A monitoring program shall be implemented to determine the success of the mitigation project and any necessary corrective actions. This program shall determine if the original goals and objectives are being met.

(b) A contingency plan shall be established for compensation in the event that the mitigation project is inadequate or fails. A performance, monitoring, and maintenance bond or other acceptable security device is required to ensure the applicant's compliance with the terms of the mitigation agreement. The amount of the performance, monitoring, and maintenance bond shall equal 125 percent of the cost of the mitigation project for a period of five years; provided, that the designated official may agree to reduce the bond in phases, in proportion to work successfully completed over the period of the bond. Failure to complete any required performance, monitoring, and maintenance shall result in forfeiture of the guarantee. Applicants who have previously defaulted will no longer be allowed to post a bond for performance, monitoring, and maintenance but will instead be required to submit an assignment of bank account to the city of Granite Falls for two times the cost of the mitigation project.

(c) The monitoring program shall consist of the following:

(i) During monitoring, best available scientific procedures shall be used as the method of establishing the success or failure of the project;

(ii) For vegetation determinations, permanent sampling points shall be established;

(iii) For measurement purposes, vegetative success shall equal 80 percent survival of planted trees and shrubs and 80 percent cover of desirable understory or emergent species;

(iv) Monitoring reports shall be submitted on the current status of the mitigation project to the designated official. The reports shall be prepared by a qualified scientific professional and reviewed by the city, shall to the extent applicable include monitoring information on wildlife, vegetation, water quality, water flow,

stormwater storage and conveyance, and existing or potential degradation, and shall be produced on the following schedule:

- A. At time of construction;
- B. Thirty days after planting;
- C. Early in the growing season of the first year;
- D. End of the growing season of first year;
- E. Twice the second year; and
- F. Annually thereafter;

(v) Monitoring shall occur three, four or five growing seasons, depending on the complexity of the fish and wildlife habitat system. The monitoring period will be determined by the designated official and specified in writing prior to the implementation of the site plan;

(vi) The applicant shall, if necessary, correct for failures in the mitigation project;

(vii) The applicant shall replace dead or undesirable vegetation with appropriate plantings based on the approved planting plan or this section;

(viii) The applicant shall repair damage caused by erosion, settling, or other geomorphological processes;

(ix) Correction procedures shall be approved by a qualified scientific professional and the designated official; and

(x) In the event of failure of the mitigation project, the applicant shall redesign the project and implement the new design.

(1310) Aquifer Recharge Areas.

(a) The following regulations for aquifer recharge areas are consistent with the Department of Ecology's critical aquifer recharge areas (CARAs) guidance.

(b) ~~Requirement for Hydrogeologic Assessment.~~ The following uses of land shall ~~require a hydrogeologic assessment of the proposed site~~ be prohibited if the site is located within a sole source aquifer recharge area as mapped by Snohomish County or a wellhead protection area mapped by Washington State Department of Health ~~high significance aquifer recharge area~~:

- (i) Hazardous substance processing or handling;
- (ii) Hazardous waste treatment and storage facility;
- (iii) Disposal of on-site sewage for subdivisions, short plats, and commercial and industrial sites;
- (iv) Feedlots;
- (v) Landfills;
- (vi) Sludge land application sites over 40 acres or with an annual application rate of greater than two dry tons of sludge per acre.

(c) Requirement for Hydrogeologic Assessment.

(i) A hydrogeologic assessment may be required by the designated official for projects that may pose significant potential risk for groundwater contamination within a high significance sole source aquifer recharge area as mapped by Snohomish County or a wellhead protection area mapped by Washington State Department of Health.

(ii) If an applicant wishes to request a change in the CARA classification of one or more parcels, a hydrogeologic assessment is required. This request shall require the applicant to submit an application for code amendment to amend the CARA map. The assessment must include sufficient geologic and/or groundwater flow information to justify a change in CARA classification. Requests to change the CARA classification will be evaluated by the City at the expense of the applicant. The City's evaluation may entail further model runs or hydrogeologic analysis. If the challenge is successful, the hydrogeologic critical areas assessment will be incorporated into the City's surface geologic mapping and an updated CARA map adopted by City Council as part of the code amendment process.

