Title 23 ENVIRONMENTALLY CRITICAL AREAS

Chapters:

Chapter 23.10 ENVIRONMENTALLY CRITICAL AREAS

Sections:

Introduction - General Provisions

23.10.000 Purpose.

This chapter designates and classifies environmentally critical areas. It protects the public from hazards, conserves the functions and values of environmentally sensitive areas, and allows for reasonable use of private property in compliance with the Washington State Growth Management Act (Chapter 36.70A RCW) through the application of the best available science, as determined according to WAC 365-195-900 through 365-195-925 and RCW 36.70A.172, and the goals and policies of the comprehensive plan. Included, but not limited, in this purpose statement are the following:

1. Maintain no net loss of value or function of fish and wildlife habitat conservation areas by preserving and restoring riparian corridors and protecting wildlife habitats that support state priority species and species of local importance.
2. Achieve no net loss of value or function of wetlands and their buffers and enhance or restore wetlands where feasible.
3. Protect critical aquifer recharge areas by avoiding land uses that risk contamination and prevent negative impacts.
4. Avoid and minimize risks to life and property from geological hazards by requiring appropriate study, analysis, and sound engineering principles to ensure sites are as safe as those without hazards.
5. Maintain no net loss of structure, value, and function of natural systems in frequently flooded areas.

23.10.010 Authority.

A. As provided herein, the Edmonds planning and development director or his/her designee (hereafter referred to as “the director”) is given the authority to interpret and apply, and the responsibility to enforce, this chapter to accomplish the stated purpose.

B. This chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property nor to prevent the provision of public facilities and services necessary to support existing development.

C. The city of Edmonds’ enactment or enforcement of this chapter shall not be construed to benefit any individual person or group of persons other than the general public.

D. The director may withhold, condition, or deny development permits or activity approvals to ensure that the proposed action is consistent with this chapter.

23.10.020 Severability.

If any clause, sentence, paragraph, section, or part of this chapter or the application thereof to any person or circumstances shall be judged by any court of competent jurisdiction to be invalid, such order or judgment shall be confined in its operation to the controversy in which it was rendered. The decision shall not affect or invalidate the remainder of any part thereof and to this end the provisions of each clause, sentence, paragraph, section, or part of this law are hereby declared to be severable.

23.10.030 Definitions.

For the purposes of this chapter, the following definitions shall apply:

“Adaptive management” means the systematic acquisition and application of reliable information to improve management over time. It often includes treating management decisions as experiments to address critical uncertainties and learn more quickly from experience. It involves setting objectives, monitoring conditions, and adjusting management based on results. Hallmarks of a sound adaptive management program include (1) adequate funding for monitoring and research, (2) a willingness to change course when pre-established triggers are reached, and (3) a commitment to gather data and evaluate conditions at appropriate special extents and time scales. See WAC 365-195-920(2).

“Adjacent” means those activities located on site immediately adjoining a critical area; or within a distance of 225 feet or less of a development proposal or subject parcel; or critical areas within the jurisdiction of critical areas regulation requirements to support the intent of this chapter and ensure protection of the functions and values of critical areas.

“Alteration” means any human-induced action which changes the existing condition of a critical area or its buffer. Alterations include, but are not limited to: grading; filling; dredging; draining; channelizing; cutting, pruning, limbing or topping, clearing, relocating or removing vegetation; applying herbicides or pesticides or any hazardous or toxic substance; discharging pollutants; paving, construction, application of gravel; modifying for surface water management purposes; or any other human activity that changes the existing landforms, vegetation, hydrology, wildlife or wildlife habitat value of critical areas.

“Applicant” means a person, as defined in ECDC 21.80.030, proposing or undertaking an alteration.

“Aquatic species” means wildlife species that live in marine or freshwater including fish, shellfish, amphibians, reptiles, crustaceans, and various other invertebrates.

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

“Best Available Science” See ECDC 23.10.070.

“Best management practices” means a system of practices and management measures that are inclusive of but not limited to:

- Control soil loss and reduce water quality degradation caused by nutrients, animal waste, and toxics;
- Control the movement of sediment and erosion caused by land alteration activities;
- Minimize adverse impacts to surface and ground water quality, flow, and circulation patterns; and

- Prevent adverse impacts to the chemical, physical, and biological characteristics of critical areas.

“Buffer” means the area adjacent to a critical area that is required for the continued maintenance, function, and/or structural stability of the critical area. Buffer widths vary depending on the relative quality and sensitivity of the area being protected. Buffer areas are intended to be left primarily undisturbed, but may be altered in limited circumstances when enhancement is provided to improve functions and values over existing conditions.

“Chapter” means those sections of this title sharing the same third digit .

“Class” or “wetland class” means descriptive categories of wetland vegetation communities within the wetlands taxonomic classification system of the U.S. Fish and Wildlife Service (Cowardin, et al., 1979).

“Clearing” means the act of cutting and/or removing vegetation. This definition shall include grubbing vegetation and the use or application of herbicide.

“Compensation project” means an action(s) specifically designed to replace project-induced critical area or buffer losses. Compensation project design elements may include but are not limited to: land acquisition procedures and detailed plans including functional value assessments, detailed landscaping designs, construction drawings, and monitoring and contingency plans.

“Compensatory mitigation” means replacing project-induced losses or impacts to a critical area such that there is no net loss to the functions and values of the critical areas involved, including but not limited to actions involving the creation, reestablishment, rehabilitation, enhancement, and/or preservation of critical areas, as defined in this section.

“Creation” means project performed to intentionally establish a wetland or stream at a site where one did not formerly exist.

“Critical aquifer recharge areas (CARAs)” See 23.10.400(A).

“Critical areas” means the following areas and ecosystems, including associated buffers: wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas as defined herein.

“Deleterious substances” include, but are not limited to, chemical and microbial substances, whether the substances are in usable or waste condition, that are not classified as hazardous materials per this chapter, that have the potential to pose a significant groundwater hazard, or for which monitoring requirements or treatment-based standards are enforced under Chapter 246-290 WAC.

“Development proposal” means any activity relating to the use and/or development of land requiring a permit or approval from the city, including, but not limited to: commercial or residential building permit; binding site plan; conditional use permit; franchise; right-of-way permit; grading and clearing permit; mixed use approval; planned residential development; shoreline conditional use permit; shoreline substantial development permit; shoreline variance; short subdivision; special use permit; subdivision; flood hazard permit; unclassified use permit; utility and other use permit; variance; rezone; or any required permit or approval not expressly exempted by this chapter.

“Director” means the city of Edmonds planning and development director or his/her designee.

“Division” means the planning division of the city of Edmonds planning and development department.

“Ecosystem functions" are 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 streamflow, aquifer water level, reduced pollutant concentrations in surface and ground waters, cool summer in-stream water temperatures, and fish and wildlife habitat functions.

“Ecosystem values" are the cultural, social, economic, and ecological benefits attributed to ecosystem functions.

“Enhancement” means an action taken to improve the condition and function of a critical area. For compensatory mitigation, enhancement additionally means actions performed to improve the condition of degraded wetlands, riparian areas or streams such that the functions and values they provide are increased.

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

“Erosion Hazard Areas” See ECDC 23.10.610(C).

"*Fish and wildlife habitat conservation area*" See ECDC 23.10.700(A).

“Floodplain” See ECDC 19.07.020.

“Footprint of existing development” or “footprint of development” means the area of a site that contains legally established: buildings; roads, driveways, parking lots, storage areas, walkways or other areas paved with concrete, asphalt or compacted gravel; outdoor swimming pools; patios.

“Frequently Flooded Areas” See ECDC 23.10.500(A).

“Geologically Hazardous Areas” See ECDC 23.10.600(A).

“Geologist” means a person licensed as a geologist, engineering geologist, or hydrologist in the state of Washington. For geologically hazardous areas, an applicant may choose a geologist or engineering geologist licensed in the state of Washington to assess the potential hazard.

“Geotechnical engineer” means a practicing geotechnical/civil engineer licensed as a professional civil engineer in the state of Washington who has at least five years of professional employment as a geotechnical engineer in responsible charge including experience with landslide evaluation.

“Grading” means any one or a combination of excavating, filling, or disturbance of that portion of the soil profile which contains decaying organic matter.

“Habitats of local importance” See ECDC 23.10.710(B)(3).

“Hazardous materials” means any material, either singularly or in combination, that is a physical or health hazard, whether the materials are in usable or waste condition, and any material that may degrade surface water or groundwater quality when improperly stored, handled, treated, used, produced, recycled, disposed of, or otherwise mismanaged. Hazardous materials also include: all materials defined as or designated by rule as a dangerous waste or extremely hazardous waste under Chapter 70A.300 RCW and Chapter 173-303 WAC; hazardous materials also include petroleum or petroleum products that are in liquid phase at ambient temperatures, including any waste oils or sludges.

“Hazardous materials inventory (HMI)” is an inventory of all current and anticipated types and quantities of hazardous materials that will be stored, handled, treated, used, produced, recycled, or disposed of at a facility as required in ECDC 23.10.420(C)(2), Hazardous Materials Inventory (HMI).

“Hazardous materials management plan (HMMP)” is a plan completed by the operator that demonstrates how the facility implements required BMPs as required in ECDC 23.10.420(C)(3), Hazardous Materials Management Plan (HMMP).

“Hazard tree” See ECDC 17.XX.XXX.

“Impact (to a critical area or buffer)” means a net loss of values or functions to a critical area or its buffer.

“In-lieu fee program” means a program which sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor, a governmental or nonprofit natural resource management entity.

“Landslide Hazard Areas” See ECDC 23.10.610(D).

“Mitigation” means the use of any of the actions listed in ECDC 23.10.250(E) for activities and development on sites containing critical areas, except for critical area aquifer recharge areas.

“Monitoring and Adaptive Management” means the process of monitoring, reporting, and improving permits, regulations, and programs to ensure the protection of critical areas.

“Native vegetation” means vegetation comprised of plant species which are indigenous to the Puget Sound region and which reasonably could have been expected to naturally occur on the site. “Native vegetation” does not include noxious weeds as defined by the state of Washington or Snohomish County.

“No Net Loss of Critical Areas” refers to the actions taken to achieve and ensure no overall reduction in existing ecosystem functions and values or the natural systems constituting the protected critical areas.

“Normal maintenance of vegetation” means removal of shrubs/nonwoody vegetation and trees (less than four-inch diameter at breast height) that occurs at least every other year. Maintenance also may include tree topping that has been previously approved by the city in the past five years.

“Noxious weeds” means any plant that is highly destructive, competitive or difficult to control by cultural or chemical practices, limited to those plants on the state noxious weed list contained in Chapter 16-750 WAC.

“Preservation” means actions taken to ensure the permanent protection of existing wetlands and fish and conservation areas.

“Priority Habitat” means a habitat type with unique or significant value to many species. An area identified and mapped as priority habitat has one or more of the following attributes: comparatively high fish and wildlife density, comparatively high fish and wildlife species diversity, important fish and wildlife breeding habitat, important fish and wildlife seasonal ranges, important fish and wildlife movement corridors, limited availability, high vulnerability to habitat alteration, and unique or dependent species.

“Priority Species” are fish and wildlife species requiring protective measures and/or management actions to ensure their survival. A species identified and mapped as priority species fit one or more of the following criteria: State-listed candidate species, vulnerable aggregations, and Species of recreational, commercial, and/or Tribal importance.

“Qualified critical areas consultant” or “qualified professional” means a person who has the qualifications specified herein to conduct critical areas studies pursuant to this chapter, and to make recommendations for critical areas mitigation. For geologically hazardous areas, the qualified critical areas consultant shall be a geologist or engineering geologist licensed in the state of Washington to assess the potential hazard. If development is to take place within a geologically hazardous area, the qualified critical areas consultant developing mitigation plans and design shall be a professional engineer licensed in the state of Washington and familiar with landslide and slope stability mitigation. For wetlands and fish and wildlife habitat priority areas, the qualified critical areas consultant shall be a specialist in botany, fisheries, wetland biology, and/or hydrology with a minimum of five years’ field experience with wetlands and/or streams in the Pacific Northwest. For critical aquifer recharge areas, the qualified professional must be a currently licensed Washington State geologist holding a current specialty license in hydrogeology.

“Reasonable economic use(s)” means the minimum use to which a property owner is entitled under applicable state and federal constitutional provisions in order to avoid a taking and/or violation of substantive due process.

"Recharge" means the process involved in the absorption and addition of water from the unsaturated zone to groundwater.

“Redeveloped land(s)” means those lands on which existing structures are demolished in their entirety to allow for new development. The director shall maintain discretion to determine if the demolition of a majority of existing structures or portions thereof constitute the redevelopment of a property or subject parcel.

“Reestablished” means actions performed to restore processes and functions to an area that was formerly a critical area; where the former critical area was lost by past alterations and activities.

“Rehabilitation” means improving or repairing processes and functions to an area that is an existing critical area that is highly degraded because one or more environmental processes supporting the critical area have been disrupted.

“Restoration” means the actions necessary to return a stream, wetland or other critical area to a state in which its stability, functions and values approach its unaltered state as closely as possible. For wetlands, restoration as compensatory mitigation may include reestablishment or rehabilitation.

“*Riparian management zone*” See ECDC 23.10.710(B)(8)

“Seismic Hazard Areas” See ECDC 23.10.610(E).

“Species of local importance” See ECDC 23.10.710(B)(3).

“Stormwater Management Manual” means the stormwater manual specified in Chapter 18.30 ECDC.

“Streams” means any area where surface waters produce a defined channel or bed which demonstrates clear evidence, such as the sorting of sediments, of the passage of water. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, storm or surface water runoff devices (drainage ditches) or other entirely artificial watercourses unless they are used by salmonids or used to convey streams naturally occurring prior to construction of such watercourse.

“Underground injection control well” means as defined in Chapter 173-218 WAC and associated guidance documents.

"Undeveloped land(s)" means land(s) on which manmade structures or land modifications (clearing, grading, etc.) do not exist. The director retains discretion to identify undeveloped land(s) in those instances where historical modifications and structures may have existed on a property or subject parcel in the past. "Wellhead protection area (WHPA)" means protective areas associated with public drinking water sources established by water systems and approved or assigned by the state Department of Health.

"Wetland functions" means those natural processes performed by wetlands, such as facilitating food chain production; providing habitat for nesting, rearing and resting sites for aquatic, terrestrial or avian species; maintaining the availability and quality of water; acting as recharge and/or discharge areas for ground water aquifers; and moderating surface water and stormwater flows.

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

"Wetlands" See ECDC 23.10.300(A).

23.10.040 Protection of critical areas.

Any action taken pursuant to this chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science, including the consideration of climate change impacts such as increased flooding, sea level rise, extreme heat, drought, wildfire risk, and shifting habitat conditions. All actions and developments shall be designed and constructed in accordance with ECDC 23.10.300(A), Mitigation sequencing, to avoid, minimize, and restore all adverse impacts, including those exacerbated by climate change. Applicants must first demonstrate an inability to avoid or reduce impacts before the use of actions to mitigate potential impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas or their buffers now or under projected future climate conditions.

23.10.050 Applicability, identification, inventory, mapping.

A. *Compliance.* No permit or authorization may be issued to alter land, water, vegetation, or to construct or modify any structure or improvement without first meeting the requirements of this chapter.

B. Critical areas regulated by this chapter include:

- Wetlands as designated in Article I: Wetlands;
- Critical aquifer recharge areas as designated in Article II: Critical Aquifer Recharge Areas;
- Frequently flooded areas as designated in Article III: Frequently Flooded Areas;
- Geologically hazardous areas as designated in Article IV: Geologically Hazardous Areas; and
- Fish and wildlife habitat conservation areas as designated in Article V: Fish and Wildlife Habitat Conservation Areas.

C. Critical areas maps. The City's critical area map is for reference only and is intended to help identify potential critical areas on a site. A site-specific investigation is required prior to any alteration to confirm the presence or absence of critical areas. The department will maintain and update critical area maps as new information becomes available. These maps include, but are not limited to:

- Federal Emergency Management Agency flood insurance rate maps;
- U.S. Geological Survey landslide, seismic, and volcano hazard maps;
- Washington Department of Natural Resources seismic hazard maps for Western Washington;
- Washington Department of Natural Resources slope stability maps;
- National Wetlands Inventory maps;
- Washington Department of Fish and Wildlife Priority Habitat and Species maps;
- (Other City-adopted critical area maps, including Critical Aquifer Recharge Areas and Geologically Sensitive Areas maps.

D. All areas within the city of Edmonds meeting the definition of one or more critical areas are hereby designated critical areas and are subject to the provisions of this chapter.

E. *Areas Adjacent to Critical Areas Subject to Regulation.* Areas adjacent to critical areas shall be considered within the jurisdiction of these requirements and regulations to support the intent of this chapter and ensure protection of the functions and values of critical areas.

F. *Potential Downstream Impacts to Type F streams.* Areas located within a watershed that drains to a Type F stream may be subject to additional review under this chapter when a proposed activity has the potential to affect the functions or values of the downstream Type F stream or its associated habitat. The director may require critical area reports, mitigation, or best management practices only to the extent necessary to evaluate and address such potential impacts.

23.10.060 General provisions.

A. *Relationship to Other Regulations.* The provisions of this chapter shall apply as an overlay and in addition to zoning, site development, stormwater management, building and other regulations adopted by the city of Edmonds. Where this chapter imposes more protective requirements for the environment, the requirements of this chapter shall prevail.

