Chapter 18.10 Critical Areas Protection

Article 1. General Provisions

18.10.005 Title

A. This chapter shall be known as the Critical Areas Protection Ordinance of the City of Castle Rock. This chapter is adopted pursuant to the authority granted by the Washington State Growth Management Act, including RCW 36.70A.060, and is intended to protect critical areas and their functions and values while allowing for reasonable use of private property consistent with state law.

18.10.010 Purpose and Intent

A. The purpose of this chapter is to protect critical areas and their functions and values as required by the Washington State Growth Management Act. This chapter establishes development standards and review procedures that apply to land use and development activities in or near critical areas.

B. It is the intent of this chapter to:

1. Designate and protect critical areas, including wetlands, fish and wildlife habitat conservation areas, special flood hazard (frequently flooded) areas, geologically hazardous areas, and critical aquifer recharge areas;

2. Apply best available science to the identification, classification, and protection of critical areas;

3. Prevent the degradation or loss of critical area functions and values and reduce risks to public health, safety, and property;

4. Provide clear and predictable standards for development while allowing for reasonable use of private property;

5. Avoid, minimize, and mitigate impacts to critical areas through the application of mitigation sequencing;

6. Coordinate critical area protection with other local, state, and federal regulations; and

7. Establish an administrative framework for review, enforcement, and long-term protection of critical areas.

18.10.015Authority

A. This chapter is adopted under the authority of the Washington State Constitution, the Washington State Growth Management Act (RCW 36.70A), and the police powers granted to cities under RCW Titles 35 and 36. The City is authorized to designate and protect critical areas and to regulate land use and development activities to protect public health, safety, and welfare.

B. This chapter implements the requirements of RCW 36.70A.060 and is intended to be applied in a manner consistent with state law, applicable administrative rules, and controlling case law.

C. Review Authority

1. Review under this chapter shall be integrated with the review of other applicable permits to the maximum extent practicable.

2. Activities regulated by this chapter shall be reviewed according to the permit type required by the underlying development proposal, which may include administrative, ministerial, or discretionary review.

3. Approval under this chapter does not constitute approval of any other permit or authorization required by law.

4. Approvals under this chapter may include conditions necessary to avoid or minimize impacts, require mitigation, or achieve compliance with the standards of this chapter.

18.10.20 Appeals & Violations

A. Appeals.

1. Any decision made under this chapter may be appealed in accordance with the appeal procedures applicable to the underlying permit or decision.
2. Appeals shall be heard by the designated appeal body as established by the City's development regulations.
3. Appeals shall be based on the record established at the time of the decision.
4. The decision-maker shall be upheld unless it is shown to be clearly erroneous or inconsistent with applicable law.

B. Violations.

1. Any development, land use activity, or action that is conducted in violation of this chapter, a permit condition issued under this chapter, or an approved critical area report or mitigation plan constitutes a

violation.

2. Each day a violation continues shall constitute a separate violation.
3. Violations may be charged against the property owner, applicant, permit holder, contractor, or any other person responsible for the violation.
4. Lack of knowledge, intent, or awareness of the requirements of this chapter shall not constitute a defense to a violation.

C. Stop Work Orders

1. The Director or designee may issue a stop work order whenever work is being performed in violation of this chapter, a permit condition, or an approved mitigation plan.
2. Upon issuance of a stop work order, all work subject to the order shall immediately cease, except work necessary to correct the violation or stabilize the site, as authorized by the City.
3. Work may resume only after the City has verified that the violation has been corrected or that adequate corrective measures have been implemented.
4. Failure to comply with a stop work order constitutes a separate violation subject to enforcement.

D. Civil Penalties

1. Any person who violates this chapter shall be subject to civil penalties as provided by the City's general penalty provisions or as otherwise authorized by law.
2. In determining the amount of a civil penalty, the City may consider the severity of the violation, the extent of environmental harm, the duration of the violation, prior violations, and the degree of cooperation in correcting the violation.
3. Civil penalties may accrue on a per-day basis for each day a violation remains uncorrected.
4. Civil penalties are cumulative and may be imposed in addition to any other remedies authorized by this chapter or by law.