(d) Contents of the Hydrogeologic Assessment.

(i) The hydrogeologic assessment shall be submitted and stamped by a licensed professional hydrogeologist firm with experience in preparing hydrogeologic assessments.

(ii) The hydrogeologic assessment must show that the use does not pose a threat to anythe aquifer system and that the proposed use will not cause contaminants to enter anythe aquifer used for water supply.

(iii) Uses requiring a hydrogeologic assessment may be conditioned or denied based upon the city's evaluation of the hydrogeologic assessment. Any project denied a permit based on the city's evaluation shall receive a written explanation of the reason(s) for the denial and an explanation of the measures required, if any, to comply with these regulations.

(de) The hydrogeologic assessment shall include but is not limited to:

- (i) Information sources;
- (ii) Geologic setting;
- (iii) Background water quality;
- (iv) Location and depth to perched water tables;
- (v) Recharge potential of the facility site;
- (vi) Ground water flow direction and gradient;
- (vii) Currently available data on wells within 1,000 feet of the site;
- (viii) Currently available data on springs within 1,000 feet of the site;
- (ix) Surface water location and recharge potential;
- (x) Discussion of the effects of the proposed project on the ground water resource;
- (xi) Other information as may be required by the city;
- (xii) All wellhead zones shall be protected if classified as a sole-source aquifer.

(e) Impervious Surfaces. Uses located within high significance aquifer recharge areas and that are not required to submit a hydrogeologic assessment shall minimize the extent of impervious surfaces on the site.

(1411) Flood Hazard Areas. Development sites within flood hazard areas shall conform to the requirements of the Snohomish County shorelines master program, ~~and to the~~ requirements of subsection (I)(6) of this section, and the requirements of Section 19.07.035. The requirements for developments in flood hazard areas shall be consistent with the FEMA requirements for the National Flood Hazard Insurance Program. [Ord. 960 § 14 (Exh. M), 2018; Ord. 925 § 2 (Exh. A), 2017; Ord. 905 § 1 (Att. A), 2016; Ord. 904 § 29, 2015; Ord. 862 § 52, 2013; Ord. 740 § 1 (Exh. A), 2007.]

# Appendix A

## Best Available Science Resources: Wetlands

# Appendix A

## Best Available Science Resources: Wetlands

### Identification and Delineation

1. Anderson, P.S., S. Meyer, P. Olson, and E. Stockdale. 2016. Determining the Ordinary High Water Mark for Shoreline Management Act Compliance in Washington State. Shorelands and Environmental Assistance Program Washington State Department of Ecology Olympia, Washington. Publication No. 16-06-029.
2. Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.
3. U.S. Army Corps of Engineers. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region. Version 2. Wetlands Regulatory Assistance Program. May 2010. ERDC/EL TR-10-3. Available at: <https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7646>.
4. U.S. Army Corps of Engineers, Seattle District. 2011. Electronic Permit Guidebook. Available at: <http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/PermitGuidebook/Wetlands.aspx>.
5. U.S. Fish and Wildlife Service. 2025. National Wetlands Inventory website. Available at: <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>.
6. Washington Department of Ecology. 1997. Washington State Wetlands Identification and Delineation Manual. Publication No. 96-94.

### Classification

1. Cowardin, L.M., Carter, V., Golet, F.C., and La Roe, E.T. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, U.S. Fish and Wildlife Service, U.S. Department of the Interior. FWS/OBS-79/31. 103pp.

### Rating System

1. Hruba, T. and Yahnke, A. 2023. Washington State Wetland Rating System for Western Washington: 2014 Update, Version 2.0. Washington Department of Ecology. Publication No. 23-06-009.

### Function Assessment

1. Cooke Scientific Services. February 2000. Wetland and Buffer Functions Semi-Quantitative Assessment Methodology (SAM).

2. Washington Department of Ecology. 2022. Wetland Guidance for Critical Areas Ordinance (CAO) Updates: Western and Eastern Washington. Shorelands and Environmental Assistance Program. Olympia, Washington October 2022, Publication No. 22-06-014.
3. Washington State Department of Transportation. June 2000. Wetland Functions Characterization Tool For Linear Projects. Wetland Strategic Plan Implementation Project.