G. *SEPA Compliance.* These critical areas regulations shall be coordinated with review conducted under the State Environmental Policy Act (SEPA), as necessary and locally adopted.

C. Compliance with the provisions of this title chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, shoreline substantial development permits, Hydraulic Permit Act (HPA) permits, Section 106 of the National Historic Preservation Act, U.S. Army Corps of Engineers Section 404 permits, and National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter.

D. If application of this chapter would deny all reasonable use of a subject property, the owner may apply for a reasonable use variance pursuant to 23.10.280(2).

23.10.070 Use of Best available science, monitoring, and adaptive management.

A. Best available science (BAS).

1. *Protect Functions and Values of Critical Areas.* Critical areas reports and decisions to alter critical areas shall rely on the BAS to protect the functions and values of critical areas, and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish, such as salmon and bull trout, and their habitat, where applicable.

2. *BAS to Be Consistent with Criteria.* The best available science is that scientific information applicable to the critical area prepared by local, state, or federal natural resource agencies, a qualified scientific professional, or a team of qualified scientific professionals that is consistent with criteria established in WAC 365-195-900 through 365-195-925 and RCW 36.70A.172.

3. *Characteristics of a Valid Scientific Process.* In the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions, and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas. To determine whether information received during the permit review process is reliable scientific information, the director shall determine whether the source of the information displays the characteristics of a valid scientific process. Such characteristics are as follows:

    a. *Peer Review.* The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The proponents of the information have addressed the criticism of the peer reviewers. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed;

    b. *Methods.* The methods used to obtain the information are clearly stated and reproducible. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer reviewed to ensure their reliability and validity;

    c. *Logical Conclusions and Reasonable Inferences.* The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained;

    d. *Quantitative Analysis.* The data have been analyzed using appropriate statistical or quantitative methods;

    e. *Context.* The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge; and

f. *References.* The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

4. Nonscientific Information. Nonscientific information, such as anecdotal observations, nonexpert opinion, and local knowledge, may supplement scientific information, but it is not a substitute for valid and available scientific information.

5. Absence of Valid Scientific Information. When valid or complete scientific information is lacking, and this results in uncertainty about the risk a proposed activity may pose to the functions and values of a critical area , the director shall:

a. Take a "precautionary or a no-risk approach" that strictly limits development and land use activities until the uncertainty is sufficiently resolved; and

b. Require application of an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.

B. *Monitoring and adaptive management program.* The City may use adaptive management to support the ongoing protection of critical areas. Adaptive management is a science-based approach that incorporates new information, monitors outcomes, and adjusts management strategies when needed to better achieve intended functions and values. The specific methods, procedures, and tools used in adaptive management may vary over time and will be determined administratively, consistent with the general principles outlined in this chapter.

23.10.080 Allowed activities and exemptions.

A. *Purpose.* The purpose of this section is to identify activities that may occur within critical areas and their buffers, with or without a critical areas report.

B. *Applicability.* Activities allowed without a critical areas report are limited to those that, when implemented using appropriate best management practices, will not result in a net loss of critical area functions or values. All other activities require review under this chapter. Unless otherwise specified, activities allowed under this section may still require permits or approvals under other chapters of the Edmonds Community Development Code or applicable state or federal law.

C. *Best Management Practices (BMPs).* All allowed activities shall be conducted using the BMPs. The director may require field inspection to confirm the use of BMPs. Any incidental damage to a critical area shall be restored or mitigated at the responsible party's expense.

C. *Allowed Activities – No Critical Area Report Required.* The following activities are allowed and do not require preparation of a critical area report:

1. Allowed Activities within Critical Areas and Buffers.

2. *Minor Structural Modifications*. Maintenance, repair, or modification of a legally established structure that does not increase its footprint, alter a critical area or buffer, or increase hazard risk to life or property.
3. *Minor Site Investigative Work*. Activities necessary for permit submittal, including surveys, soil logs, percolation tests, hand-dug test pits, and similar non-intrusive work, provided disturbed areas are restored immediately and no lasting impacts occur.
4. *Minor Utility Projects.* Utility projects activities that:
    a. Have no practical alternative with less impact;
    b. Are limited to the placement of poles, signs, anchors, or vaults, or similar other small utility components; and
    c. Disturb no more than 75 square feet.
5. *Activities in Improved Right-of-Way.* Installation, repair, replacement, or modification of utilities within the improved portion of the public right-of-way or a city-approved private roadway, provided the activity:
    a. Does not alter a wetland or watercourse; and
    b. Does not increase sediment or stormwater discharge.
6. Navigational Aids and Boundary Markers. Installation or modification of navigational aids and boundary markers.
7. *Select Vegetation Removal Activities.* The following vegetation removal activities are allowed:
    a. Removal of invasive and noxious plant species shall be restricted to hand removal unless permits or approval from the appropriate regulatory agencies have been obtained for approved mechanical, biological or chemical treatment, or other removal techniques. Plants that appear on the Washington State and/or Snohomish County Noxious Weed Control Boards list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species.
    b. The removal of invasive, non-native plants and noxious weeds for the purpose of habitat maintenance or restoration when the area of work is restricted to under 1,500 square feet in area per year.
    c. Vegetation removal for habitat protection or restoration in wetlands or fish and wildlife habitat conservation areas may exceed the 1,500-square-foot limit when the work is proposed and managed by a qualified nonprofit or similar organization approved by the City or another agency with jurisdiction, and is supported by a City-approved proposal describing the project scope and location, providing appropriate supervision, and including a monitoring and inspection schedule acceptable to the City.
    d. Hazardous Trees. The removal of hazard trees within critical areas and their buffers may be approved by the director, provided the trees are documented as hazardous and the following conditions are met:
        i. *Documentation and review*. Prior to any tree cutting, the applicant shall submit a report from an ISA- or ASCA-certified arborist, or a registered landscape architect, documenting that the tree presents a high or extreme risk using a Level 2 ISA Tree Risk Assessment.

The report shall include a replanting schedule consistent with an approved restoration plan.

ii. *Tree Pruning or Removal Methods.* Tree cutting shall be limited to pruning or crown thinning necessary to remove the hazard, unless the arborist or landscape architect determines that full removal is warranted due to a high or extreme risk. Where feasible, hazardous trees shall be converted to wildlife snags rather than removed entirely. If removal to a stump is required, tree roots shall remain intact and undisturbed.

iii. *Imminent Risk*. When a tree poses an imminent risk to public safety or property, the landowner may prune or cut the tree into a wildlife snag before receiving written City approval. Within 14 days of such action, the landowner shall submit to the director: (a) a report from an ISA- or ASCA-certified arborist documenting the hazard and (b) a restoration plan demonstrating compliance with this section.

iv. *Tree Replacement.* Any entity, including public utilities, removing a hazard tree shall replace it at a ratio of two replacement trees for each tree removed (2:1) within one year, in accordance with an approved restoration plan. Replacement trees shall be native species and indigenous to the site, a minimum of one to two inches DSH for deciduous trees or six feet in height for evergreens. Where replanting in the same location would create a new hazard or impact the critical area, replacement may occur in a nearby location.

v. *Hazardous trees that provide critical habitat.* If a hazardous tree provides critical habitat (e.g., an eagle or heron nest), a qualified wildlife biologist shall be consulted to determine appropriate timing, removal methods, and other agency permitting to minimize impacts.

vi. *Vegetation removal.* All vegetation removed (e.g., stems, branches) shall remain within the critical area or buffer unless removal is necessary to prevent the spread of disease or pests, protect the understory, or the debris poses a risk to slope stability.

vii. *Hazardous trees that do not pose an imminent risk*. In advance of any cutting, the applicant submits a report to the City from an ISA-certified arborist that documents the hazard as a high- or extreme risk using Level 2 ISA Tree Risk Assessment and provides a replanting schedule for the replacement trees.

viii. *Prohibited vegetation removal*. Except as provided above or as part of an approved alteration, the removal of vegetation or woody debris from a fish and wildlife habitat conservation area or wetland is prohibited.

8. *Pedestrian Trails.* Construction of new pedestrian-only trails located in the outer 25 percent of a wetland buffer, riparian management zone, or other critical area buffer when:
    a. No feasible alternative exists;
    b. Constructed of pervious materials;
    c. Limited to five feet in width;
    d. Avoids removal of significant trees.

Raised boardwalks utilizing nontreated pilings may be used where necessary.

9. Installation of fences in geologically hazardous areas that do not require grading or structural foundations. Fence posts shall be installed using hand tools that do not alter slope stability or impact critical area functions.

D. *Allowed Activities – Critical Areas Report Required.* The following activities may occur in critical areas or buffers with preparation of a critical area report demonstrating consistency with this chapter:

1. *Wetland - Buffer Uses.*
    a. Conservation, restoration, or preservation activities required as mitigation.
    b. Passive recreation facilities, including walkways, boardwalks, wildlife viewing structures, and small-scale fishing access, when located and designed to minimize disturbance and placed in the outer 25 percent of the buffer unless otherwise justified.
    c. Stormwater conveyance and dispersion facilities within the outer 25 percent of buffers for Category III and IV wetlands only, consistent with ECDC 18.30, Stormwater Management, including Minimum Requirement No. 8, Wetland Protection.
2. *Geologically Hazardous Areas - Seismic Hazard Areas.*
    a. Construction of non-residential buildings under 2,500 square feet of floor area or roof area, whichever is greater, and which are not used as places of employment or public assembly.
    b. Additions to existing single-story residences that are 250 square feet or less.
3. Fish and wildlife habitat conservation areas – Riparian Management Zones. The following uses may be permitted within a riparian management zone in accordance with the review procedures of this chapter; provided, they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the riparian management zone and adjacent stream:
    a. *Pedestrian Trails.* After reviewing the proposed development and technical reports, the director may determine that a pedestrian-only trail may be allowed in a riparian management zone; provided, proposed development meets the requirements in ECDC 23.10.080(C)(8), and appropriate provisions are made to protect water quality. No motorized vehicles shall be allowed within a stream or the riparian management zone except as required for necessary maintenance or security. Vegetative edges, structural barriers, signs or other measures must be provided wherever necessary to protect streams by restricting vehicular access to designated public use or interpretive areas.

E. Exemptions.

1. *Exemption Request and Review Process.* The proponent of the activity may submit a written request for exemption to the director that describes the activity and states the exemption listed in this section that applies.

    The director shall review the exemption request to verify that it complies with this chapter and approve or deny the exemption. If the exemption is approved, it shall be placed on file with the city of Edmonds.

If the exemption is denied, the proponent may continue in the review process and shall be subject to the requirements of this chapter.

2. *Exempt Activities and Impacts to Critical Areas.* All exempted activities shall avoid impacts to critical areas. To be exempt from this chapter does not give permission to degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area associated with the exempted activity shall be subject to the mitigation requirements and sequencing in 23.10.250 ECDC and 23.10.260 ECDC at the responsible party's expense.

3. *Exempt Activities.* The following development, activities, and associated uses shall be exempt from the provisions of this chapter; provided, that they are consistent with the provisions of other local, state, and federal laws and requirements:

    a. *Emergencies.* Those activities necessary to prevent an immediate threat to public health, safety, or welfare, or that pose an immediate risk of damage to private property and that require remedial or preventative action in a time frame too short to allow for compliance with the requirements of this chapter.

    b. Emergency actions that create an impact to a critical area or its buffer shall use reasonable methods to address the emergency; in addition, they must minimize impacts to the critical area or its buffer. The person or agency undertaking such action shall notify the director within one working day following commencement of the emergency activity. For activities undertaken through emergency provisions of a State agency having jurisdiction, a copy of the authorization shall be provided to the director within 30 days of the action. The director shall determine if the action taken was within the scope of the emergency actions allowed in this subsection within 30 days from date of submittal. If the director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then enforcement provisions of ECDC 23.10.110, Unauthorized critical area alterations and enforcement, shall apply.

    c. After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and/or mitigation for any loss to the functions and values of the critical area and its buffers resulting from the emergency action in accordance with an approved critical areas report and mitigation plan. Within 30 days after an emergency action that impacts a critical area, the person or agency undertaking the action shall submit a critical area report, and mitigation plan for review and approval by the director in accordance with the review procedures contained herein. Restoration and/or mitigation activities must be initiated within one year of the date of the emergency and completed in a timely manner.

    d. *Operation, Maintenance, or Repair.* Operation, maintenance, or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees, or drainage systems that do not require a construction permit, are exempt, provided that:

        i. The activity does not further alter, encroach upon, or impact the critical area or buffer.

        ii. The activity does not result in a net loss to the critical area or buffer functions or values

        iii. The activity does not increase the risk to life or property.

iv. When operation and maintenance requires removal of native vegetation, it shall be limited the minimum necessary to complete the work.

e. *Passive Outdoor Activities.* Recreation, education, and scientific research activities that do not degrade the critical area, including fishing, hiking, and bird watching.

f. *Modifications to Existing Structures within Critical Areas and/or Buffers.* Modification to a legally constructed structure existing within a critical area or buffer shall be allowed when the modification:

i. Does not increase the footprint of the structure; and

ii. Does not increase the impact to a the critical area or buffer; and

iii. Does not increase risk to life or property as a result of the proposed modification or replacement.

This provision shall be interpreted to supplement the provisions of the Edmonds Community Development Code relating to nonconforming structures in order to permit the full reconstruction of a legal nonconforming building within its footprint.

g. *Development Proposals within Riparian Management Areas functionally isolated from Streams or Wetlands.* Adjacent areas that are functionally isolated from a stream or wetland due to existing, legally established structures or paved areas may be exempted from the riparian management zones widths if proven scientifically to be functionally isolated from the stream or wetland. The director will require the applicant to provide a site assessment critical areas report, prepared in accordance with ECDC 23.10.100, that includes a functional analysis documentation report by a qualified professional that demonstrates the proposed development area is functionally isolated. The director shall consider, and evaluate the hydrologic, geologic, and/or biological habitat connection potential and the extent and permanence of the physical separation.

23.10.100 Restoration projects.

A. When a critical area restoration project is proposed that includes actions beyond the activities allowed per ECDC 23.10.080, may alter or affect critical areas or their buffers, and is not required as mitigation for a development proposal, the director or hearing examiner (as applicable) may grant relief from standard critical area or their buffer requirements if:

1. The restoration project is permitted and/or otherwise authorized by state or federal agencies having jurisdiction over the proposed project activities;

2. The restoration project will result in a net increase in the functions and values of the affected critical areas;

3. A copy of the restoration plan, as submitted to authorizing state or federal agency, is submitted to the director for review and consideration of any conditions that may be necessary to mitigate any negative effects during the restoration work.

B. The director or hearing examiner may require a buffer width necessary to ensure success and enhancement of the values and functions of the areas adjacent to the stream or wetland.

C. In determining whether to allow a deviation from standard buffer widths, the director or hearing examiner shall consider the proposed width along with site-specific hydrologic, geologic, and habitat data. If a reduced buffer is warranted, the director or hearing examiner may approve it for the restoration site.

23.10.110 Unauthorized alterations and enforcement.

A. When a critical area or its buffer has been altered in violation of this chapter or the provisions of Chapter 7.200 ECC, all ongoing development work shall stop, and the critical area shall be restored. The director shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of the provisions of this chapter. The director may also require an applicant or property owner to take immediate action to ensure site stabilization and/or erosion control as needed.

B. *Requirement for Restoration Plan.* All development work shall remain stopped until a restoration plan is prepared and approved by the director. Such a plan shall be prepared by a qualified professional using the best available science and shall describe how the actions proposed meet the minimum requirements described in subsection (C) of this section. The director may, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. *Minimum Performance Standards for Restoration.* The following minimum performance standards shall be met for the restoration of a critical area; provided, that if the violator can demonstrate that greater functional and habitat values can be obtained, these standards may be modified.

1. For unauthorized alterations to frequently flooded areas, wetlands, and fish and wildlife habitat conservation areas:

    a. The historic structural and functional values shall be restored, including water quality and habitat functions;

    b. The historic soil types and configuration shall be replicated;

    c. The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities.

    d. The historic functions and values shall be replicated at the location of the alteration; and

    e. Information demonstrating compliance with the requirements in ECDC 23.10.250, Mitigation plan requirements, shall be submitted to the City.

2. For alterations to flood and geological hazards, the following minimum performance standards shall be met:

a. The hazard shall be reduced to a level equal to, or less than, the predevelopment hazard;

b. Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and

c. The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.

3. *Site Investigations.* The director is authorized to make site inspections and take such actions as are necessary to enforce this chapter. The director shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

4. *Penalties.* Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this chapter shall be guilty of a misdemeanor and subject to penalties not to exceed a square footage cost of $10.00 per square foot of impacted critical area and critical area buffer and/or a per tree penalty consistent with ECDC 17.130.100(C). Any development carried out contrary to the provisions of this chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the state of Washington. The city of Edmonds may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this chapter.

23.10.120 Markers and signs.

A. General Requirements

1. The boundary at the outer edge of any critical area or its buffer may be required by the director, be required to be delineated with signage, fencing, or other markers as necessary to prevent unauthorized disturbance and protect critical area functions and values.