E. Restoration and Remedies

1. In addition to any civil penalties, the City may require restoration of affected critical areas and buffers to conditions that achieve compliance with this chapter.
2. Where restoration is required, the City may require submission and approval of a restoration or mitigation plan prepared by a qualified professional.
3. Where full restoration is not feasible, the City may require alternative mitigation measures sufficient to address impacts and achieve no net loss of critical area functions and values.
4. If a responsible party fails to complete required restoration or mitigation, the City may complete the work and recover costs as authorized by law.
5. The remedies provided in this chapter are not exclusive and do not limit the City's authority to pursue any other legal or equitable remedies.

18.10.025 Applicability & Relationship to Other Regulations

A. General Applicability. The provisions of this chapter apply to all land use and development activities, including new uses of land and buildings, changes of use, new construction, modification of existing buildings, structures, and infrastructure, clearing, grading, construction, and vegetation removal, that occur within critical areas or their required buffers, unless expressly exempted by this chapter.

B. Critical areas subject to the provisions of this Chapter include:

1. Critical aquifer recharge areas.
2. Special flood hazard (frequently flooded) areas.
3. Geologic hazard areas.
4. Wetlands.
5. Fish and wildlife habitat conservation areas.

C. This chapter applies to both public and private actions and to all properties within the City limits.

D. Compliance with this chapter is required in addition to compliance with all other applicable local, state, and federal regulations. Approval under this chapter does not relieve an applicant from the responsibility to obtain all other required permits or approvals.

E. Where the provisions of this chapter conflict with other development regulations, the provision that provides greater protection to critical areas shall apply, unless otherwise provided by law.

F. Mapped and Unmapped Critical Areas. The provisions of this chapter apply to critical areas and buffers whether or not they are shown on official maps

G. Administrative provisions of this chapter do not apply to lands within the jurisdiction of the Shoreline Management Act (SMA). Projects within the jurisdiction of the SMA shall be processed under the City of Castle Rock Shoreline Master Program.

H. No Authorization of Impacts. Nothing in this chapter shall be construed to authorize impacts to critical areas except as expressly allowed under the standards of this chapter.

Article 2. Definitions

18.10.030 Definitions

A. For the purposes of this chapter, the following definitions shall apply unless the context clearly requires otherwise. It is further acknowledged that several of the following terms appear in other codes and those may be slightly different than those contained in this code.

1. “Agricultural activities (existing and ongoing)” means those activities conducted on lands defined in RCW 84.34.020(2), Open space, agricultural, timber lands – Current use – Conservation futures, and those activities involved in the production of crops and livestock, including but not limited to operation and maintenance of existing farm and stock ponds or drainage systems, irrigation systems, changes between agricultural activities, and maintenance or repair of existing serviceable structures and facilities. Activities which bring an area into agricultural use are not part of an ongoing activity. An activity ceases to be ongoing when the area on which it was conducted has been converted to a nonagricultural use or, with the exception of forest practices, has been unattended for five years.

2. “Alluvial fan” means a low, outspread, relatively flat to gently sloping mass of loose alluvium, shaped like an open fan, deposited by a stream where it issues from a narrow valley, or where a tributary stream issues into the main stream, or wherever a constriction in a valley abruptly ceases or the gradient of the stream suddenly decreases; it is steepest near the mouth of the valley where its apex points upstream, and it slopes gently and convexly outward with gradually decreasing gradient.

3. “Alluvium” means sand, clay, etc., gradually deposited by moving water, as along a riverbed, stream or shore of a lake.

4. “Alteration” means a human-induced action which materially affects a regulated critical area or associated buffer, such as a physical change to the existing condition of land or improvements, including but not limited to construction, clearing, filling, and grading.

5. “Applicant” means the person, party, firm, corporation, tribe, or federal, state, or local government, or any other entity that proposes any activity that could affect a critical area.

6. “Aquifer recharge area” An area with a critical recharging effect on an aquifer that is vulnerable to contamination and is used as a sole source of potable water supply. Aquifer recharge areas are those areas designated pursuant to a) The Federal Safe Drinking Water Act, b) Chapter 90.44, 90.48 and 90,54 RCW; and c) WAC 173-100 and 173-200.