## Mitigation

1. Hruby, T. 2012. Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington. Ecology Publication No. 10-06-011. Available at: <<https://fortress.wa.gov/ecy/publications/publications/1006011.pdf>>.
2. Hruby, T., K. Harper, and S. Stanley. 2009. Selecting Wetland Mitigation Sites Using a Watershed Approach. Washington State Department of Ecology Publication No. 09-06-032. Olympia, Washington. Available at: <<https://apps.ecology.wa.gov/publications/SummaryPages/0906032.html>>
3. Interagency Review Team. 2022. Bank Use Plan: Using Credits from Wetland Mitigation Banks: Guidance to Permit Applicants on Submittal Contents for Bank Use Plans.
4. National Resource Council. 2001. Compensating for Wetland Losses Under the Clean Water Act. The National Academies Press. Washington, DC.
5. U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. 2008. Compensatory Mitigation for Losses of Aquatic Resources. Final Rule. Federal Register 73(70): 19594-19705.
6. Washington State Department of Ecology (Ecology). 2012. Guidance on In-Lieu Fee Mitigation. Ecology Publication No. 12-06-012. Available at: <<https://fortress.wa.gov/ecy/publications/publications/1206012.pdf>>.
7. Washington State Department of Ecology (Ecology), U.S. Army Corps of Engineers (USACE), and Washington Department of Fish and Wildlife (WDFW). 2012. Advance Permittee-Responsible Mitigation. Ecology Publication No. 12-06-015. Available at: <<https://fortress.wa.gov/ecy/publications/publications/1206015.pdf>>.
8. Washington State Department of Ecology (Ecology), U.S. Army Corps of Engineers (Corps), and U.S. Environmental Protection Agency (EPA). 2021. Wetland Mitigation in Washington State—Part 1: Agency Policies and Guidance (Version 2). Ecology Publication No. 21-06-003. April. Available at: <<https://apps.ecology.wa.gov/publications/documents/2106003.pdf>>
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## Buffers

1. Hruby, T. 2013. Update on Wetland Buffers: The State of the Science, Final Report, October 2013. Washington State Department of Ecology Publication No. 13-06-11. Available at: <<https://fortress.wa.gov/ecy/publications/SummaryPages/1306011.html>>.

2. Johnson, A.W., and D. Ryba. 1992. A Literature Review of Recommended Buffer Widths to Maintain Various Functions of Stream Riparian Areas. King County Surface Water Management Division, Seattle, Washington.
3. Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2006. Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness: A Review of Current Science and Regulations. EPA/600/R-05/118. Cincinnati, Ohio, U.S. Environmental Protection Agency, 2006.
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5. Semlitsch, R. and J. B. Jensen. 2001. Core Habitat, Not Buffer Zone. National Wetlands Newsletter July.
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## General Wetland Resources

1. Granger, T., T. Hruby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley, E. Stockdale. April 2005. Wetlands in Washington State - Volume 2: Guidance for Protecting and Managing Wetlands.
2. King County. 2025. Soil with Capability Class and Hydrologic Group. Available at: <[https://www5.kingcounty.gov/sdc?Layer=soil\\_capability\\_area](https://www5.kingcounty.gov/sdc?Layer=soil_capability_area)>.
3. Mitsch, W.J. and Gosselink, J.G. 2000. Wetlands. 3rd ed. Van Nostrand Reinhold, New York.
4. NRCS. 2025. Web Soil Survey website. Available at: <<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>.
5. Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. 2005. Wetlands in Washington State - Volume 1: A Synthesis of the Science. Washington State Department of Ecology. Publication No. 05-06-006. Olympia, Washington.
6. Washington State Department of Ecology. Publication No. 05-06-008. Olympia, Washington.

# Appendix B

## Best Available Science Resources: Critical Aquifer Recharge Areas

# Appendix B

## Best Available Science Resources: Critical Aquifer Recharge Areas

1. Snohomish County. 2025. PDS Map Portal: Aquifer Layers.
2. NRCS. 2025. Web Soil Survey website. Available at:  
<<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>.
3. Washington Department of Ecology. 2021. Critical Aquifer Recharge Areas – Guidance Document. Publication No. 05-10-028. Revised March 2021.