2. The director may modify these requirements to ensure protection of sensitive features or wildlife needs.

3. All signs and fencing required under this section shall be installed prior to final occupancy or site use, when applicable to the permit type, and maintained by the property owner in perpetuity.

B. Temporary markers.

1. Prior to site alteration, the outer boundary of the critical area or buffer, and the limits of approved disturbance areas, shall be marked in the field in a manner that clearly prevents unauthorized intrusion.

2. Temporary markers shall be maintained throughout construction and may be subject to inspection by the director.

3. Temporary markers shall remain in place until any required permanent signs or fencing are installed.

C. Permanent Signs.

1. As a condition of any permit or authorization issued under this chapter, the director may require the installation of permanent signs along the boundary of a critical area.
2. Permanent signs shall be made of durable material such as enamel-coated or metal faced signage and affixed to metal or another nontreated material of equal durability.
3. Signs shall be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity.
4. The sign shall be worded as follows or with alternative language approved by the director:

Protected [Critical Area Type] Area

Do Not Disturb

Contact the City of Edmonds
Regarding Uses and Restrictions

D. *Permanent fencing.*

1. The director may require permanent fencing along the outer edge of a critical area buffer when necessary to protect the area's functions and values.
2. Fencing shall be constructed of materials that do not interfere with wildlife movement and shall be designed to minimize habitat impacts.
3. The following circumstances may warrant fencing, unless waived by the director:
    a. Development proposals for single-family plats, short plats, multifamily, mixed-use, or commercial projects;
    b. Parks where adjacent uses involve active recreation;
    c. Where domestic grazing animals are present or may be introduced on site; or
    d. Where buffer averaging or reductions are approved.
4. Breaks in fencing may be permitted for access to approved buffer uses.

23.10.130 Notice on title.

A. *Notice on Title.* The owner of any property with field-verified presence of critical areas and/or critical areas buffers, except critical aquifer recharge areas, for which a permit application is submitted shall, as a condition of permit issuance, record a notice of the existence of such critical area and/or critical area buffer against the property with the Snohomish County auditor's office. The notice shall be approved by the director and the city attorney for compliance with this provision. The titleholder will have the right to challenge this notice and to have it released if the critical area designation no longer applies; however, the titleholder shall be responsible for completing a critical areas report, subject to approval by the director, before the notice on title can be released.

23.10.140 Building setbacks.

A. Buildings and other structures shall be set back a minimum distance of 15 feet from the edges of all critical area or their buffers. In addition to other allowances provided by this chapter, the following may be allowed in the building setback area from a critical area:

1. Landscaping;
2. Uncovered decks; and
3. Building overhangs, may extend no more than 30 inches into the setback area.

Impervious ground surfaces, such as driveways and patios; provided, that such improvements may be subject to water quality regulations as adopted in the current editions of the International Residential Code and International Building Code, as adopted in ECDC Title 19.

Critical Area Review Procedures

23.10.200 Critical area review sequence.

A. *Purpose.* The purpose of this section is to establish a clear and consistent review sequence for proposals requiring a critical areas report. The review process ensures that potential impacts are identified early, appropriate studies and mitigation measures are applied, and projects comply with the requirements of this chapter. The sequence is intended to:

   a. Identify critical areas and potential hazards;
   b. Determine applicable standards and required reports;
   c. Evaluate mitigation measures; and
   d. Confirm the proposal is consistent with other applicable regulations and standards prior to project approval.

B. Critical areas compliance requirements flowchart.

C. *Prior to any alteration or development activity.*

   1. *Determination of the presence of critical areas.* A property owner, or an authorized representative, must submit a critical area checklist form through the City's permitting system. Staff will review the checklist, conduct a site visit, and determine whether there are critical areas and/or critical area buffers on or near the site. Critical area determinations are valid for a period of five years, except when recent events or updates to best available science justify a new critical areas determination.

   2. *Critical Areas Report Required.* If critical areas or their buffers are found, a critical areas report addressing the applicable critical area requirements of this chapter is required if the proposed activity impacts critical areas or their buffers. The report shall:

      a. Address mitigation sequencing in accordance with ECDC 23.10.250(E); and
      b. Meet all requirements for critical areas reports set forth in ECDC 23.10.210.

D. *Optional Pre-application Consultation.*

   1. Any person preparing to apply for development or use of land that may be regulated by the provisions of this chapter may request a pre-application meeting with the director prior to applying for development or other approval. At this meeting, the director shall discuss the requirements of this chapter; provide critical areas maps, scientific information, and other source materials; outline the review process; and work with the activity proponent to identify any potential concerns that might arise during the review process, in addition to discussing other permit procedures and requirements. All applicants, regardless of participation in a preapplication meeting, are held fully responsible for knowledge and disclosure of critical areas on, adjacent to, or associated with a subject parcel and full compliance with the specific provisions and goals, purposes, objectives, and requirements of this chapter.

E. *Application review and preliminary decision.* The director shall review the application materials for compliance with the requirements of this chapter and issue a preliminary Critical Areas Notice of Decision as follows:

1. *Favorable decision.* Issued when the director determines that the proposed activity either avoids impacts to the critical area altogether or complies with the provisions of this chapter. Any conditions of the preliminary Critical Areas Notice of Decision shall be included in said notice, attached to the underlying permit file, and be considered during the next phase of review in accordance with any other applicable codes or regulations. Any subsequent changes to the proposed activity that conflict with the conditions set forth in the notice shall void the preliminary decision and be subject to further review. A favorable decision should not be construed as endorsement or approval of any underlying permit or approval.
2. *Unfavorable decision.* Issued when the director determines that the proposed activity is not exempt or does not adequately mitigate its impact on critical areas and/or does not comply with the criteria in ECDC 23.10.200(D), Review criteria, and the provisions of this chapter. No proposed activity or permit shall be approved or issued if the impact to critical areas is not avoided, mitigated, and/or comply with the requirements of this chapter.

F. *Reconsideration of an unfavorable decision*. Following notice of decision that the proposed activity does not meet the review criteria and/or does not comply with the applicable provisions of this chapter, the applicant may request consideration of a revised critical area report. If the revision is found to be substantial and relevant to the critical area review, the director may reopen the critical area review and make a new decision based on the revised report.

G. *Public notice.* When the underlying permit type requires public notice under ECDC 20.01.003, the preliminary Critical Areas Notice of Decision, including any conditions of a favorable decision, shall be included in any Notice of Application required pursuant to 20.03.002 ECDC, Notice of Application. The director shall provide opportunity for public comment on the Notice of Decision as to whether the proposed activity and mitigation, if any, is consistent with the provisions of this chapter.

H. Completion of the critical areas review. The director's decision regarding critical areas pursuant to this chapter shall be final, concurrent with the final project decision to approve, condition, or deny the development proposal or other activity involved.

23.10.210 Critical areas report requirements - General.

A. *Preparation by Qualified Professional.* The applicant shall submit a critical areas report prepared by a qualified professional as defined in ECDC 23.10.030.

B. *Independent Review of Critical Areas Reports.* Critical areas studies and reports on geologically hazardous areas and those developed by an applicant representative or consultant not as part of a three-party contract shall be subject to independent review. This independent review shall be performed by a qualified technical consultant selected by the city with all costs borne by the applicant. The purpose of such independent review is to provide the city with objective technical assistance in evaluating the accuracy of submitted reports and/or the effects on critical areas which may be caused by a development proposal and to facilitate the decision-making process. The director may also have technical assistance provided by appropriate resource agency staff if such assistance is available in a timely manner. This requirement may be selectively waived at the discretion of the director, provided the applicable qualified professional for the project provides written concurrence, determination, details, facts and/or data that individual site conditions warrant an exemption from outside peer review.

C. *Best Available Science.* The critical areas report shall use scientifically valid methods and studies in the analysis of critical areas data and field reconnaissance and reference the source of science used. The critical areas report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this chapter.

D. *Minimum Critical Area Report Contents.* At a minimum, the report shall contain the following:

1. The name and contact information of the applicant, a description of the proposal, and identification of the permit requested;
2. A copy of the site plan for the development proposal including:
    a. A map to scale depicting critical areas, buffers, the development proposal, and any areas to be cleared;
    b. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;
    c. The site plan shall identify and locate all vegetation of six inches DSH or larger;
3. The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
4. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, and buffers within 200 feet of the proposed project area;
5. A description of efforts made to apply mitigation sequencing pursuant to ECDC 23.10.250(E), to avoid, minimize, and mitigate impacts to critical areas. Demonstration of avoidance of impacts must include, where applicable: alternative building locations on the property; adjustments to the project footprint and orientation; and/or alternate building design;
6. A statement specifying the accuracy of the report and all assumptions made and relied upon;
7. A description of the methodologies used to conduct the critical areas study, including references;
8. Plans for adequate mitigation, as needed to offset any critical areas impacts, in accordance with the mitigation plan requirements in ECDC 23.10.250(F); and
9. An evaluation of the functions and values of affected critical areas at a scale appropriate to the functions being assessed. The evaluation shall consider interrelated ecosystems and processes that may extend beyond parcel boundaries, including watershed- or regional-scale influences, where relevant to maintaining overall ecological function.

E. *Supplemental Information.* A critical areas report may incorporate, be supplemented by or composed, in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the director. At the discretion of the director, reports previously compiled or submitted as part of a proposal for development may be used as a critical areas report to the extent that the requirements of this section and the report requirements for each specific critical area type are met.

F. Expiration. Critical areas reports shall be considered valid for five years, except when recent events or updates to best available science justify a new report; after such date the city shall determine whether a revision or additional assessment is necessary.

G. Modifications to requirements.

1. *Limitations to Study Area.* The director may limit the required geographic area of the critical areas report as appropriate if:

    a. The applicant, with assistance from the city of Edmonds, cannot obtain permission to access properties adjacent to the project area; or

    b. The proposed activity will affect only a limited part of the subject site.

2. *Modifications to Required Contents.* The applicant may consult with the director prior to or during preparation of the critical areas report to obtain approval of modifications to the required contents of the report where, in the judgment of a qualified professional, a modification to the required contents is required to adequately address the potential critical area impacts and required mitigation.

3. *Additional Information Requirements.* In addition to the requirements in ECDC 23.10.210, the director may require additional information to be included in the critical areas report when determined to be necessary to review of the proposed activity in accordance with this chapter. Additional information that may be required includes, but is not limited to:

    a. Historical data, including original and subsequent mapping, aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;

    b. Grading and drainage plans; and

    c. Information specific to the type, location, and nature of the critical area.

23.10.220 Critical areas report requirements – Specific to critical area types.

A. In addition to the general critical areas report requirements of ECDC 23.10.210, critical areas reports for specific critical area types must meet the requirements of this section, as applicable. Critical areas reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

B. *Wetlands - Additional Critical Areas Report Requirements.*

1. Critical areas report requirements for wetlands may be met in “stages” or through multiple reports. The typical sequence of potentially required reports that may in part or in combination fulfill the requirements of this section include:

    a. Wetland reconnaissance report documenting the existence and general location of wetlands in the vicinity of a project area;

    b. Wetland delineation report documenting the extent and boundary of a jurisdictional wetland per RCW 36.70A.175; and

c. Wetland mitigation report documenting potential wetland impacts and mitigation measures designed to retain or increase the functions and values of a wetland in accordance with the general provisions of this chapter.

2. A wetland critical areas report may include one or more of the above three report types, depending on the information required by the director and the extent of potential wetland impacts. The director maintains the authority and discretion to determine which report(s) alone or combined are sufficient to meet the requirements outlined below and to waive report requirements based upon site conditions and the potential for project impacts.

3. *Area Addressed in Critical Area Report - Wetlands.* In addition to the requirements in ECDC 23.10.210(D), the following areas shall be addressed in a critical area report for wetlands:

   a. The project area of the proposed activity;

   b. A description of the data collection methodology, including the date(s) of data collection, the data forms used for wetland delineation, and a map identifying data collection points and the boundaries of the delineated wetland, Wetland field data forms used for completion of wetland ratings shall be consistent with the Washington State Wetland Rating System for Western Washington: 2014 Update or as amended;

   c. All wetlands and recommended buffers within 200 feet of the project area; and

   d. All shoreline areas, water features, floodplains, associated streams, and other critical areas, and related buffers within 200 feet of the project area. The location and extent of wetlands and other critical areas existing outside of the project area or subject parcel boundary may be shown in approximation as practical and necessary to provide an assessment of potential project effects.

4. *Wetland Analysis.* A critical areas report for wetlands shall contain an analysis of the wetlands, including the following site- and proposal-related information at a minimum:

   a. A written assessment and accompanying maps of the wetlands and buffers within 200 feet of the project area, including the following information at a minimum:

      i. Wetland delineation and required buffers;

      ii. Existing wetland acreage;

      iii. Wetland category;

      iv. Vegetative, faunal, and hydrologic characteristics;

      v. Soil and substrate conditions;

      vi. Topographic elevations, at two-foot contours; and

      vii. A discussion of the water sources supplying the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, and evidence of recharge or discharge, evidence of water depths throughout the year: drift lines, algal layers, moss lines, and sediment deposits).

The location, extent and analyses of wetlands not contiguous with the subject parcel existing outside of the immediate project area may be described in approximation as practical and necessary to provide an assessment of potential project effects and hydrologic/ecological connectivity to on-site wetlands and other critical areas.

b. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land use activity.

c. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and wetland functions.

d. Functional evaluation for the wetland and adjacent buffer using a local or state agency staff-recognized method and including the reference of the method and all data sheets.

e. Proposed mitigation, if needed, including a written assessment and accompanying maps of the mitigation area, including the following information at a minimum:

i. Existing and proposed wetland acreage;

ii. Vegetative and faunal conditions;

iii. Surface and subsurface hydrologic conditions including an analysis of existing and future hydrologic regime and proposed hydrologic regime for enhanced, created, or restored mitigation areas;

iv. Relationship to the watershed and existing waterbodies;

v. Soil and substrate conditions, topographic elevations;

vi. Existing and proposed adjacent site conditions;

vii. Required wetland buffers; and

viii. Property ownership.

f. A scale map of the development proposal site and adjacent area. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs.

g. A bond estimate for the installation (including site preparation, plant materials and installation, fertilizers, mulch, and stakes) and the proposed monitoring and maintenance work for the required number of years.

C. Frequently Flooded Areas - Additional Critical Areas Report Requirements. Critical areas reports for frequently flooded areas must meet the requirements of this section and demonstrate consistency with ECDC 19.07, Flood Damage Prevention, and the current editions of the International Residential Code and International Building Code, as adopted in ECDC Title 19.

1. Frequently Flooded Area Assessment. The report shall evaluate:

a. The site area of the proposed activity;

b. All special flood hazard areas within 200 feet of the project area, as identified on FEMA flood-insurance rate maps; and

c. Any mapped floodways or other flood-prone areas within 200 feet of the project site; and

d. Any fish-passable or anadromous-fish-bearing watercourses within the affected floodplain.

2. Flood Hazard Assessment. The report shall include, at a minimum:

a. Site and Construction Plans. Plans and elevations consistent with the submittal standards of ECDC 19.07.070, identifying:

i. Regulatory floodplain and floodway boundaries, base-flood elevations, and other critical-area features;

ii. Existing and proposed structures, fill, material storage, utilities, drainage facilities, and clearing limits; and

iii. Finished-floor elevations and proposed flood-proofing measures.

b. Watercourse Alteration. Natural watercourses shall not be altered unless unavoidable. If alteration is proposed, the report shall include:

i. A plan showing the extent of alteration or relocation;

ii. An assessment of the watercourse's functions and habitat value, including fish-passage potential; and

iii. A maintenance program ensuring the altered or relocated segment retains its flood-carrying capacity, consistent with ECDC 19.07.100, Watercourse Alterations and Maintenance.

D. *Geologically Hazardous Areas - Additional Critical Areas Report Requirements.* Geotechnical report(s) shall be required whenever a potential landslide hazard area is located within 50 feet of the proposed development site; whenever a development site is located within a seismic hazard area; or when otherwise determined as warranted by the director (e.g., a distance equal to the height of the slope).

1. *Area Addressed in Critical Areas Report.* The following areas shall be addressed in a critical areas report for geologically hazardous areas:

a. The project area of the proposed activity; and

b. All geologically hazardous areas within 200 feet of the project area or that have the potential to be affected by the proposal.

2. *Geological Hazards Assessment.* The report shall include a field investigation and contain an assessment of whether or not each type of geologic hazard identified in ECDC 23.10.610 is present or not present and if development of the site will increase the risk of landslides or erosion on or off the site. Geotechnical reports shall be prepared, stamped and signed by a qualified professional. These reports must address all the following requirements for approval:

a. Be appropriate for the scale and scope of the project;

b. Include a discussion of all geologically hazardous areas on the site and any geologically hazardous areas off site potentially impacted by the proposed project. If the affected area extends beyond the subject property, the geology hazard assessment may utilize existing data sources pertaining to that area;

c. Clearly state that the proposed project will not decrease slope stability or pose an unreasonable threat to persons or property either on or off site and provide a rationale as to those conclusions based on geologic conditions and interpretations specific to the project;

d. Provide adequate information to determine compliance with the requirements of this chapter;

e. Follow the guidelines set forth in the Washington State Department of Licensing Guidelines for Preparing Engineering Geology Reports in Washington (2006).