7. “Best available science” Current scientific information used in the process of designating, protecting, or restoring critical areas; that is, scientific information derived from a valid scientific process as defined by WAC 365-195-900 through 925

8. “Best management practices” means Conservation practices or systems of practices and management measures that: (a) Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, or sediment; (b) Minimize adverse impacts to surface water and ground water flow and circulation patterns and to the chemical, physical, and biological characteristics of wetlands; (c) Protect trees, vegetation, and soils designated to be retained during and following site construction and use native plant species appropriate to the site for re-vegetation of disturbed areas; and (d) Provide standards for proper use of chemical herbicides within critical areas.

9. “Buffer or buffer area” Vegetated areas adjacent to wetlands or other aquatic resources that can reduce impacts from adjacent land uses through various physical, chemical, and/or biological processes. Buffers are measured horizontally outward from the edge of the critical area as defined by this chapter.

10. “Buffer averaging” means a method of modifying the configuration of a required buffer in which portions of the buffer are reduced in width and other portions are increased in width, resulting in an overall buffer area that is equal to or greater than the area required by the standard buffer width, and that provides equal or greater protection of critical area functions and values.

11. **“**Critical area boundary” means the outer edge or limit of a critical area, as identified based on field conditions, best available science, and applicable classification criteria, from which required buffers and setbacks are measured. The critical area boundary shall be determined using site-specific information where available and shall not be based solely on mapped or generalized data.

12. “Critical area report” means a written technical report prepared by a qualified professional that identifies, evaluates, and documents the presence, extent, functions, and values of critical areas on or adjacent to a site, typically with critical areas present within 300 feet of the study area.

13. "Critical areas" include the following areas and ecosystems: (a) Wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) special flood hazard (frequently flooded) areas; and (e) geologically hazardous areas. "Fish and wildlife habitat conservation areas" does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and

are maintained by a port district or an irrigation district or company.

14. “Conservation easement” means an interest or right of use over a property, less than fee simple (means that the easement has been conveyed to the public by deed or other document, but the actual land stays with the original landowner), to protect, preserve, maintain, improve, restore, limit the future use of, or conserve for open space purposes any land or improvement on the land.
15. “Construction” means any act or process that requires a building or fill and grading permit, and/or that adds an addition onto an existing building or erects a new principal or accessory structure on a lot which is subject to the design standards for the district in which the property is located.
16. “Development” means a construction project involving property improvement or a change of physical character within the site; the act of using land for building or extractive purposes. “Development” shall include, but shall not be limited to, the activities identified in CRMC 18.10.060.
17. “Enhancement” The manipulation of the physical, chemical, or biological characteristics of a wetland or other critical area to heighten, intensify, or improve specific function(s). Enhancement results in the gain of selected function(s), but may also lead to a decline in other function(s). Enhancement does not result in a gain in area.
18. “ESA” means the Endangered Species Act, specifically Section (4)(d), Protective Regulations.
19. “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account site conditions, existing constraints, available technology, and the scale and scope of the proposed development. Feasible does not mean desirable or preferred by the applicant and does not include measures that would render a project incapable of reasonable use of the property.
20. “Filling” means the act of placing material including temporary stockpiling of fill material.
21. “Fill material” means earth or other natural or manmade material.
22. “Fish,” as used in this chapter, refers to resident game fish; anadromous fish and specified salmonoids listed as endangered or threatened under the Federal Endangered Species Act, Section (4)(d), or the Washington State List of Threatened and Endangered Species.
23. "Fish and wildlife habitat conservation areas" are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species. Fish and wildlife habitat conservation areas do not include such artificial features or constructs as irrigation, delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company. Fish and wildlife habitat conservation areas may also include habitats of local importance.
24. “Functions and values” means the physical, biological, chemical, and hydrologic processes and characteristics of a critical area that support ecological integrity, natural hazard reduction, and water quality, including but not limited to:
    - **a.** Water storage, conveyance, and flood attenuation;
    - **b.** Groundwater recharge and discharge;
    - **c.** Water quality improvement through filtration, sediment retention, and nutrient cycling;
    - **d.** Habitat for fish and wildlife, including breeding, rearing, migration, and refuge;
    - **e.** Maintenance of hydrologic and ecological connections; and
    - **f.** Reduction of risks to public health, safety, and property from flooding, erosion, or geologic hazards.
25. "Geologically hazardous areas" means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns. Geologically hazardous areas are characterized by slopes greater than 15% and known erosion, landslides, settling, rockslide, debris flow, and/or seismic hazards as defined by the US Department of Agriculture Soil Conservation Service.
26. “Geologist” means a person who is licensed as a professional geologist in Washington State in accordance with Chapter 18.220 RCW.
27. “Geotechnical assessment” means an assessment prepared by a geotechnical engineer licensed by the state of Washington, which evaluates the site conditions and the effects of a proposal, and identifies mitigating measures to ensure that the risks associated with geologic hazards will be substantially reduced.
28. “Geotechnical engineer (engineering geologist)” means a licensed as a professional civil engineer with the state of Washington, who is also licensed as a professional geologist in Washington State in accordance with RCW 18.220.
29. “Geotechnical report” means a report prepared by a geotechnical engineer including a description of the site geology, conclusions, and recommendations regarding the effect of geologic conditions on the proposed development, opinions and recommendations of the adequacy of the site to be developed, the effects of groundwater interception and infiltration, seepage, potential slip planes, and changes in soil bearing