# Appendix C

## Best Available Science Resources: Frequently Flooded Areas

# Appendix C

## Best Available Science Resources: Frequently Flooded Areas

### Classification

1. Federal Emergency Management Agency. 2020. Flood Insurance Rate Map. Snohomish County and Incorporated Areas. Panel 755 of 1575. Map Number 53061C0755F. June 19, 2020.

### Guidance

1. Federal Emergency Management Agency. 2002. CRS Credit for Higher Regulatory Standards. Indianapolis, Indiana.
2. Federal Emergency Management Agency. 2009. National Floodplain Insurance Program Floodplain Management Guidebook. FEMA – Region 10. Bothell, Washington.
3. Federal Emergency Management Agency. 2013. National Floodplain Insurance Program Community Rating System Coordinator’s Manual. FIA-15/2013. Indianapolis, Indiana.
4. Federal Emergency Management Agency. 2013. Model Ordinance for Floodplain Management under the National Flood Insurance Program and the Endangered Species Act. FEMA - Region 10. Bothell, Washington.
5. Washington State Department of Ecology. 2025. Guidance to Local Governments on Frequently Flooded Area Updates in CAOs. Shorelands and Environmental Assistance Program. Olympia, Washington.
6. Washington State Department of Ecology. 2019. Comprehensive planning for flood hazard management: A guidebook. Publication No. 21-06-019.

# Appendix D

## Best Available Science Resources: Geologically Hazardous Areas

# Appendix D

## Best Available Science Resources: Geologically Hazardous Areas

### Erosion Hazard Areas

1. Snohomish County. 2025. Natural Hazard Viewer.

### Landslide Hazard Areas

1. Snohomish County. 2025. Natural Hazard Viewer.

### Geologic Maps

1. Dragovich, J.D., S.P. Mavor, M.L. Anderson, S.A. Mahan, J.H. MacDonald Jr., J.H. Tepper, D.T. Smith, B.A. Stoker, C.J. Koger, R. Cakir, S.A. DuFrane, S.P. Scott, and B.P. Justman. 2016. Geologic Map of the Granite Falls 7.5-minute Quadrangle, Snohomish County, Washington. Washington Division of Geology and Earth Resources Map Series 2016-03.

### Seismic Hazard Areas

1. Palmer, S.P. S.L. Magsino, E.L. Bilderback, J.L. Poelstra, D.S. Folger, and R.A. Niggemann. 2004. Liquefaction Susceptibility Map of Snohomish County, Washington. Washington Division of Geology and Earth Resources. Open File Report 2004-20.

# Appendix E

## Best Available Science Resources: Fish and Wildlife Habitat Conservation Areas

# Appendix E

## Best Available Science Resources: Fish and Wildlife Habitat Conservation Areas

### Species Classification

1. Cullinan, T. 2001. Important Bird Areas of Washington. Audubon Washington.
2. Washington Department of Natural Resources. 1997. Endangered, Threatened and Sensitive Vascular Plants of Washington with Working Lists of Rare Non-vascular Species. Washington Natural Heritage Program.

### Species Guidance

1. Almack, J. 1995. Washington Grizzly Bear and Gray Wolf Research Project 1981-1995. Vols. 1-6
2. Corkran, C.C. and C. Thoms. 1996. Amphibians of Oregon, Washington and British Columbia. Canada: Lone Pine Publishing.
3. Eschmeyer, W.N. and E.S. Herald. 1983. A Field Guide to Pacific Coast Fishes: North America. Boston: Houston Mifflin Company.
4. Knight, K. 2009. Land Use Planning for Salmon, Steelhead and Trout. Washington Department of Fish and Wildlife. Olympia, Washington.
5. Larson, E.M., Rodrick, E., and Milner, R, editors. 1995. Management Recommendations for Washington's Priority Species, volume I: Invertebrates.
6. Leonard, W.P., H.A. Brown, L.C. Jones, K.R. McAllister, and R.M. Storm. 1993. Seattle Audubon Society The Trailside Series: Amphibians of Washington and Oregon. Seattle Audubon Society.
7. Lusch, Ed. 1985. Comprehensive Guide to Western Gamefish. Portland: Frank Amato Publications.
8. Morgan, J.T. 1998. Annotated Bibliography for Washington's Priority Habitats: Freshwater Wetlands and Fresh Deepwater. Washington Department of Fish and Wildlife.
9. National Marine Fisheries Service. 2008. Anadromous Salmonid Passage Facility Design. NMFS, Northwest Region. Portland, Oregon.
10. Pollard, W.R., G.F. Hartman, C. Groot, and P. Edgell. 1997. Field Identification of Coastal Juvenile Salmonids. Harbour Publishing.
11. Rodrick, E. and Milner, R., editors. 1991. Management Recommendations for Washington's Priority Habitats and Species. Wildlife Management, Fish Management, and Habitat Management Divisions, Washington Department of Fish and Wildlife.