3. If a landslide or erosion hazard is identified, in accordance with ECDC 23.10.610, provide minimum setback recommendations for avoiding the landslide or erosion hazard, other recommendations for site development so that the frequency or magnitude of landsliding or erosion on or off the site is not altered.

4. *Mitigation of Long-Term Impacts.* When hazard mitigation is required, the mitigation plan shall specifically address how the activity maintains or reduces the preexisting level of risk to the site and all other properties potentially impacted on a long-term basis (equal to or exceeding the projected lifespan of the activity or occupation). Proposed mitigation techniques shall be considered to provide long-term hazard reduction only if they do not require regular maintenance or other actions to maintain their function. Mitigation may also be required to avoid any increase in risk above the preexisting conditions following abandonment of the activity.

5. *Additional Technical Information Requirements for Projects within Erosion and Landslide Hazard Areas.* In addition to the basic critical areas report requirements for geologically hazardous areas provided in (1) through (4) of this section, technical information for any development within erosion and landslide hazard areas shall meet the requirements of Chapter 19.10 ECDC and include the following information at a minimum:

a. *Site Plan.* The critical areas report shall include a copy of the site plan for the proposal showing:

i. The height of slope, slope gradient, and cross-section of the project area;

ii. The location of springs, seeps, or other surface expressions of ground water on or within 200 feet of the project area or that have the potential to be affected by the proposal; and

iii. The location and description of surface water runoff features;

b. *Hazards Analysis.* The hazards analysis component of the critical areas report shall specifically include:

i. A description of the extent and type of vegetative cover;

ii. A description of subsurface conditions based on data from site-specific explorations;

iii. Descriptions of surface and ground water conditions, public and private sewage disposal systems, fills and excavations, and all structural improvements;

iv. An estimate of slope stability and the effect construction and placement of structures will have on the slope over the estimated life of the structure;

v. An estimate of the bluff retreat rate or an estimate of the percent risk of landslide area expansion that recognizes and reflects potential catastrophic events such as seismic activity or a 100-year storm event;

vi. Consideration of the run-out hazard of landslide debris and/or the impacts of landslide run-out on downslope properties;

vii. A study of slope stability including an analysis of proposed cuts, fills, and other site grading;

viii. A documented recommendation for buffer size in accordance with ECDC 23.10.630. Any buffer recommendation below the minimum 15-foot requirement must be substantiated by the report.

ix. Recommendations for building siting limitations; and

x. An analysis of proposed surface and subsurface drainage, and the vulnerability of the site to erosion;

c. *Geotechnical Engineering Report.* The technical information for a project within a landslide hazard area shall include a geotechnical engineering report prepared by a licensed engineer that presents engineering recommendations for the following:

i. Parameters for design of site improvements including appropriate foundations and retaining structures. These should include allowable load and resistance capacities for bearing and lateral loads, installation considerations, and estimates of settlement performance;

ii. Recommendations for drainage and subdrainage improvements;

iii. Earthwork recommendations including clearing and site preparation criteria, fill placement and compaction criteria, temporary and permanent slope inclinations and protection, and temporary excavation support, if necessary; and

iv. Mitigation of adverse site conditions including slope stabilization measures and seismically unstable soils, if appropriate;

d. *Erosion and Sediment Control Plan.* For any development proposal on a site containing an erosion hazard area, an erosion and sediment control plan shall be required. The erosion and sediment control plan shall be prepared in compliance with requirements set forth in Chapter 18.30 ECDC.

6. *Limited Report Requirements for Stable Erosion Hazard Areas.* At the director's discretion, detailed critical areas report requirements may be waived for erosion hazard areas with stable slopes. Report requirements for stable erosion hazard areas may be met through construction documents that shall include at a minimum an erosion and sediment control plan prepared in compliance with requirements set forth in Chapter 18.30 ECDC.

7. *Seismic Hazard Areas.* In addition to the basic critical areas report requirements for geologically hazardous areas provided in (1) through (4) of this section, a critical areas report for a seismic hazard area shall also meet the following requirements:

    a. The hazards analysis shall include a complete discussion of the potential impacts of seismic activity on the site (for example, forces generated and fault displacement).

    b. A geotechnical engineering report shall evaluate the physical properties of the subsurface soils, especially the thickness of unconsolidated deposits and their liquefaction potential. If it is determined that the site is subject to liquefaction, mitigation measures appropriate to the scale of the development shall be recommended and implemented. [Ord. 4026 § 1 (Att. A), 2016; Ord. 3527 § 2, 2004].

E. Fish and Wildlife Habitat *Conservation Areas - Additional Critical Areas Report Requirements.* Critical area reports for fish and wildlife habitat conservation areas must meet the requirements of this section.

1. *Areas Addressed in Critical Areas Report.* The following areas shall be addressed in a critical areas report for fish and wildlife habitat conservation areas:

    a. The project area of the proposed activity;

    b. All fish and wildlife habitat conservation areas and recommended buffers within 200 feet of the project area;

    c. All shoreline areas, floodplains, other critical areas, and related buffers within 200 feet of the project area; and

    d. A discussion of the efforts to avoid and minimize potential effects to these resources and the implementation of mitigation/enhancement measures as required.

2. *Habitat Assessment.* A habitat assessment is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical areas report for a fish and wildlife habitat conservation area shall contain an assessment of habitats, including the following site- and proposal-related information at a minimum:

    a. Detailed description of vegetation on and adjacent to the project area and its associated buffer;

    b. A description of the watershed in which the project is located;

    c. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;

d. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area.

3. *Additional Technical Information Requirements for Streams and Riparian Management Zones.* Critical area report requirements may be met, at the discretion of the director, through submission of one or more specific report types:

   a. If an enhancement to the riparian management zone is proposed per ECDC 23.10.730(D)(2) to reduce the required width of the riparian management zone, or as part of project mitigation required by the director, a riparian management zone enhancement plan may be submitted to fulfill the requirements of this section.

   b. If no project impacts are anticipated and riparian management zone widths are retained, a stream survey report, general critical areas report or other reports alone or in combination may be submitted as consistent with the specific requirements of this section.

4. In addition to the basic critical areas report requirements for fish and wildlife habitat conservation areas provided in subsections (1) through (2) of this section, technical information on streams shall include the following information at a minimum:

   a. A written assessment and accompanying maps of the stream and associated hydrologic features within 200 feet of the project area, including the following information at a minimum:

      i. Stream survey showing the ordinary high water mark(s);

      ii. Standard stream buffer boundary;

      iii. Boundary for proposed reduced stream buffers;

      iv. Vegetative, faunal, and hydrologic characteristics;

      v. Soil and substrate conditions; and

      vi. Topographic elevations, at two-foot contours;

   b. A detailed description and functional assessment of the stream buffer under existing conditions pertaining to the protection of stream functions, fish habitat and, in particular, potential anadromous fisheries;

   c. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and stream functions;

   d. Proposed buffer enhancement, if needed, including a written assessment and accompanying maps and planting plans for buffer areas to be enhanced, including the following information at a minimum:

      i. A description of existing buffer conditions;

      ii. A description of proposed buffer conditions and how proposed conditions will increase buffer functioning in terms of stream and fish habitat protection;

iii. Performance standards for measuring enhancement success through a monitoring period of at least five years; and

iv. Provisions for monitoring and submission of monitoring reports documenting buffer conditions as compared to performance standards for enhancement success;

e. A discussion of ongoing management practices that will protect stream functions and habitat value through maintenance of vegetation density within the stream buffer.

23.10.230 Review criteria.

A. Any alteration to a critical area shall be reviewed and approved, approved with conditions, or denied based on the proposal's ability to comply with all of the following criteria:

1. The proposal minimizes the impact on critical areas in accordance with ECDC 23.10.250(E), Mitigation sequencing;

2. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

3. The proposal is consistent with the general purposes of this chapter and the public interest;

4. Any alterations permitted to the critical area are mitigated in accordance with ECDC 23.10.250 and 23.10.260;

5. The proposal protects the critical area functions and values consistent with the best available science and results in no net loss of critical area functions and values; and

6. The proposal is consistent with other applicable regulations and standards.

B. The director may condition the proposed activity as necessary to mitigate impacts to critical areas and to conform to the standards required by this chapter. Except as provided for by this chapter, any project that cannot adequately mitigate its impacts to critical areas in the sequencing order of preferences in ECDC 23.10.250(E) shall be denied..

23.10.240 Contingent review procedure and criteria.

A. *Scope.* The procedures set forth in this section shall apply to the following types of critical area restoration projects as allowed by ECDC 23.10.100:

1. Restoration projects involving anadromous fish streams;

2. Restoration projects involving Category I or Category II wetlands;

3. Restoration projects involving Category I or Category II estuarine wetlands.

B. *Notice of Application.* Development activity within the scope of subsection (A) of this section shall be processed as a Type II application, unless the process is altered according to subsection (D) of this section. In addition to the notice provided pursuant to ECDC Title 20, notice of application for all such development shall also be sent to the city council by email.

C. *Contingent Review Process.* Development activity within the scope of subsection (A) of this section shall be escalated to a Type III-A process when:

1. The city receives a request from any person for a public hearing within 14 days of the date of the notice of application; and

2. The public hearing request is accompanied by a hearing fee in the amount of 50 percent of the difference between the Type II and Type III-A application fee.

D. *Effect of Contingent Review.* When the contingent review process is triggered pursuant to subsection (C) of this section, the project applicant shall pay the other 50 percent of the difference between the Type II and Type III-A application fee, on top of the previously paid Type II application fee. The applicant shall pay this fee within 30 days of notice from the city that the fee is due. If the applicant fails to pay the additional fee within the required 30-day period, the application for the project shall be deemed withdrawn. The city shall not schedule the public hearing until the additional fee has been paid. For these public hearings, the cost of the hearing examiner shall be borne by the city.

E. *Notice of Decision.* Whether development activity within the scope of subsection (A) of this section is processed as a Type II application or escalated to a Type III-A application, notice of decision shall be sent by email to the city council in addition to any other notice that may be required by ECDC Title 20. [Ord. 4026 § 1 (Att. A), 2016].

23.10.250 Mitigation requirements and sequencing - General.

A. *Mitigation requirements*. Applicants must avoid impacts to critical areas whenever possible. If impacts are unavoidable, they shall be mitigated using the best available science in accordance with an approved critical areas report and SEPA documents to ensure no net loss of critical area functions and values.

B. *Mitigation standards*. Mitigation must:

1. Maintain or replace the functions and values of the impacted critical area; and

2. Eliminate or reduce risks posed by critical area hazards.

C. *Timing of mitigation.* Mitigation shall not begin until the director approves of a critical areas report that includes a mitigation plan. All mitigation shall follow the approved plan.

D. *Project approval.* If impacts cannot be adequately mitigated to achieve no net loss or protect public safety as required in this chapter, the project shall not be appproved.

E. Mitigation sequencing. Applicants shall demonstrate that all reasonable efforts have been made to avoid and minimize impacts to critical areas.

1. *Mitigation Sequence.* When an alteration to a critical area is proposed, impacts must be addressed in the following order of priority to ensure no net loss of critical area functions:

a. Avoid the impact by not taking a certain action or parts of an action;

b. Minimize impacts by limiting the degree or magnitude of the action, redesigning the project, relocating facilities, adjusting timing, or using alternative technologies to avoid net loss of functions and values of the critical area;

c. Repair or restore the affected area to the extent feasible to reestablish critical area functions and values.

d. Stabilize hazards by restoring or engineering the hazard area to eliminate or minimize risks to public safety and property;

e. Compensate for remaining impacts by replacing, enhancing, or providing substitute resources or environments; and/or

f. Monitor and adapt to ensure mitigation measures are successful, with remedial actions taken as needed to achieve performance standards.

2. *Project viability.* If impacts cannot be provided to ensure no net loss to function and values, or to protect public safety, the project must be redesigned or withdrawn.

3. *Combination of measures.* Mitigation for individual projects may include a combination of the measures above, as appropriate.

F. Mitigation plan requirements. When mitigation is required, the applicant shall submit for approval by the director a mitigation plan as part of the critical areas report. The mitigation plan shall include:

1. *Environmental Goals and Objectives.* The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:

a. A description of the anticipated impacts to the critical areas, the mitigating actions proposed, and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area;

b. A review of the best available science supporting the proposed mitigation;

c. An analysis of the likelihood of success of the compensation project; and

d. Specific mitigation plan and report requirements for each critical area type as indicated in this chapter.

2. *Performance Standards.* The mitigation plan shall include measurable specific criteria for evaluating whether the goals and objectives of the mitigation project have been successfully attained and whether the requirements of this chapter have been met.

3. *Detailed Construction Plans.* The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as:

a. The proposed construction sequence, timing, and duration;

b. Areas of proposed impacts on critical areas or buffers;

c. Grading and excavation details;

d. Erosion and sediment control features;

e. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and

f. Measures to protect and maintain plants until established.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

4. *Monitoring Program.* The mitigation plan shall include a program for monitoring construction and for assessing a completed project. A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years one, three, and five after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five years without approval from the director.

5. *Contingency Plan.* The mitigation plan shall include identification of potential courses of action and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.

6. *Financial Guarantees.* The mitigation plan shall include financial guarantees, as necessary, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures shall be posted in accordance with ECDC 23.40.290, Bonds to ensure mitigation, maintenance, and monitoring.

G. Innovative mitigation.

1. *Purpose.* The City may encourage and approve innovative mitigation approaches, such as advance mitigation, in-lieu fee programs, or mitigation banking, when they are based on the best available science and likely to provide equal or greater critical area functions than on-site mitigation.

2. *Criteria for approval.* Innovative mitigation may only be approved when all of the following apply:

a. Lack of on-site feasibility. On-site mitigation is not feasible or has a low likelihood of success due to site limitations, such as inadequate hydrology, unsuitable soil, or insufficient area for full mitigation.

b. Improved functional outcome. Off-site mitigation offers a greater potential for long-term success and functional value compared to on-site mitigation.

c. Location preference. Off-site mitigation shall occur within the same drainage basin and within City limits unless:

i. Established watershed goals justify another location;

ii. Credits are purchased from a state-certified mitigation bank; or

iii. Fees are paid to an approved in-lieu fee program consistent with program requirements.

23.10.260 Mitigation requirements – Specific to Critical Area Types.

A. *Wetlands – Compensatory Mitigation Requirements.* Compensatory mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions. Wetland mitigation plans shall be consistent with guidelines in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Ecology, 2006) and Selecting Wetland Mitigation Sites Using a Watershed Approach (Ecology, 2009), as revised.

1. *Mitigation for Lost or Affected Functions.* Compensatory mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement and shall provide similar wetland functions as those lost, except when:

    a. The lost wetland provides minimal functions as determined by a site-specific function assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington State watershed assessment plan or protocol; or

    b. Out-of-kind replacement will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.

2. *Preference of Mitigation Actions.* Mitigation actions that require compensation by replacing, enhancing, or substitution shall occur in the following order of preference:

    a. Restoring (reestablishing) wetlands on upland sites that were formerly wetlands.

    b. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of nonnative, introduced species. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is being designed.

    c. Enhancing significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area meeting appropriate ratio requirements.

    d. Implementing compensatory restoration through purchase of credits at an approved mitigation bank or through payment into an approved in-lieu fee program.

3. *Type and Location of Mitigation.* Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be in kind and conducted on the site or in the vicinity of the alteration except when all of the following apply:

    a. On-site opportunities do not have a high likelihood of success, after a determination of the natural capacity of the site to mitigate for the impacts. Consideration should include: anticipated wetland mitigation replacement ratios, buffer conditions and proposed widths, hydrogeomorphic classes of on-site wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);

b. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland;

c. Off-site mitigation incorporates guidance from Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington (Ecology Publication No. 10-06-011, Hruby 2012); and

d. Off-site locations for compensatory mitigation are consistent with city of Edmonds goals for watershed wide ecological restoration. Off-site locations are selected with a preference for sites within the same basin as the impact, followed by other sites within the city. Specific areas targeted for restoration efforts include:

i. Lake-fringe wetlands and habitat areas associated with Lake Ballinger;

ii. Edmonds marsh;

iii. Yost Park wetlands;

iv. Good Hope wetlands;

v. Wetlands and habitat areas peripheral to anadromous fish-bearing streams; and

vi. Sites available through an approved mitigation bank or in-lieu fee program.

This list is not comprehensive and may change as the city of Edmonds identifies areas suitable for restoration and capital improvement projects consistent with goals for jurisdiction-wide habitat retention and enhancement provided in the city's comprehensive plan.

4. *Mitigation Timing.* Mitigation projects shall be completed with an approved monitoring plan prior to activities that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

5. Mitigation Ratios.

a. Acreage Replacement Ratios. The ratios in the table below shall apply to creation or re-establishment, rehabilitation, or enhancement that is in kind, is on site, is timed prior to or concurrent with alteration, and has a high probability of success. These ratios do not apply to remedial actions resulting from unauthorized alterations; greater ratios shall apply in those cases. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered. Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or reestablishment pursuant to Table 1a, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance – Version 1 (Ecology Publication No. 06-06-11a, or as revised). Creation, reestablishment, rehabilitation, and enhancement definitions are provided in ECDC 23.40.005 (see definition for "compensatory mitigation"), and shall be additionally consistent with intent pursuant to Ecology Publication No. 06-06-11a.