strength, and the impacts of the proposed development and appropriate mitigating measures.

30. "Grading" means an excavating and/or filling of the earth's surface or combination thereof to achieve a desired slope or topography.

31. "Habitats of local importance" designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities.

32. "Hydric soils" means soils which are wet long enough to periodically produce anaerobic (reduced oxygen) conditions, thereby influencing plant growth.

33. "Hydrogeologist" means a person who is licensed as a professional hydrogeologist in Washington State in accordance with RCW18.220.010.

34. "Hydrologic function" means the role a critical area plays in the movement, storage, and quality of water within a watershed, including but not limited to the regulation of surface water flows, groundwater recharge and discharge, flood attenuation, erosion control, and the maintenance of natural hydrologic connections.

35. "Hydrologic unit (watershed)" means an area of land above or upstream from a specific point on a stream, which is enclosed by a topographic divide (i.e., hillsides, mountains, cliffs, etc.) such that direct surface runoff from precipitation normally drains by gravity into the stream or the area above the specified point on a stream.

36. "Indigenous" means any native species of plant or wildlife that occurs naturally on a particular site or area.

37. "Landfill" means a disposal facility or part of a facility at which solid waste is placed in or on land.

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

39. "Liquefaction" means a process in which soil loses strength, and behaves like a liquid.

40. "Mitigation" means compensating action designed to replace project-induced critical area losses or impacts:

- **a.** In-Kind Mitigation. Replacement of wetlands or surface water systems with substitute wetlands or surface water systems whose characteristics and functions and values closely approximate those destroyed or degraded by a regulated activity.
- **b.** Out-of-Kind Mitigation. Replacement of surface water systems or wetlands with substitute surface water systems or wetlands whose characteristics do not closely approximate those destroyed or degraded by a regulated activity.

41. "Mitigation plan" means a plan that outlines the activities that will be undertaken to alleviate project impacts. The plan generally contains: a site and project description; an environmental assessment of the functions and values of the site that will be impacted; a description of the proposed mitigation; the goals and objectives of the proposed mitigation; the performance standards against which success will be measured; monitoring of and reporting on the success of the mitigation; and a contingency plan in case of failure.

42. "Mitigation sequencing" means A prescribed order of steps taken to reduce the impacts of activities on wetlands. As defined in WAC 197-11-768, mitigation means: (a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts; (c) Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment; (d) Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action; (e) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or (f) Monitoring the impact and taking remedial action when necessary.

43. "Monitoring" means the periodic evaluation and documentation of mitigation measures or protected critical areas to determine whether required performance standards are being met over time and to identify the need for maintenance or corrective actions.