12. Sibley, David Allen. 2000. *The National Audubon Society: The Sibley Guide to Birds*. New York: Alfred A. Knopf.
13. Stebbins, Robert C. 1966. *The Peterson Field Guide Series: A Field Guide to Western Reptiles and Amphibians*. Boston: Houston Mifflin Company.
14. Washington State Department of Fish and Wildlife. 2009. *Landscape Planning for Washington's Wildlife: Managing for Biodiversity in Developing Areas*. Olympia, Washington.
15. Whitaker, John O. Jr. 1980. *The Audubon Society Field Guide to North American Mammals*. Alfred A. Knopf, Incorporated.

## Naturally Occurring Ponds (Under 20 Acres)

1. Morgan, J.T. 1998. *Annotated Bibliography for Washington's Priority Habitats: Freshwater Wetlands and Fresh Deepwater*. Washington Department of Fish and Wildlife.

## Streams and Rivers

1. Barnard, R. J., J. Johnson, P. Brooks, K. M. Bates, B. Heiner, J. P. Klavas, D.C. Ponder, P.D. Smith, and P. D. Powers. 2013. *Water Crossings Design Guidelines*. WDFW, Olympia.
2. Bolton, S. and Shellberg, J. 2001. *White Paper: Ecological Issues in Floodplains and Riparian Corridors*. Center for Streamside Studies, University of Washington. 150 pp.
3. Cramer, M.L. 2012. *Stream Habitat Restoration Guidelines*. Co-published by the Washington Departments of Fish and Wildlife, Natural Resources, Transportation and Ecology, Washington State Recreation and Conservation Office, Puget Sound Partnership, and the U.S. Fish and Wildlife Service. Olympia, Washington.
4. Knutson, K.L. and Naef, V.L. 1997. *Management Recommendations for Washington's Priority Habitats: Riparian*. Washington Department of Fish and Wildlife.
5. Kusler, J.A. 2011. *Assessing the Natural and Beneficial Functions of Floodplains: Issues and Approaches; Future Directions*. Prepared for the Association of State Wetland Managers, Inc. Berne, New York. October 18, 2011.
6. May, C.W. 2003. *Stream-riparian Ecosystems in Puget Sound Lowland Eco-region: A Review of Best Available Science*. Watershed Ecology LLC.
7. Mayer, P.M., S.K. Reynolds, M.D. McCutchen, and T.J. Canfield. 2006. *Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness: A Review of Current Science and Regulations*. EPA/600/R-05/118. Cincinnati, Ohio, U.S. Environmental Protection Agency.
8. Quinn, T., G.F. Wilhere, and K.L. Krueger, technical editors. 2020. *Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications*. Habitat Program, Washington Department of Fish and Wildlife, Olympia, Washington.
9. Rentz, T., A. Windrope, K. Folkerts, and J. Azerrad. 2020. *Riparian Ecosystems, Volume 2: Management Recommendations*. Washington Department of Fish and Wildlife. December.
10. Washington Department of Fish and Wildlife. 2023. *Riparian Management Zone Checklist for Critical Areas Ordinances*. April.

11. Washington Department of Fish and Wildlife. 2025. Guidelines for Determining Site Potential Tree Height from Field Measurements. Washington Department of Fish and Wildlife, Olympia, Washington.
12. Washington, State of. WAC 222-16-030 defines water types and a water typing system.

## Water, Including Lakes, Ponds, Streams, and Rivers Where Fish Have Been Released

1. Local governments should consult with the local tribal entities and the Washington Department of Fish and Wildlife for the latest finfish release information.