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation only	Enhancement only
Category I:			
Based on functions	4:1	8:1	16:1
Mature and old-growth forest	6:1	12:1	24:1
High conservation value/bog	Not considered possible		
Category II:			
All	3:1	6:1	12:1
Category III:			
All	2:1	4:1	8:1
Category IV:			
All	1.5:1	3:1	6:1

Mitigation requirements may also be determined using the credit/debit tool described in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report (Ecology Publication No. 10-06-011, Olympia, WA, March 2012, or as revised) if approved by the director.

6. *Off-Site Mitigation.* The ratios provided in subsection (5)(a) of this section do not apply to off-site mitigation, including use of credits from a state-certified wetland mitigation bank or payment to a certified in lieu fee program. When off-site mitigation is proposed, or when a mitigation bank or in-lieu fee program is used, replacement ratios may incorporate guidance from Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington (Ecology Publication No. 10-06-011, Hruby 2012), and for mitigation banks or in-lieu fee programs should be consistent with the certification requirements. Use of mitigation banks shall meet all requirements of subsection (9) of this section.
7. *Increased Replacement Ratio.* The director may require increased compensatory mitigation ratios under the following circumstances:
    a. Uncertainty exists as to the probable success of the proposed restoration or creation;
    b. A significant period of time will elapse between impact and replication of wetland functions;
    c. Proposed mitigation will result in a lower-category wetland or reduced functions relative to the wetland being impacted; or

d. The impact was an unauthorized impact.

8. Wetlands Enhancement as Mitigation.

   a. Impacts to wetland functions may be mitigated by enhancement of existing significantly degraded wetlands, but may, at the discretion of the director, be used in conjunction with restoration and/or creation. Applicants proposing to enhance wetlands must produce a critical areas report that identifies how enhancement will increase the functions of the degraded wetland and how this increase will adequately mitigate for the loss of wetland area and function at the impact site. An enhancement proposal must also show whether existing wetland functions will be reduced by the enhancement actions.

   b. At a minimum, enhancement acreage shall be double the acreage required for creation or restoration under subsection (5) of this section. The ratios shall be greater than double the required acreage where the enhancement proposal would result in minimal gain in the performance of wetland functions and/or result in the reduction of other wetland functions currently being provided in the wetland.

   c. Mitigation ratios for enhancement in combination with other forms of mitigation shall range from six-to-one to three-to-one and be limited to Class III and IV wetlands.

9. Wetland Mitigation Banks and In-Lieu Fee Programs.

   a. *Wetland Mitigation Banks.* Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

      i. The bank is certified under state rules;

      ii. The director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts;

      iii. The proposed use of credits is consistent with the terms and conditions of the bank's certification instrument;

      iv. Replacement ratios for projects using bank credits are consistent with replacement ratios specified in the bank's certification; and

      v. Credits from a certified wetland mitigation bank are used to compensate for impacts located within the service area specified in the certified bank instrument. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

   b. In-Lieu Fee Programs. As an alternative to on-site or other off-site mitigation approaches, the director may approve purchase of credit for compensatory mitigation from an in-lieu fee program. Any such program used to compensate for direct wetland impacts shall be developed and approved through a public process and be consistent with federal rules, state policy on in-lieu fee mitigation and state water quality regulations. Determining credit purchase necessary to compensate for wetland impacts shall incorporate guidance from Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington (Ecology Publication No. 10-06-011, Hruby 2012). Development proposals

impacting critical areas and/or associated buffers may contribute payment towards an identified city of Edmonds mitigation project with approval from the director; provided, that the mitigation approach meets all state and federal permit requirements, where required. Applicant provision of funds for compensatory mitigation shall only be approved if:

i. The director determines that it would provide environmentally appropriate compensation for the proposed wetland impacts;

ii. The mitigation will occur on a site identified using the site selection and prioritization process in the approved in-lieu fee program instrument or at a city-identified restoration site consistent with ECDC 23.10.250(G).

iii. A restoration area and plan have been identified and shall be implemented within three years of project development;

iv. Restoration efforts are focused in areas identified as suitable for restoration by the director; and

v. Credits from an approved in-lieu fee program may be used to compensate for impacts located within the service area specified in the approved in-lieu fee instrument.

B. Fish and Wildlife Habitat Conservation Areas - Additional Mitigation Requirements.

1. Where allowed, a fish and wildlife habitat conservation area may be altered only in accordance with mitigation sequencing as prescribed in ECDC 23.10.250(E) and only if the proposed alteration does not result in a net loss of the functions and values of the habitat. Any approval of an alteration or impacts to a fish and wildlife habitat conservation area must be supported by best available science as described in the required critical area report prepared by a qualified professional.

2. Mitigation of alterations to fish and wildlife habitat conservation areas shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse impacts upstream or downstream of the development proposal site. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis. Mitigation shall be located on site except when demonstrated that a higher level of ecological functioning would result from an off-site location. Mitigation shall be detailed in a fish and wildlife habitat conservation area mitigation plan, which may include the following as necessary:

i. A native vegetation planting plan;

ii. Plans for retention, enhancement or restoration of specific habitat features;

iii. Plans for control of nonnative invasive plant or wildlife species; and

iv. Stipulations for use of innovative, sustainable building practices.

23.10.260 Monitoring and bonds.

A. Bonds to ensure mitigation, maintenance, and monitoring.

1. *When required.* If required mitigation cannot be completed before final permit approval (e.g., final plat approval, final building inspection), the applicant shall post a financial guarantee, such as a performance bond or other security, to ensure mitigation, maintenance, and monitoring are completed as approved.
2. *Form and amount.*
    a. The bond shall be in the amount of 120 percent of the estimated cost of uncompleted work, including a reasonable inflation factor based on the length of anticipated delay.
    b. Bond shall be in a form acceptable to the City's attorney (e.g., surety, performance, or maintenance bond).
3. Duration and release.
    a. Bonds or other security authorized by this section shall remain in effect until the director determines, in writing, that mitigation is fully implemented and performance standards are met.
    b. Bonds or other security shall be held by the city for a minimum of five years or longer if needed to ensure mitigation success.
    c. Depletion, failure, or collection of bond funds shall not discharge the obligation to complete required mitigation, maintenance, monitoring, or restoration.
4. *Public projects.* Public development projects are exempt from bonding requirements of this section if public funds have been committed for mitigation, maintenance, monitoring, or restoration.
5. *Default.* Failure to comply with requirements, including monitoring and reporting deadlines, within 30 days after the due date constitutes default. Upon default, the City may collect bond funds or take other enforcement actions authorized by law.
6. *Recovered funds*. Any funds recovered pursuant to this section shall be used to complete the required mitigation. [Ord. 4026 § 1 (Att. A), 2016; Ord. 3527 § 2, 2004].

23.10.270 Appeals.

Any decision to approve, condition, or deny a development proposal or other activity based on the requirements of this chapter may be appealed according to, and as part of, the appeal procedure, if any, for the permit or approval involved.

23.10.280 Variances.

A. Variances from the standards of this chapter may be authorized through the process of hearing examiner review in accordance with the general requirements set forth in ECDC 20.85.020 only if an applicant demonstrates that one or more of the following two conditions exist:
    1. The application of this chapter would prohibit a development proposal by a public agency or public utility. A public agency and utility exception may be granted as a variance if:

a. There is no other practical alternative to the proposed development with less impact on the critical areas;

b. The application of this chapter would unreasonably restrict the ability to provide utility services to the public;

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

d. The proposal protects and mitigates impacts to the critical area functions and values consistent with the best available science; and

e. The proposal is consistent with other applicable regulations and standards.

2. The application of this chapter would deny all reasonable economic use (see the definition of "reasonable economic use(s)" in ECDC 23.10.030) of the subject property acquired prior to the applicable provisions of this chapter. A reasonable use exception may be authorized as a variance only if an applicant demonstrates that:

a. The application of this chapter would deny all reasonable economic use of a property or subject parcel;

b. No other reasonable economic use of the property consistent with the underlying zoning and the city comprehensive plan has less impact on the critical area;

c. Applicant demonstrates that an alternative building type permitted under the parcel's zoning cannot be used to avoid impacts;

d. The proposed impact to the critical area is the minimum necessary to allow for reasonable economic use of the property;

e. The applicant's inability to derive reasonable economic use of the property must not result from actions taken by the applicant after the effective date of this chapter or its predecessor, including actions related to acquisition of the property;

f. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

g. The proposal creates no net loss of critical area functions and values consistent with the best available science; and

h. The proposal is consistent with other applicable regulations and standards.

B. *Specific Variance Criteria.* A variance may be granted if the applicant demonstrates that the requested action conforms to all of the following specific criteria:

1. Special conditions and circumstances exist that are peculiar to the land, the lot, or something inherent in the land, and that are not applicable to other lands in the same district;

2. The special conditions and circumstances do not result from the actions of the applicant;

3. A literal interpretation of the provisions of this chapter would deprive the applicant of all reasonable economic uses and privileges permitted to other properties in the vicinity and zone of the subject

property under the terms of this chapter, and the variance requested is the minimum necessary to provide the applicant with such rights;

4. Granting the variance requested will not confer on the applicant any special privilege that is denied by this chapter to other lands, structures, or buildings under similar circumstances;

5. The granting of the variance is consistent with the general purpose and intent of this chapter, and will not further degrade the functions or values of the associated critical areas or be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity of the subject property;

6. The variance application shall include an assessment by a qualified professional with a recommendation for setbacks from the critical area to preserve its values and function; and

7. The decision to grant the variance is based upon the best available science and gives special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish habitat.

H. *Hearing Examiner Review.* The city hearing examiner shall, as a Type III-A decision (see Chapter 20.01 ECDC), review variance applications and conduct a public hearing. The hearing examiner shall approve, approve with conditions, or deny variance applications based on a proposal's ability to comply with general and specific variance criteria provided in subsections (A) and (B) of this section.

I. *Conditions May Be Required.* The director retains the right to prescribe such conditions and safeguards as are necessary to secure adequate protection of critical areas from adverse impacts, and to ensure conformity with this chapter for variances granted through hearing examiner review.

J. *Time Limit.* The director shall prescribe a time limit within which the action for which the variance is required shall be begun, completed, or both. Failure to begin or complete such action within the established time limit shall void the variance, unless the applicant files an application for an extension of time before the expiration. An application for an extension of time shall be reviewed by the director as a Type II decision (see Chapter 20.01 ECDC).

K. *Burden of Proof.* The burden of proof shall be on the applicant to bring forth evidence in support of a variance application and upon which any decision has to be made on the application.

23.10.290 Inspections.

Reasonable access to the site shall be provided to the city, state, and/or federal agency review staff for the purpose of inspections during any proposal review, restoration, emergency action, or monitoring period. Failure to provide access shall constitute grounds for issuance of a stop work order.

Article I. Wetlands

23.10.300 Description and Purpose.

A. *Description.* Wetlands are areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted to life in saturated soil conditions. All areas meeting the wetland designation criteria, as determined using the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) and applicable regional supplements, are regulated under this chapter. Wetlands shall be rated according to the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication #14-06-029, or as amended), in accordance with WAC 173-22-035.

B. *Purpose.* The purpose of this article is to protect, maintain, and where feasible restore the functions and values of wetlands—including flood storage and attenuation, water-quality improvement, groundwater recharge, and fish and wildlife habitat—in compliance with the Washington State Growth Management Act (RCW 36.70A.170 and 36.70A.172).

23.10.310 Designation, rating, and mapping.

A. *Designation.* Wetlands are those areas, designated in accordance with the approved federal delineation manual and applicable regional supplements as set forth in WAC 173-22-035..

B. *Wetland Ratings.* Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication No. 14-06-029, or as revised and approved by Ecology), which contains the definitions and methods for determining whether the criteria below are met.

1. *Category I.* Category I wetlands are: (a) relatively undisturbed estuarine wetlands larger than one acre; (b) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (c) bogs; (d) mature and old-growth forested wetlands larger than one acre; (e) wetlands in coastal lagoons; (f) interdunal wetlands that score eight or nine habitat points and are larger than one acre; and (g) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (a) represent unique or rare wetland types; (b) are more sensitive to disturbance than most wetlands; (c) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (d) provide a high level of functions.

2. *Category II.* Category II wetlands are: (a) estuarine wetlands smaller than one acre, or disturbed estuarine wetlands larger than one acre; (b) interdunal wetlands larger than one acre or those found in a

mosaic of wetlands; or (c) wetlands with a moderately high level of functions (scoring between 20 and 22 points).

3. *Category III.* Category III wetlands are: (a) wetlands with a moderate level of functions (scoring between 16 and 19 points); (b) can often be adequately replaced with a well-planned mitigation project; and (c) interdunal wetlands between one-tenth and one acre. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

4. *Category IV.* Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and should be protected to some degree.

5. *Illegal Modifications.* Wetland rating categories shall not change due to illegal modifications made by the applicant or with the applicant's knowledge.

C. *Date of Wetland Rating.* Wetland rating categories shall be applied as the wetland exists on the date of adoption of the rating system by the local government, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities.

D. *Delineation.* The exact location of a wetland's boundary shall be determined through the performance of a field investigation by a qualified professional wetland scientist applying the approved federal wetland delineation manual and applicable regional supplements and appended to the critical area report. Wetland delineations are valid for five years, except when recent events or updates to best available science justify a new delineation.

E. *Lake Ballinger.* Lake Ballinger is designated on the U.S. National Wetlands Inventory as a lacustrine (lake) environment and should not be delineated as a wetland in its entirety. Lake fringe wetlands existing along the periphery of Lake Ballinger shall be identified according to specific criteria provided in this section. Consistent with guidance for delineating lake fringe wetlands provided in these resources, the existence of jurisdictional wetlands along Lake Ballinger shorelines shall be largely based upon the presence of persistent emergent vegetation in shoreline areas less than 6.6 feet in depth. Provisions for protection of Lake Ballinger shorelines not meeting criteria for jurisdictional wetlands are provided in the city of Edmonds shoreline master program.

F. *Edmonds Marsh.* The Edmonds Marsh is a 28-acre Category I tidal wetland which in addition to being a wildlife habitat and natural resource sanctuary is also classified by the state as a priority habitat.

G. *Other Significant Wetlands.*

1. Good Hope Pond.

2. Mouth of Shell Creek. [Ord. 4127 § 1, 2018; Ord. 4026 § 1 (Att. A), 2016; Ord. 3527 § 2, 2004].

23.10.320 Development standards.

A. Activities and uses shall be prohibited in wetlands and wetland buffers, except as provided for in ECDC 23.10.090 and 23.10.100.

B. Activities may only be permitted in a wetland buffer if the applicant can show that the proposed activity will not degrade the functions and functional performance of the wetland and other critical areas.

C. *Category I Wetlands.* Activities and uses shall be prohibited from Category I wetlands, except as provided in ECDC 23.10.090, ECDC 23.10.100, and restoration projects approved by the director.

D. *Category II Wetlands.* With respect to activities proposed in Category II wetlands, the following standards shall apply:

1. Water-dependent activities may be allowed where there are no practicable alternatives that would have a less adverse impact on the wetland, its buffers and other critical areas.

2. Where non-water-dependent activities are proposed, it shall be presumed that alternative locations are available, and therefore, activities and uses shall be prohibited unless the applicant demonstrates that:

    a. The basic project purpose, as proposed, cannot be accomplished and avoid impact, or result in a less adverse impact, on a wetland on another site or sites in the general region; and

    b. All alternative designs of the project as proposed, such as a reduction in the size, scope, configuration, or density of the project, would not avoid or result in less of an adverse impact on a wetland or its buffer.

E. *Category III and IV Wetlands.* Activities and uses that result in unavoidable and necessary impacts may be permitted in Category III and IV wetlands and associated buffers in accordance with an approved critical areas report and mitigation plan.

F. Wetland Buffers.

1. General Buffer Requirements.

    a. Vegetation requirements. At least 70 percent of the buffer area not covered by pre-existing structures or paved surfaces shall be covered with native plants. Non-native and non-invasive species shall not exceed 10 percent of the total area. Noxious weeds and invasive species shall be removed in compliance with the provisions found in ECDC 23.10.070(C)(7).

    b. Buffer widths. Established in accordance with best available science and the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication No. 14-06-029, or as revised and approved by Ecology) and are based on the category of wetland, habitat score, and the adjacent land use intensity (assumed to be high).

    c. The more protective buffer widths in the Standard Buffer Width table in subsection (F)(3)(a) below apply by default. However, if the conditions in subsection (F)(2) of this subsection are met and approved, buffers found in the Reduced Buffer Width table in subsection (F)(3)(b) below may be used.

2. Reduced Buffer Options Based on Habitat Score.

a. *Wetlands with habitat score of six or more.* The Reduced Buffer Width table in (F)(3)(b) of this subsection may be used only when all of the following conditions are met:

i. A protected, undisturbed vegetated corridor at least 100 feet wide is provided between the wetland and a priority habitat, as defined by the Washington State Department of Fish and Wildlife.

ii. The corridor is legally protected for its entire length (e.g., conservation easement).

iii. A qualified biologist confirms the presence of the priority habitat.

iv. If no corridor option exists, the buffer widths in Table (F)(3)(a) may be used only when all the applicable impact-reduction measures in Table (F)(4)(b) are implemented.

b. *Wetlands with a habitat score of three to five.* The impact-minimization measures in subsection (F)(4) are required when using the buffer widths in Table (F)(3)(b).