44. "No net loss" means a standard requiring that the total extent, functions, and values of critical areas are maintained over time through the avoidance, minimization, and mitigation of impacts resulting from regulated activities. No net loss is evaluated based on the effectiveness of adopted development standards and required mitigation measures and does not require the complete elimination of all impacts.

45. "Noxious weeds" means any plant which, when established, is highly destructive, competitive, or difficult to control. Cowlitz County Weed Control Board maintains an annually updated noxious weed list.

46. "Open space" means land eligible for tax assessment at its current use value as authorized by Chapter 84.34 RCW.

47. "Ordinary high water mark" or "OHWM" means the line on the shore of waters that is established by fluctuations of water and is indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding area.

48. "Peer review" means the independent evaluation of a critical area report, mitigation plan, or other technical information by a qualified professional retained by the City to assess the accuracy, completeness, and consistency of the information with best available science and the standards of this chapter. Peer review does not replace the City's decision-making authority and may be required at the applicant's expense when

determined necessary by the City.

49. “Pond” means a naturally existing or artificially created body of standing water which exists on a year-round basis and occurs in a depression of land or expanded part of a stream.

50. “Priority habitat” means those habitat types or elements with a unique or significant value to a diverse assemblage of species, typically defined by the Washington Department of Fish and Wildlife’s Priority Habitats and Species List. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element.

51. “Priority species” means fish and wildlife species requiring protective measures and/or management guidelines to ensure their perpetuation as determined by the Washington State Department of Fish and Wildlife’s Priority Habitats and Species List, as now exists or is hereafter amended.

52. “Qualified expert or qualified professional” A person with professional wetland and/or critical areas experience that meets the following criteria: (a) A Bachelor of Science or Bachelor of Arts or equivalent degree in hydrology, soil science, botany, ecology, resource management, or related field, or four years of full-time work experience as a wetland or critical areas professional may substitute for a degree, and (b) At least two additional years of full-time work experience as a wetland or critical areas professional; including but not limited to delineating wetlands, preparing wetland reports, conducting function assessments, and developing and implementing mitigation plans, and (c) Completion of additional wetland-specific or critical areas training programs. This could include a more comprehensive program such as the University of Washington Wetland Science and Management Certificate Program or individual workshops on topics such as wetland delineation, function assessment, mitigation design, hydrophytic plant or hydric soil identification. A person certified as a Professional Wetland Scientist through the Society of Wetland Scientists professional certification program meets the above criteria

53. Resident Game Fish. “Game fish,” as described in the Washington Game Code, spend their life cycle in freshwater. Steelhead, Sea-Run Cutthroat and Dolly Varden trout are anadromous game fish and should not be confused with resident game fish.

54. “Restoration” means Measures taken to restore an altered or damaged natural feature, including: (a) Active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and (b) Actions performed to re-establish structural and functional characteristics of a critical area that have been lost by alteration, past management activities, or catastrophic events.

55. “Riparian zone” means the upland area immediately adjacent to and paralleling a body of water and is usually composed of trees, shrubs and other plants. Riparian functions include bank and channel stability, sustaining water supply, providing flood storage, retainment of woody debris, leaf litter, nutrients, sediment and pollutant filtering, while providing shade, shelter and other functions that are important to the survival of both fish and wildlife.

56. “Setback” means a required minimum horizontal distance, measured in feet, between a structure or development activity and a specified feature or line, within which structures or development are restricted or prohibited. A setback is separate from and in addition to any required critical area buffer unless expressly stated otherwise.

57. “Site potential tree height” or “SPTH” means the expected mature height, expressed in feet, of the tallest dominant tree species that would naturally occur on a particular site under normal ecological conditions, based on soil type, climate, hydrology, and vegetation potential, and determined using best available science. Site potential tree height is not based on the height of existing trees or current site conditions resulting from past disturbance.

58. “Slope” means an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance. In these regulations, slopes are generally expressed as a percentage; percentage of slope refers to a given rise in elevation over a given run in distance.