Northwest Indian Fisheries Commission  
6730 Martin Way East  
Olympia, Washington 98512  
(360) 438-1180

Washington Department of Fish and Wildlife, Fish Program  
600 Capital Way North  
Olympia, Washington 98501-1091  
(360) 902-2700

Stillaguamish Tribe of Indians  
3322 236th Street Northeast  
Arlington, Washington 98223  
(360) 652-7362

The Tulalip Tribes  
6406 Marine Drive  
Tulalip, Washington 98271  
(360) 716-4000

2. Morgan, J.T. 1998. Annotated Bibliography for Washington's Priority Habitats: Freshwater Wetlands and Fresh Deepwater. Washington Department of Fish and Wildlife.

# Appendix F

## Priority Habitats

# Appendix F

## Priority Habitats

### State Listed Habitat

As of October 2025, the state list of priority habitats that may be within the Granite Falls area include:

- Herbaceous balds
- Freshwater wetlands and fresh deepwater
- Instream habitat
- Old growth / mature forest
- West side prairie
- Riparian
- Rural natural open space
- Snags and logs
- Talus



**NOTICE OF PROPOSED CODE AMENDMENTS AND DETERMINATION OF NONSIGNIFICANCE (DNS)**

**NOTICE IS HEREBY GIVEN** that the City of Granite Falls is in the process of adopting code amendments to Granite Falls Municipal Code (GFMC) 19.07.020, Critical Areas Regulations:

**PROJECT NAME/FILE NUMBER:** Granite Falls Critical Areas Ordinance Amendments

**APPLICANT/PROPONENT:** City of Granite Falls

**LEAD AGENCY:** City of Granite Falls

**PROJECT LOCATION:** Citywide (Non-project action)

**PROJECT DESCRIPTION:** The proposed non-project action is for amendments to the Granite Falls Municipal Code (GFMC) 19.07.020, Critical Areas Regulations. Several updates have been made to align with current best available science. Proposed amendments include revising the following sections: GFMC 19.07.020.A.2 to add definitions, GFMC 19.07.020.D to add additional standards for reasonable use exceptions, GFMC 19.07.020.I to include channel migration hazards as a geologically hazardous area, GFMC 19.07.020.J to revise buffer width and replacement ratio requirements for wetlands and to revise buffer width requirements for fish and wildlife habitat areas, to provide standards for off-site mitigation by purchasing mitigation bank credits in GFMC 19.07.020 (J)(7), and various sections throughout the code to reference most recent best available science.

**LIST OF REQUIRED ACTIONS:** Recommendation by Planning Commission with final adoption of an ordinance by City Council.

**ENVIRONMENTAL DOCUMENTS PREPARED:** SEPA DNS and Environmental Checklist

**SEPA DETERMINATION/ISSUANCE DATE:** February 4, 2026

**END OF COMMENT PERIOD:** February 18, 2026

**SEPA THRESHOLD DETERMINATION:** The City has determined that this proposal would not have a probable and unavoidable 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 reviewing a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request. This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date of issuance.

**RESPONSIBLE OFFICIAL:** Brent Kirk, Deputy City Manager – [brent.kirk@ci.granite-falls.wa.us](mailto:brent.kirk@ci.granite-falls.wa.us)

**PHONE NUMBER:** (360) 691-6441

**MAILING ADDRESS:** PO Box 1440, Granite Falls, WA 98252

**PUBLIC COMMENT AND APPEALS:** Upon publication of the issuance of the SEPA determination, there is a 14-day comment / appeal period. The deadline for public comment and appeals is 4:00 pm, February 18, 2026. Interested parties may view the project file at Granite Falls City Hall (215 South Granite Avenue) Monday-Friday 8 am to 5 pm. The appeals must be in written form and contain a concise statement of the matter being appealed. A fee is required per the City's Fee resolution. All comments or appeals are to be directed to City Hall, Attn: Responsible Official to the mailing address above.

**SIGNATURE:** *Brent Kirk*

**DATE:** 1/30/2026

**Distribution:** Official City Notification Boards (City Hall, Post Office)  
Everett Herald  
State Distribution List