3. Wetland Buffer Width Tables.

Table 23.10.320(F)(3)(a): Standard Buffer Widths.

Buffer Width (in Feet) Based on Habitat Score			
Wetland Category	**Habitat Score: 3 – 5**	**Habitat Score: 6 – 7**	**Habitat Score: 8 – 9**
Category I:			
Based on total score	100’	150’	300’
Bogs and wetlands of high conservation value	250’		300’
Forested	100’	150’	300’
Interdunal	300’		
Estuarine and coastal lagoons	200’		
Category II:			
Based on score	100’	150’	300’
Interdunal wetlands	150’		
Estuarine and coastal lagoons	150’		
Category III:			
All	80’	150’	300’
Category IV:			
All	50’		

Table 23.10.320(F)(3)(b): Reduced Buffer Widths.

Buffer Width (in Feet) Based on Habitat Score			
Wetland Category	**Habitat Score: 3 – 5**	**Habitat Score: 6 – 7**	**Habitat Score: 8 – 9**
Category I:			
Based on total score	75’	110’	225’
Bogs and wetlands of high conservation value	190’		225’
Forested	75’	110’	225’
Interdunal	225’		
Estuarine and coastal lagoons	150’		
Category II:			
Based on score	75’	110’	225’
Interdunal wetlands	110’		
Estuarine and coastal lagoons	110’		
Category III:			
All	60’	110’	225’
Category IV:			
All	40’		

4. *Impact-Reduction Measures.* The impact-reduction measures in this subsection shall be implemented, where applicable, and minimize impacts to the adjacent land uses.

Table 23.10.320(F)(4). Impact-Reduction Measures.

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

5. Increased Wetland Buffer Widths. The director shall require increased buffer widths in accordance with the recommendations of an experienced, qualified professional wetland scientist and the best available science on a case-by-case basis when a larger buffer is necessary to protect wetland

functions and values based on site-specific characteristics. This determination shall be based on one or more of the following criteria:

a. A larger buffer is needed to protect other critical areas;

b. The buffer or adjacent upland has a slope greater than 15 percent or is susceptible to erosion and standard erosion control measures will not prevent adverse impacts to the wetland;

c. The buffer area has minimal vegetative cover. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to protect the wetland functions and values, development and implementation of a wetland buffer enhancement plan in accordance with this subsection (G)(3) may substitute; or

d. The wetland and/or buffer is occupied by a federally listed threatened or endangered species, a bald eagle nest, a great blue heron rookery, or a species of local importance; and it is determined by the director that an increased buffer width is necessary to protect the species.

6. *Measurement of Wetland Buffers.* All buffers shall be measured 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 category of the created, restored, or enhanced wetland.

7. *Buffer Consistency.* All mitigation sites shall have buffers consistent with the buffer requirements of this chapter.

8. *Buffer Maintenance.* Except as otherwise specified or allowed in accordance with this chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. Removal of invasive nonnative weeds is required for the duration of the mitigation bond.

G. Wetland Buffer Modifications.

1. Where wetland or buffer alterations are permitted by the city of Edmonds, the applicant shall mitigate impacts to achieve no net loss of wetland acreage and functions consistent with applicable provisions of this chapter.

2. At the discretion of the director, standard wetland buffers may be averaged or reduced when consistent with all criteria in this subsection. Wetland buffer averaging with enhancement shall be preferred over wetland buffer reduction with enhancement. Wetland buffer reduction shall only be approved by the director when buffer averaging cannot be accomplished on site.

3. *Wetland Buffer Width Averaging with Buffer Enhancement.* The director may allow modification of a standard wetland buffer width in accordance with an approved critical areas report and the best available science on a case-by-case basis by averaging buffer widths so long as there is no net loss of the functions and values of the critical area. Any allowance for averaging buffer widths shall only be granted concomitant to the development and implementation of a wetland buffer enhancement plan for areas of buffer degradation. Only those portions of a wetland buffer existing within the

project area or subject parcel shall be considered the total standard buffer for buffer averaging. Averaging of buffer widths may only be allowed where a qualified professional wetland scientist demonstrates that:

a. The buffer averaging and enhancement plan provides evidence that wetland functions and values will be:

i. Increased or retained through plan implementation for those wetlands where existing buffer vegetation is generally intact; or

ii. Increased through plan implementation for those wetlands where existing buffer vegetation is inadequate to protect the functions and values of the wetland;

b. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

c. The total area contained in the buffer area, or the total buffer area existing on a subject parcel for wetlands extending off site, after averaging is no less than that which would be contained within a standard buffer; and

d. The buffer width at any single location is not reduced by more than 25 percent of the standard buffer width.

4. Buffer Width Reductions through Buffer Enhancement. At the discretion of the director, and only when buffer averaging cannot be accomplished on site, wetland buffer width reductions (or approval of standard buffer widths for wetlands where existing buffer conditions require increased buffer widths) may be granted concomitant to the development and implementation of a wetland buffer enhancement plan for Category III and IV wetlands only. Approval of a wetland buffer enhancement plan shall, at the discretion of the director, allow for wetland buffer width reductions by no more than 25 percent of the standard width; provided, that:

a. The plan provides evidence that wetland functions and values will be:

i. Increased or retained through plan implementation for those wetlands where existing buffer vegetation is generally intact; or

ii. Increased through plan implementation for those wetlands where existing buffer vegetation is inadequate to protect the functions and values of the wetland;

b. The plan documents existing native plant densities and provides for increases in buffer native plant densities to no less than three feet on center for shrubs and eight feet on center for trees;

c. The plan requires monitoring and maintenance to ensure success; and

d. The plan specifically documents methodology and provides performance standards including but not limited to:

i. Percent vegetative cover;

ii. Percent invasive species cover;

iii. Species richness; and

iv. Amount of large woody debris.

H. Additions to Structures Existing within Wetlands and/or Wetland Buffers.

1. Additions to legally constructed structures existing within wetlands or wetland buffers that increase the footprint of development or impervious surfacing shall be permitted consistent with the development standards of this section; provided, that a wetland and/or buffer enhancement plan is included in the critical area report to mitigate for impacts consistent with this chapter; and provided, that all impacts from temporary disturbances within the critical area buffer shall be addressed through use of best management plans and buffer enhancement plantings during and following construction of the allowed alteration. Provisions for standard wetland buffers, wetland buffer averaging with enhancement, and buffer reductions with enhancement require applicants to locate such additions in accordance with the following sequencing:

a. Outside of the standard wetland buffer;

b. Outside of a wetland buffer averaged (with enhancement) per subsection (G)(3) of this section;

c. Outside of a wetland buffer reduced (with enhancement) per subsection (G)(4) of this section;

d. Outside of the inner 25 percent of the standard wetland buffer width with no more than 300 square feet of structure addition footprint within the inner 50 percent of the standard wetland buffer width; provided, that enhancement is provided at a minimum three-to-one (3:1) ratio (enhancement-to-impact);

e. Outside of the inner 25 percent of the standard wetland buffer width with no more than 500 square feet of new footprint within the inner 50 percent of the standard wetland buffer width; provided, that enhancement is provided at a minimum five-to-one (5:1) ratio (enhancement-to-impact), and that stormwater low impact development (LID) techniques and other measures are included as part of the wetland/buffer enhancement plan.

2. Where meeting wetland buffer enhancement requirements required by subsection (I)(1) of this section would result in enhancement that is separated from the critical area due to uncommon property ownership, alternative enhancement approaches may be approved by the director. Alternative approaches could include a vegetated rain garden that receives storm runoff, replacement of existing impervious surfaces with pervious materials, or other approaches that provide ecological benefits to the adjacent critical area.

3. Additions to legally constructed structures existing within wetlands or wetland buffers that cannot be accommodated in accordance with the sequencing in subsection (I)(1) of this section (e.g., additions proposed within a wetland or the inner 25 percent of a standard buffer width) may be permitted at the director's discretion as a variance subject to review by the city hearing examiner and the provisions of ECDC 23.10.280.

I. *Development Proposals within the Footprint of Existing Development.* New development shall be allowed within the footprint of existing development occurring within a wetland buffer; provided, that the following conditions are met:

1. The footprint of existing development was legally established, and is consistent with the definition provided in ECDC 23.10.030.
2. The proposed development within the footprint of existing development is sited as far away from the wetland edge as is feasible;
3. As part of the development proposal, opportunities to reduce the footprint of existing development are implemented where such reduction would increase the buffer width adjacent to the wetland and not represent an undue burden given the scale of the proposed development.
4. The proposed development must include a wetland or buffer enhancement to the adjacent wetland and its buffer that improves functions degraded by prior development and provides an area of enhancement that is equal to or greater than the area affected by the proposed development.
5. Impacts from temporary disturbances within the wetland buffer shall be addressed through use of best management plans and buffer enhancement plantings during and following construction of the allowed alteration.

23.10.330 Performance standards – Subdivisions.

A. The subdivision and short subdivision of land in wetlands and associated buffers is subject to the following:

1. Land that is located wholly within a wetland or its buffer may not be subdivided.
2. Land that is located partially within a wetland or its buffer may be subdivided; provided, that an accessible and buildable contiguous portion of each new lot is located outside of the wetland and its buffer.
3. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only at the discretion of the director.

Article II. CRITICAL AQUIFER RECHARGE AREAS

23.10.400 Description and Purpose.

A. *Description.* Critical aquifer recharge areas (CARAs) are those areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(3). CARAs have prevailing geologic conditions that create a high potential for contamination of ground water resources or contribute significantly to the replenishment of ground water. The Growth Management Act requires cities to adopt regulations to protect CARAs.

B. *Purpose.* The purpose of this chapter is to establish critical aquifer recharge area (CARA) and groundwater protection standards to protect aquifers from degradation and depletion. The intent is to minimize loss of recharge quantity, to maintain the protection of public drinking water sources, and to prevent contamination of groundwater.

23.10.410 Designation, classification, and mapping.

A. *Designation.* Olympic View Water and Sewer District (Olympic View) has two wellhead protection areas in Edmonds: Deer Creek Springs and the 228th Street Wellfield. Deer Creek Springs itself is located west of Edmonds in the town of Woodway while the 228th Street Wellfield is located in Esperance (unincorporated Snohomish County), which is surrounded by Edmonds. Both areas have been mapped and modeled using best available science and include four travel time zones (six-month, one-year, five-year, and 10-year) plus an additional buffer. An area of exposed highly sensitive soils (QVa aquifer) is also mapped.

B. *Classification.* CARAs are classified using the following criteria:

1. Class 1 CARAs include those mapped areas located within the six-month, one- and five-year capture zones of a wellhead protection area.
2. Class 2 CARAs include those mapped areas located within the 10-year capture zone of a wellhead protection area.
3. Class 3 CARAs include those mapped areas in the critical aquifer recharge area buffer.

C. *Applicability.* The provisions of this chapter apply to regulated activities occurring within Class 1, Class 2 and Class 3 CARAs as identified in the city of Edmonds GIS, which may be updated as new information becomes available.

D. *Local Consultation.* The city of Edmonds will notify Olympic View when new development applications are submitted within the mapped CARAs. Typical applications will include but not be limited to: single-family/multifamily/commercial building permits, and short/formal subdivisions.

E. *Hydrogeologic Report.* A hydrogeologic report is required for activities as noted in Table 23.10.420(B). The report must contain the following information:

1. The surface location of all critical aquifer recharge areas located on site or immediately adjacent to the site, and the permeability of the unsaturated zone;
2. Groundwater depth, flow direction, and gradient based on available information;
3. Currently available data on wells and springs within one-quarter mile of the site;
4. Currently available information on the location of surface waters within one-quarter mile of the site;
5. Historic water quality data for the area to be affected by the proposed activity or use compiled for at least the previous five-year period;
6. Discussion of the effects of the proposed project on the groundwater quality and quantity, including:
    a. Predictive evaluation of groundwater withdrawal effects on nearby wells and surface water features;
    b. Predictive evaluation of contaminant transport based on potential releases to groundwater;
    c. Recharge potential of the site including permeability and transmissivity; and
    d. If water use is proposed for the development activity, a description of the groundwater source of water to the site or a letter from an approved water purveyor stating the ability to provide water to the site;
7. Best management practices relevant to the proposed activity or use;
8. Provisions to monitor the groundwater quality and quantity;
9. A spill plan that identifies equipment and structures that could fail, resulting in an impact to the critical aquifer recharge area. Spill plans shall include provisions for regular inspection, repair, and replacement of structures and equipment with the potential to fail;
10. An assessment of how the development activity meets the protection standards established in ECDC 23.10.420(D);
11. If the hydrogeologic report identifies impacts to critical aquifer recharge areas, the project applicant will be required to:
    a. Identify and provide an analysis of alternatives by which such impacts could be avoided or prevented; and
    b. Provide a detailed mitigation plan for any unavoidable impacts. The mitigation plan should include preventative measures, monitoring, process control and remediation and a contingency plan, as appropriate;
12. Recommendations for implementation and operation of activities, including size limitations, monitoring, reporting and best management practices (BMPs); and
13. Any other information necessary to determine compliance with this chapter.

23.10.420 Regulated activities.

A. Stormwater. The use of stormwater infiltration best management practices (BMPs), including those that qualify as a Class V underground injection control well (UIC), are prohibited for all land uses within all wellhead protection areas (WHPAs) associated with Olympic View Water and Sewer District's (OVWSD) 228th Street Wellhead and the Deer Creek Springs Wellhead area, including their buffers.

B. *CARA Prohibited and Restricted Uses*. Land uses and related activities that are prohibited and restricted within a specific CARA classification. New land uses or activities that pose a hazard to the city's groundwater resources, resulting from storing, handling, treating, using, producing, recycling, or disposing of hazardous materials or other deleterious substances, are prohibited in Critical Aquifer Recharge Areas 1 and 2. Some uses are prohibited in all CARA classes. Uses and activities lawfully established prior to the effective date of this code are considered to be legal nonconforming uses subject to Chapter 17.40 ECDC and may continue to operate within the scope of the existing use.

Table 23.10.420(B) CARA Prohibited and Restricted Uses

Use Activity	CARA Restriction
All mineral resource uses	Mining, processing and reclamation of any type below the water table or the upper surface of the saturated groundwater is prohibited in Class 1 and 2 CARA and in exposed QVa soils in Class 3 CARA. A hydrogeologic report is required for the use in Class 3 CARA outside of the area of exposed QVa.
Cemeteries	Cemeteries are prohibited in the Class 1 and 2 CARA and in exposed QVa soils in Class 3 CARA. Best management practices (BMPs) and integrated pest management (IPM) are required for the use in Class 3 CARA outside of the areas of exposed QVa.
Hazardous liquid transmission pipelines	As defined in Chapter 81.88 RCW, pipelines are prohibited in Class 1 and 2 CARA as well as in exposed QVa soils in Class 3 CARA. A hydrogeologic report is required for the use in Class 3 CARA outside of the area of exposed QVa.
Hazardous waste storage and/or treatment facilities and/or processing, or disposal of radioactive substances	Hazardous waste storage and/or treatment facilities, as defined by Chapter 173-303 WAC, are prohibited in all CARA classes. Storage, processing, or disposal of radioactive substances as defined in RCW 70.99.020 is prohibited in all CARA classes, except for medical equipment and/or material and medical waste, defined by RCW 70A.390.020, that is held for proper disposal. Aboveground storage tanks for hazardous substances or hazardous wastes with primary and secondary containment area(s) and spill protection plan are prohibited in Class 1 and 2 CARA as well as in exposed QVa soils

Use Activity	CARA Restriction
	in Class 3 CARA. A hydrogeologic report is required for the use in Class 3 CARA outside of the area of exposed QVa.
Automotive uses	Wrecking yards are prohibited in all CARA classes. Vehicle towing yards that store vehicles on permeable surfaces are also prohibited. Service stations are prohibited in Class 1 and 2 CARA as well as in exposed QVa soils in Class 3 CARA. In Class 3 CARA outside of the area of exposed QVa, vehicle repair and servicing must be conducted indoors over impermeable pads. For underground storage tanks (UST) with hazardous substances, applicants must demonstrate that the facility complies with federal and state laws.
Dry cleaning	Dry cleaning using chlorinated solvents or using solvent perchloroethylene is prohibited in all CARA classes.
Large on-site sewage systems, as defined in Chapter 246-272A WAC	Prohibited.
Solid waste landfills Solid waste is defined in WAC 173-304-100.	Prohibited.
Solid waste transfer stations Solid waste is defined in WAC 173-304-100.	Prohibited.
Petroleum refinement processes, including any related reprocessing or storage	Prohibited.
Bulk storage facilities where flammable or combustible liquids, solids, or gels are received by pipeline or tank vehicle, and are stored or blended in bulk for the purpose of distributing such substances by pipeline, tank vehicle, portable tank, or container	Prohibited.
Chemical manufacturing, including but not limited to organic and inorganic	Prohibited in Class 1 and 2 CARA as well as in exposed QVa soils in Class 3 CARA. A hydrogeologic report is required for the use in Class 3 CARA outside of the area of exposed QVa.

Use Activity	CARA Restriction
chemicals, plastics and resins, pharmaceuticals, cleaning compounds, paints and lacquers, and agricultural chemicals	Applicants must demonstrate that the facility complies with federal and state laws.
Primary and secondary metal industries that manufacture, produce, smelt, or refine ferrous and nonferrous metals from molten materials	Prohibited.
Commercial wood preserving and wood products preserving	Prohibited
Mobile fleet fueling operations	Prohibited
Permanent dewatering of the aquifer when done as part of remediation action that is approved by the Department of Ecology	Prohibited
Irrigation and infiltration of greywater	Prohibited
Reclaimed or recycled water use with the exception of uses that discharge to the sanitary sewer	Prohibited
Rainwater collection and use	Allowed
Hydrocarbon extraction	Prohibited
Metal recycling facilities with outdoor storage and handling activities	Prohibited in Class 1 and 2 CARA as well as in exposed QVa soils in Class 3 CARA. A hydrogeologic report is required for the use in Class 3 CARA outside of the area of exposed QVa.
Crumb rubber (styrene-butadiene rubber) for artificial turf installations	Prohibited

C. *Regulation of Facilities Handling and Storing Hazardous Materials.* Activities may only be permitted in a critical aquifer recharge area if the applicant can show, through providing a hydrogeologic report prepared by a qualified professional, that the proposed activity will not cause contaminants to enter the groundwater by

compliance with the best management practices (BMPs) for handling and storing hazardous materials. The city may impose development conditions in accordance with BMPs to prevent degradation of groundwater.

1. *Best Management Practices for Handling and Storing Hazardous Materials.* Any facility, activity, or residence in the city in which hazardous materials or other deleterious substances are present must be operated in a manner that ensures safe storage, handling, treatment, use, production, and recycling or disposal of such materials and substances and prevents their unauthorized release to the environment. Businesses, cemeteries and schools that store and/or handle hazardous materials must, at a minimum, comply with the following BMPs:
    a. Waste disposal and recordkeeping of disposal and use activity;
    b. Spill containment supplies and an emergency response plan;
    c. An emergency response training plan for all employees;
    d. Hazardous materials must be stored using secondary containment measures at all times;
    e. Periodic monitoring of the storage areas and methods used for containment must be reviewed:
        i. On a regular basis;
        ii. Whenever business practices change regarding hazardous materials; and
        iii. As required by laws and regulations;
    f. In no case may hazardous materials or other deleterious substances be stored, handled, treated, used, produced, recycled, or disposed of in a way that would pose a significant groundwater hazard within the city.
2. *Hazardous Materials Inventory (HMI).* The HMI statement is intended to reflect all current and anticipated types and quantities of hazardous materials that will be stored, handled, treated, used, produced, recycled, or disposed of at a facility. The HMI must always be kept on site. New and existing commercial land uses, schools and cemeteries located in Class 1 and Class 2 CARAs must submit an HMI statement:
    a. Within one year of the effective date of the ordinance codified in this chapter;
    b. With any new land use or building permit application;
    c. With a new business license; and
    d. At periodic intervals as needed to keep up with changing business practices.
3. *Hazardous Materials Management Plan (HMMP).* Hazardous materials quantities correspond to the aggregate total of all hazardous materials, not individual chemicals. Facilities that use aggregate quantities of hazardous materials equal to or greater than 20 gallons or the equivalent of 200 pounds, or that use hazardous materials that may be a potential risk to the WHPA, are reviewed to determine the potential risk to the groundwater and the need for an HMMP. Commercial land uses and activities using aggregate quantities of hazardous materials equal to or greater than 50 gallons

or the equivalent of 500 pounds, or that use hazardous materials that are considered to be a potential risk to the groundwater in lower quantities, must submit an HMMP to the city.

a. The city requires an HMMP based on the type and aggregate quantity of inventoried material. The following are exempt from an HMMP:

i. Retail sale of containers five gallons or less in size when the business has fewer than 500 gallons on the premises at any one time; and

ii. Hazardous materials of no potential risk to the wellhead protection areas.

b. HMMPs must demonstrate implementation of BMPs. An HMMP must be completed by the facility operator and must always kept on site and include:

i. A description of the facility including a floor plan showing storage, drainage and use areas. The plans must be legible and approximately to scale;

ii. The plan must include and identify all hazardous materials containers, sizes, storage locations and methods of secondary containment of the hazardous materials; and

iii. The plan must, at a minimum, include how the facility implements the BMPs as identified in this code.

4. *Inspections.* The city has the right to inspect a facility at reasonable times for the purpose of determining compliance with this chapter. Inspections may include, but are not limited to:

a. Visual inspections of hazardous materials storage and secondary containment areas;

b. Inspections of HMMP; and

c. Sampling of soils, surface water and groundwater.

5. *Third-Party Review.* The city shall employ a hydrogeologic consultant licensed in Washington State at the applicant's expense for third-party review for compliance with the BMPs, the HMI and the HMMP. This requirement may be selectively waived at the discretion of the director, provided the applicable qualified professional for the project provides written concurrence, determination, details, facts and/or data that individual site conditions warrant an exemption from outside peer review.

6. *Enforcement.* Whenever a person has violated any provisions of this chapter, the planning and development director, in consultation with the public works director as necessary, may take code enforcement action based on the nature of the violation including, but not limited to, abatement, injunction, mitigation, fines and penalties as set forth in ECDC 18.30.100, Stormwater management.

D. General Requirements.

1. A project applicant must make all reasonable efforts to avoid and minimize impacts to critical aquifer recharge areas according to the requirements of this section, in the following sequential order of priority:

a. Avoiding impacts altogether by not taking a certain action or parts of an action; or

b. When avoidance is not possible, minimizing impacts by limiting the degree or magnitude of the action and its implementation, using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid impacts.

2. Any activity or use specifically listed in this chapter must comply with the best management practices and mitigation plan identified in the hydrogeologic report.

3. All development activities must comply with the groundwater quality standards contained in Chapter 173-200 WAC and Chapter 90.48 RCW.

4. Where the director determines that an activity or use not specifically listed in this chapter has the potential to harm water quality or quantity within critical aquifer recharge areas, the applicant must apply best management practices and all known and available reasonable technology (AKART) appropriate to protect critical aquifer recharge areas.

Article III. Frequently flooded areas

23.10.500 Description and Purpose.

A. *Description.* Frequently flooded areas include floodways, floodplains, and other lands subject to a one percent or greater annual chance of flooding, as identified by the Federal Emergency Management Agency (FEMA) or other best-available data. Such areas are designated consistent with WAC 365-190-110, the standards of the National Flood Insurance Program (NFIP), and the provisions of ECDC 19.07 (Flood Damage Prevention).

B. *Purpose.* The purpose of this article is to protect life, property, and the environment by minimizing losses due to flood conditions; maintaining the natural hydrologic, storage, and habitat functions of floodplains; and preventing increases in flood hazards. This article complements ECDC 19.07, which governs flood-hazard reduction, floodplain development, and construction standards consistent with the NFIP. Title 23 provides for the protection of ecological functions and values within frequently flooded areas consistent with the Washington Growth Management Act (RCW 36.70A.060) and WAC 365-190-110.

23.10.510 Designation and mapping.

A. *Designation.* Frequently flooded areas shall include:

1. Those areas designated as special flood hazard areas and other mapped flood-prone lands as defined and adopted in ECDC 19.07.040, Basis for Establishing Flood Areas; and
2. Any areas identified by the City through best-available science or other reliable data that can demonstrate susceptibility to flooding or conveyance of floodwaters.

B. *Use of Best-Available Information.* The city shall utilize the most current FEMA Flood Insurance Study (FIS), Flood Insurance Rate Maps (FIRMs), and any revisions thereto as adopted under ECDC 19.07, together with other scientifically valid sources, to identify frequently flooded areas and guide regulation under this chapter.

C. *Supplemental Designation.* The city may designate additional flood-prone areas not shown on the current FIRMs where historical or scientific evidence indicates a risk of flooding. Such areas shall be regulated consistent with ECDC 19.07 and the current editions of the International Residential Code and International Building Code, as adopted in ECDC Title 19.

23.10.520 Liability Disclaimer.

The degree of flood protection required by this chapter and ECDC 19.07, is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside frequently flooded areas or uses permitted within such areas will be free from flooding or flood damage.

This chapter shall not create liability on the part of the city of Edmonds, any officer or employee thereof, or the Federal Insurance Administration for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

23.10.530 Development standards.

A. *General.* Development standards and provisions for protection of frequently flooded areas shall comply with ECDC 19.07 and the current editions of the International Residential Code and International Building Code, as adopted in ECDC Title 19. Compliance with the provisions of ECDC 19.07 shall be deemed compliance with ECDC 23.10.040, Protection of Critical Areas, for the purposes of flood-hazard management.

B. *Critical area review.* Critical-area reports prepared for projects within frequently flooded areas shall identify and evaluate floodplain functions and ecological values, consistent with ECDC 23.10.090, Critical-Areas Reports. Such reports shall be incorporated into the corresponding floodplain development permit review under ECDC 19.07, ensuring consistency between environmental protection and flood-hazard reduction requirements.

C. *Conflict of Standards*. Where provisions of this article and ECDC 19.07 conflict, the more restrictive standard that provides the greatest protection to public safety and ecological function shall apply.

Article IV. Geologically hazardous areas

23.10.600 Description and Purpose.

A. *Description.* Geologically hazardous areas are lands that, because of their susceptibility to erosion, landslides, seismic activity, or other geologic processes, pose a risk to health, safety, or property when developed. Such areas are designated and classified in accordance with WAC 365-190-120, which provides criteria for identifying and evaluating the degree of risk associated with specific hazard types.

B. *Purpose.* The purpose of this article is to reduce risk to people, property, and the environment by requiring appropriate site investigation, design, and mitigation measures; by locating development to minimize hazard potential; and by maintaining the stability and natural functions of slopes and related landforms. Regulation of these areas ensures consistency with RCW 36.70A.172 and the use of best available science in managing geologic hazards.

23.10.610 Designation and mapping.

A. Designation. Geologically hazardous areas include areas susceptible to erosion, land sliding, earthquakes, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Such incompatible development may not only place itself at risk but also may increase the hazard to surrounding development and use. Areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area:

    1. Erosion hazard;
    2. Landslide hazard; and
    3. Seismic hazard.

B. Mapping of Geologically Hazardous Areas. The approximate location and extent of geologically hazardous areas are shown on the city of Edmonds' critical areas inventory GIS map. In addition, resources providing information on the location and extent of geologically hazardous areas include:

    1. Washington Department of Ecology coastal zone atlas (for marine bluffs);
    2. U.S. Geological Survey geologic maps, landslide hazard maps, and seismic hazard maps;
    3. Washington State Department of Natural Resources seismic hazard maps for Western Washington;
    4. Washington State Department of Natural Resources slope stability maps;
    5. National Oceanic and Atmospheric Administration tsunami hazard maps; and
    6. Federal Emergency Management Agency flood insurance maps.

The critical areas inventory and the resources cited above are to be used as a guide for the city of Edmonds planning and development department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

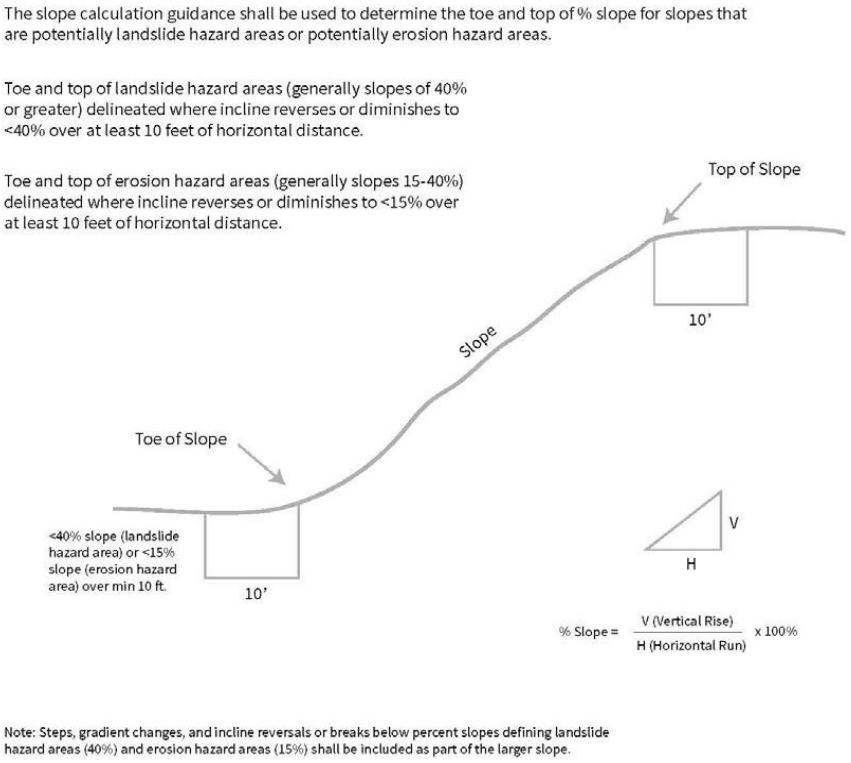
C. Erosion Hazard Areas. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard. Erosion hazard areas are also those areas impacted by shoreland and/or stream bank erosion. Within the city of Edmonds, erosion hazard areas include:

1. Those areas of the city of Edmonds containing soils that may experience severe to very severe erosion hazard. This group of soils includes, but is not limited to, the following when they occur on slopes of 15 percent or greater:
    a. Alderwood soils;
    b. Alderwood/Everett series;
    c. Everett series.
2. Coastal and stream erosion areas which are subject to the impacts from lateral erosion related to moving water such as stream channel migration and shoreline retreat;
3. Any area with slopes of 15 percent or greater and impermeable soils interbedded with granular soils and springs or ground water seepage; and
4. Areas with significant visible evidence of ground water seepage, and which also include existing landslide deposits regardless of slope.

D. Landslide Hazard Areas. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Within the city of Edmonds potential landslide hazard areas include:

1. Areas of ancient or historic failures in Edmonds which include all areas within the earth subsidence and landslide hazard area as identified in the 1979 report of Robert Lowe Associates and amended by the 1985 report of GeoEngineers, Inc., and further discussed in the 2007 report by Landau Associates;
2. Coastal areas mapped as class u (unstable), uos (unstable old slides), and urs (unstable recent slides) in the Department of Ecology Washington coastal atlas;
3. Areas designated as quaternary slumps, earthflows, mudflows, or landslides on maps published by the United States Geological Survey or Washington State Department of Natural Resources;

Figure 1. Simple Slope Calculation



4. Any slope of 40 percent or steeper that exceeds a vertical height of 10 feet over a 25-foot horizontal run. Except for rockeries that have been engineered and approved by the engineer as having been built according to the engineered design, all other modified slopes (including slopes where there are breaks in slopes) meeting overall average steepness and height criteria should be considered potential landslide hazard areas);
5. Any slope with all three of the following characteristics:
    a. Slopes steeper than 15 percent;
    b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment; and
    c. Springs or ground water seepage;
6. Any area potentially unstable as a result of rapid stream incision or stream bank erosion;
7. Any area located on an alluvial fan, presently subject to, or potentially subject to, inundation by debris flow or deposition of stream-transported sediments; and
8. Any slopes that have been modified by past development activity that still meet the slope criteria.

E. Seismic Hazard Areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. These areas are designated as having a “high” and “moderate to high” risk of liquefaction as

mapped on the Liquefaction Susceptibility Map of Snohomish County by the Washington State Department of Natural Resources or areas located within landslide hazard areas. [Ord. 4026 § 1 (Att. A), 2016; Ord. 3527 § 2, 2004].

23.10.620 Development standards – General requirements.

A. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:

1. Will not increase the threat of the geological hazard to adjacent properties beyond predevelopment conditions;
2. Will not adversely impact other critical areas;
3. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than predevelopment conditions; and
4. Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.

B. *Critical Facilities Prohibited.* Critical facilities shall not be sited within geologically hazardous areas unless there is no other practical alternative.

23.10.630 Development standards – Specific hazards.

A. *Erosion and Landslide Hazard Areas.* Activities on sites containing erosion or landslide hazards shall meet the requirements of ECDC 23.10.620, Development standards – General requirements, and the specific following requirements:

1. *Minimum Building Setback.* The minimum setback shall be the distance required to ensure the proposed structure will not be at risk from landslides for the life of the structure, considered to be 120 years, and will not cause an increased risk of landslides taking place on or off the site. A setback shall be established from all edges of landslide hazard areas. The size of the setback shall be determined by the director consistent with recommendations provided in the geotechnical report 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 critical areas report prepared by a qualified professional.
2. *Buffer Requirements.* A buffer may be established with specific requirements and limitations, including but not limited to drainage, grading, irrigation, and vegetation. Buffer requirements shall be determined by the director consistent with recommendations provided in the geotechnical report to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by activities within the buffer area, based upon review of and concurrence with a critical areas report prepared by a qualified professional.
3. *Alterations.* Alterations of an erosion or landslide hazard area, building setback and/or buffer may only occur for activities for which a hazards analysis is submitted and approved. It must certify that:

a. The alteration will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions;

b. The alteration will not decrease slope stability on adjacent properties; and

c. Such alterations will not adversely impact other critical areas.

4. *Design Standards within Erosion and Landslide Hazard Areas.* Development within an erosion or landslide hazard area and/or buffer shall be designed to meet the following basic requirements unless it can be demonstrated that an alternative design that deviates from one or more of these standards provides greater long-term slope stability while meeting all other provisions of this chapter. The requirement for long-term slope stability shall exclude designs that require regular and periodic maintenance to maintain their level of function. The basic development design standards are:

a. The proposed development shall not decrease the factor of safety for landslide occurrences below the limits of 1.5 for static conditions and 1.2 for dynamic conditions. If stability at the proposed development site is below these limits, the proposed development shall provide practicable approaches to reduce risk to human safety and improve the factor of safety for landsliding so it satisfies the limits stated above. In no case shall the existing factor of safety be reduced for the subject property or adjacent properties;

b. Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

c. Structures and improvements shall minimize alterations to the natural contour of the slope, and foundations shall be tiered where possible to conform to existing topography;

d. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

e. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

f. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and

g. Development shall be designed to minimize impervious lot coverage;

5. *Seasonal Restriction.* Clearing shall be allowed only from May 1st to October 1st of each year; provided, that the director may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practice permit issued by the city of Edmonds or the Washington State Department of Natural Resources;

6. *Point Discharges.* Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except as follows:

a. Conveyed via continuous storm pipe downslope to a point where there are no erosion hazard areas downstream from the discharge;

b. Discharged at flow durations matching predeveloped conditions, with adequate energy dissipation, into existing channels that previously conveyed stormwater runoff in the predeveloped state; or

c. Dispersed discharge upslope of the steep slope onto a low-gradient, undisturbed buffer demonstrated to be adequate to infiltrate all surface and stormwater runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope; and

7. *Prohibited Development.* On-site sewage disposal systems, including drain fields, shall be prohibited within erosion and landslide hazard areas and related buffers.

B. *Earth Subsidence and Landslide Hazard Area.* In addition to the requirements of this chapter, development proposals for lands located within the earth subsidence and landslide hazard area as indicated on the critical areas inventory shall be subject to the provisions of Chapter 19.10 ECDC.

C. *Seismic Hazard Areas.* Activities proposed to be located in seismic hazard areas shall meet the standards of ECDC 23.10.620, Development standards – General requirements.

Article V. Fish and wildlife habitat conservation areas

23.10.700 Description and purpose.

A. *Description*. Fish and wildlife habitat conservation areas are lands and waters necessary to maintain populations of species in suitable habitats within their natural geographic distribution, ensuring viable populations over the long term and avoiding isolated subpopulations. These areas are designated and regulated using best available science and include, but are not limited to, streams, riparian corridors, wetlands, lakes, marine and freshwater shorelines, and other areas identified as priority habitats and species by state or federal agencies or designated by the City.

B. *Purpose*. The purpose of this section is to:

1. Protect and maintain fish and wildlife populations and their habitats using best available science to prevent net loss of habitat functions and values.
2. Ensure development and land uses within or adjacent to FWHCAs are compatible with long-term species viability.
3. Give special consideration to measures necessary to preserve or enhance anadromous fish and other priority species.

23.10.710 Designation, rating, and mapping.

A. *Designation*. Any area meeting one or more of the following criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter and shall be managed consistent with the best available science, such as the Washington Department of Fish and Wildlife's Management Recommendations for Priority Habitat and Species.

B. Fish and wildlife habitat conservation areas includes:

1. Areas where endangered, threatened, and sensitive species have a primary association. This includes:
    a. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the NOAA Fisheries that are in danger of extinction or threatened to become endangered. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service shall be consulted for current listing status.
    b. State-designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington identified by the Washington Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats. State-

designated endangered, threatened, and sensitive species are periodically recorded in WAC 232-12-014 (state endangered species) and WAC 232-12-011 (state threatened and sensitive species). The State Department of Fish and Wildlife maintains the most current listing and shall be consulted for current listing status.

2. *State priority habitats and areas associated with state priority species.* Priority habitats and species are priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the State Department of Fish and Wildlife.
3. *Habitats and species of local importance.* Habitats and species identified by the city of Edmonds that, due to their population status or sensitivity to habitat manipulation, warrant protection. Habitats may include a seasonal range or habitat element with which a species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.
4. *Commercial and Recreational Shellfish Areas*. These areas include all public and private tidelands or bedlands suitable for shellfish harvest, including shellfish protection districts established pursuant to Chapter 90.72 RCW.
5. *Kelp and eelgrass beds and herring and smelt spawning areas.*
6. *Naturally Occurring Ponds Under 20 Acres.* Naturally occurring ponds are those ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.
7. *Waters of the State.* Waters of the state include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-031 (or WAC 222-16-030, depending on classification used).
8. Riparian management zones (RMZs). The area that has the potential to provide full riparian functions for bank stability, shade, pollution removal, contribution of detrital nutrients, and recruitment of large woody debris. In many forested regions of the state, this area occurs within one 200-year site-potential tree height measured from the edge of the stream channel. In non-forest zones, the RMZ is defined by the greater of the outermost point of the riparian vegetative community or the pollution removal function, at 100 feet.

9. Streams. Streams shall include those areas where surface waters produce a defined channel or bed which demonstrates clear evidence, such as the sorting of sediments, of the passage of water. The channel or bed need not contain water year-round. Streams shall be classified in accordance with the Washington Department of Natural Resources water typing system (WAC 222-16-030) hereby adopted in its entirety by reference and summarized as follows:

Table 23.10.720(9) Stream Types

Stream Classification	Description	Designation Criteria
Type F	Fish-bearing with continuous flows	Segments of natural waters within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which contain fish habitat or meet the criteria below: • Waters, which are diverted for use by federal, state, tribal or private fish hatcheries. Such waters shall be considered Type F water upstream from the point of diversion for 1,500 feet, including tributaries if highly significant for protection of downstream water quality. • Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria: o The site must be connected to a fish habitat stream and accessible during some period of the year; and o The off-channel water must be accessible to fish.
Type N	Non-fish-bearing, with perennial or season flows.	Segments of natural waters within the bankfull width of defined channels that are non-fish habitat streams.

C. Mapping. The approximate location and extent of fish and wildlife habitat conservation areas are shown on the city of Edmonds critical areas inventory. Resources providing information on the location and extent of fish and wildlife habitat conservation areas incorporated into the inventory include:

1. Washington Department of Fish and Wildlife priority habitat and species maps;

2. Washington Department of Fish and Wildlife 200-year Site-potential Tree Height (SPTH200) and Riparian Management Zone (RMZ) Values mapping resource;
3. Washington State Department of Natural Resources official water type reference maps, as amended;
4. Washington State Department of Natural Resources Puget Sound intertidal habitat inventory maps;
5. Washington State Department of Natural Resources shore zone inventory;
6. Washington State Department of Natural Resources Natural Heritage Program mapping data;
7. Washington State Department of Health annual inventory of shellfish harvest areas;
8. Anadromous and resident salmonid distribution maps contained in the habitat limiting factors reports published by the Washington Conservation Commission; and
9. Washington State Department of Natural Resources state natural area preserves and natural resource conservation area maps.

The critical areas inventory and the resources cited above are to be used as a guide for the city of Edmonds planning and development department, project applicants, and/or property owners and should be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical areas designation.

23.10.720 Development Standards - General.

A. *Alterations.* A fish and wildlife habitat conservation area may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat. There are no specific development standards for upland habitats of local importance unless these areas include another critical area (streams, heron rookeries, steep slopes, etc.). City staff will review the critical areas report and work with the applicant to minimize effects or improve conditions to upland habitat.

B. *Approvals of Activities.* The director shall condition approvals of activities allowed within or adjacent to a fish and wildlife habitat conservation areas as necessary to minimize or mitigate any potential adverse impacts. Conditions shall be based on the best available science and may include, but are not limited to, the following:

1. Establishment of buffer zones;
2. Preservation of critically important vegetation and/or habitat features such as snags and downed wood;
3. Limitation of access to the habitat area, including fencing to deter unauthorized access;
4. Seasonal restriction of construction activities;
5. Establishment of a duration and timetable for periodic review of mitigation activities; and

6. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

C. Buffers.

1. *Establishment of Buffers.* The director shall require the establishment of temporary or permanent buffer areas for permitted activities adjacent to fish and wildlife habitat conservation areas which may result in fish or wildlife disturbance (e.g., construction, grading, etc.) when needed to protect fish and wildlife habitat conservation areas. Establishment of buffers shall follow recommendations set forth by a qualified biologist in the project critical areas report except as provided for riparian management zones in ECDC 23.10.750 (E). Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby and shall be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife.

2. *Seasonal and Daily Timing Restrictions.* When a species is more susceptible to adverse impacts during specific periods of the year or day, seasonal restrictions on permitted activities within or adjacent to fish and wildlife habitat conservation areas may be required at the discretion of the director pursuant to recommendations set forth in a critical areas report.

23.10.730 Development standards – Specific requirements.

A. Endangered, Threatened, and Sensitive Species.

1. No development shall be allowed within a fish and wildlife habitat conservation area or riparian management zone with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.

2. Whenever activities are proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical areas report prepared by a qualified professional and approved by the director. Approval for alteration of land adjacent to the fish and wildlife habitat conservation area shall not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

3. Bald eagle habitat is subject to the Federal Bald and Golden Eagle Protection Act. Washington State bald eagle protection rules (WAC 232-12-292) shall not be required as long as bald eagles are not listed as a state endangered or threatened species.

B. Anadromous Fish.

1. All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:

    a. Activities shall be timed to occur only during the allowable work window as designated by the Washington Department of Fish and Wildlife for the applicable species;

    b. An alternative alignment or location for the activity is not feasible;

    c. The activity is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;

    d. Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques, according to an approved critical areas report; and

    e. Any impacts to the functions or values of the fish and wildlife habitat conservation area are mitigated in accordance with an approved critical areas report.

2. Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed.

3. Fills, when authorized, shall not adversely impact anadromous fish or their habitat or shall mitigate any unavoidable impacts and shall only be allowed for a water-dependent use.

C. Streams. No alteration to a stream shall be permitted unless consistent with the provisions of this chapter and the specific standards for development outlined below.

1. *Stream Crossings.* Stream crossings may be allowed only if all reasonable construction techniques and best management practices are used to avoid disturbance to the stream bed or bank. Upon completion of construction, the area affected shall be restored to an appropriate grade, replanted with native species and/ or otherwise protected according to a stream mitigation and riparian zone enhancement plan approved by the director, and maintained and monitored per the requirements of this chapter and provide for riparian zone enhancement in accordance with the requirements of subsection (D)(2) of this section. In addition, the applicant must demonstrate that best management practices will be used during construction; provided that:

    a. Fisheries protection is maintained, including no interference with fish migration or spawning;

    b. All crossings shall be constructed during summer low flow periods and shall be timed to avoid stream disturbance during periods when stream use is critical to salmonids;

    c. Crossings shall not occur over salmonid spawning areas unless no other possible crossing site exists;

    d. Crossings and culverted portions of the stream shall be minimized to the extent feasible and serve multiple purposes and multiple lots whenever possible;

e. Roads may cross streams only on previously approved rights-of-way, provided no practical alternative exists and adequate provision is made to protect and/or enhance the stream through appropriate mitigation. Roads shall be designed and located to conform to topography, and maintained to prevent erosion and restriction of the natural movement of ground water as it affects the stream;

f. Roads and utilities shall be designed in conjunction to minimize the area of disturbance to the stream;

g. Roads shall be constructed so as to minimize adverse impacts on the hydrologic quality of the stream or associated habitat to a degree acceptable to the city;

h. An alternative alignment or location with less impact is not feasible; and

i. The crossing will be designed as near as perpendicular with the water body as possible.

2. *Stormwater Management Facilities.* Stormwater management facilities, limited to outfalls, pipes and conveyance systems, stormwater dispersion outfalls and bioswales, may be allowed within riparian management zone; provided, that:

a. No other location is feasible;

b. Pipes and conveyance facilities will be in the outer 25 percent of the riparian management zone;

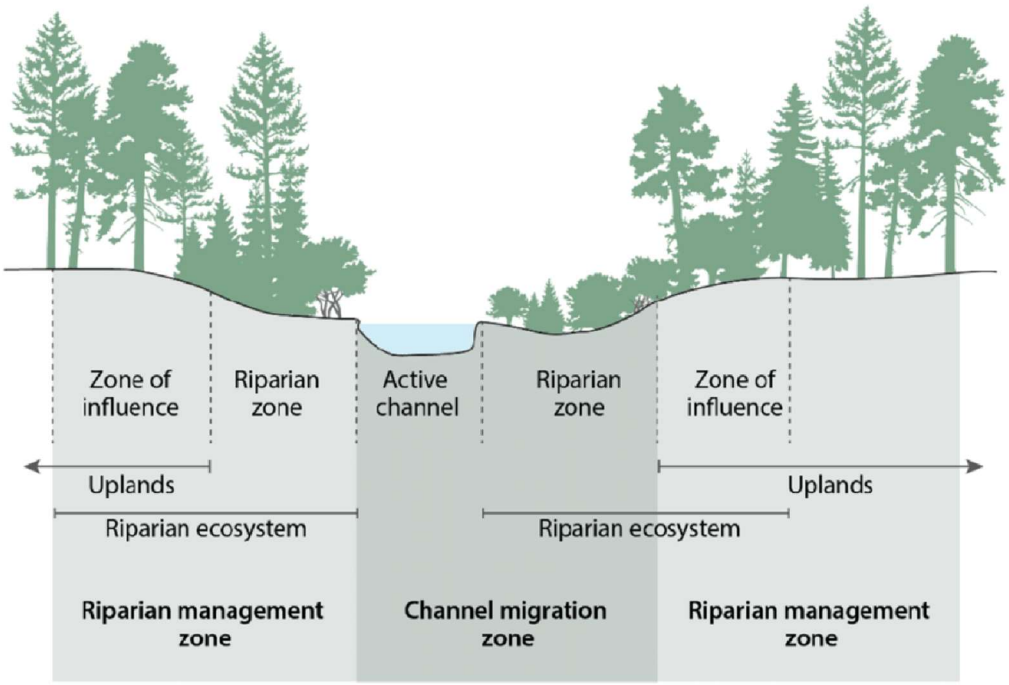
c. Stormwater dispersion outfalls, bioswales, and bioretention facilities may be allowed anywhere within riparian management zones;

d. Such facilities are designed consistent with requirements of Chapter 18.30 ECDC; and

e. The location and function of such facilities will not degrade the functions or values of the stream or riparian management zone.

D. Riparian Management Zones (RMZ).

Illustration of Riparian Management Zones



1. *Standard RMZ Width by Water Type.*

Water Type	Standard Width (in feet)
Type F	200’
Type N	100’

2. *Reduced RMZ Widths*. Standard RMZ widths for Type F waters may be reduced by no more than 25 percent of the required width pursuant to (D)(1) of this subsection, and concomitant to development and implementation of a riparian zone enhancement plan approved by the director. Reduced widths shall only be approved by the director if a riparian zone enhancement plan conclusively demonstrates that enhancement of the reduced area will not degrade the quantitative and qualitative functions and values of the critical area in terms of fish and stream protection and the provision of wildlife habitat. Riparian zone enhancement plans must meet the following specific requirements:

    a. The plan is proposed as part of riparian zone reduction and provides evidence that functions and values in terms of stream and wildlife protections will be:

i. Increased or retained through plan implementation for those streams where existing vegetation is generally intact and providing the functions and values of a riparian zone; or

ii. Increased through plan implementation for those streams where existing buffer vegetation is inadequate to protect the functions and values of the stream;

b. The plan documents existing native plant densities and provides for increases in native plant densities in RMZ to no less than three feet on center for shrubs and eight feet on center for trees;

c. The plan requires monitoring and maintenance to ensure success for a minimum of five years in accordance with ECDC 23.10.260; and

d. The plan specifically documents methodology and provides performance standards for assessing increases in RMZ functioning as related to:

i. Bank stability;

ii. Shade;

iii. Pollution removal;

iv. Contributions to detrital nutrients; and

v. Recruitment of large woody debris.

3. *City Discretion in Protection, Enhancement and Preservation of Riparian Zones.* The city of Edmonds is unique within the state of Washington as a built-out community with streams that have been incorporated within, and often located immediately adjacent to, residential development. The director is allowed full discretion to condition proposals for development on parcels containing, adjacent to, or potentially impacting streams consistent with the purposes and objectives of this chapter. Conditions on development shall be required to enhance streams and riparian management zones as fish and wildlife habitat conservation areas to provide increased protection of anadromous fisheries and potential fish habitat in accordance with best available science and the recommendations of an approved critical areas report and may include:

a. Removal of stream bank armoring;

b. In-stream habitat modification;

c. Native planting;

d. Relocation of stream channel portions to create contiguous riparian corridors or wildlife habitat;

e. Planting of stream bank native vegetation to increase stream shading;

f. Removal and control of nonnative, invasive weed species;

g. Requiring additional building setbacks or modified buffers; and

h. Limiting or reducing the types or densities of particular uses.

The right of discretion in provisioning development in regard to streams is maintained in order to provide for the creation of enhanced conditions over those currently existing around streams in the city of Edmonds. In all instances where an applicant cannot demonstrate that Riparian Management Zone widths as provided in subsection (D)(1) of this section can be accommodated by project plan or a stream mitigation and riparian management zone enhancement plan as part of a critical areas report indicating that post-project site conditions will provide equivalent or greater protection of stream functions and fish habitat over a riparian management zone and existing site conditions.