59. “Soil with severe erosion hazard” means any soil type having a degree of hazard or limitation of severe or very severe according to the Soil Survey of Cowlitz County, Washington (2006) : United States. Natural Resources Conservation Service : Free Download, Borrow, and Streaming : Internet Archive

60. “Top of bank” means the point along a stream, river, or watercourse where the slope of the land transitions from the relatively flat floodplain or terrace to the steeper slope descending to the water body, as identified by a distinct change in grade, vegetation, or soil characteristics. Where a distinct break in slope is not present, the top of bank shall be determined based on site-specific conditions using best available science.

61. “Undisturbed buffer” means a protective area left in its natural state, except for any access and/or utility crossings approved by the city planner, between land development and a critical area.

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

63. "Wetland" or "wetlands" means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence

of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

64. "Wetland evaluation technique" means a technique for evaluating wetlands as described in the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers' Wetland Delineation Manual (Environmental Laboratory 1987) and Western Mountains, Valleys, and Coast Region (Version 2.0) (Corps 2010) 3. Hruby, T. & Yahnke, A. (2023). Washington State Wetland Rating System for Western Washington: 2014 Update (Version 2). Publication #23-06-009. Washington Department of Ecology.

65. "Wetland functions" are determined by physical, chemical, and biological characteristics and include but are not limited to fish and wildlife habitat, aquifer recharge and discharge, water quality, shoreline stabilization, and flood and erosion control.

66. "Wetland rating" " means the classification of a wetland based on its functions and values using an approved wetland rating system adopted or referenced by the City and consistent with best available science. Wetland rating is used to determine applicable buffer widths, development standards, and mitigation requirements under this chapter.

Article 3. Best Available Science and Standards

18.10.045 Best Available Science

A. The City shall use best available science in the designation, classification, and protection of critical areas, and required by RCW 36.70A.172.

B. Best available science shall be applied in the development and interpretation of the standards of this chapter, including buffer widths, mitigation requirements, and critical area report standards. The City is not required to conduct an independent scientific analysis for individual development proposals.

C. Best available science includes, but is not limited to, the following sources, as applicable:

1. Peer-reviewed scientific studies and technical reports;

2. Guidance and technical manuals prepared or adopted by federal, state, and local agencies;

3. Scientific information and data from recognized academic, professional, and governmental sources; and

4. Site-specific technical information prepared by qualified professionals.

D. Where site-specific conditions differ from mapped or generalized data, the City may rely on site-specific studies and critical area reports prepared by qualified professionals, provided such information is consistent with best available science.

E. Decisions under this chapter shall be supported by the record and shall demonstrate consideration of best available science. The City may rely on adopted standards and regulations that were developed using best available science.

18.10.050 No Net Loss Standard

A. Development and land use activities regulated by this chapter shall be designed and conducted to achieve no net loss of critical area function and values, consistent with best available science.

B. No net loss shall be achieved through the application of avoidance, minimization, and mitigation measures, as required by this chapter. Compliance with adopted buffer standards, mitigation requirements, and development standards shall be presumed to achieve no net loss, unless demonstrated otherwise by site-specific conditions

C. The City shall evaluate impacts to critical areas according to type, scale, and intensity of the proposed activities, as well as the functions and values of the affected critical area.

D. Where impacts to critical areas cannot be completely avoided or minimized, mitigation shall be required to offset impacts and achieve no net loss of functions and values. Mitigation shall be proportional to the impact and based on best available science.

18.10.055 Mitigation Sequencing

A. Property Owners and Project Applicants shall, when designing development activities that may affect geologic hazard areas, wetlands, fish and wildlife habitat conservation areas, frequently flooded areas (i.e. special flood hazards), or critical aquifer recharge areas, use the following measures, referred to as mitigation sequencing, listed in priority order:

1. Avoid the adverse impact altogether by not taking a certain action or parts of an action or moving the proposed action.
2. Minimize adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts.
3. Rectify the adverse impact by repairing, rehabilitating or restoring the affected environment to the conditions existing at the time of the initiation of the project.
4. Reduce or eliminate the adverse impact over time by preservation and maintenance activities during the life of the action.
5. Compensate for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments.
6. Monitor the impact for a reasonable period of time and taking appropriate corrective measures. and

B. The mitigation of individual projects may include a combination of the above measures as needed to achieve the most effective protection or compensatory mitigation of the critical area functions and values.

18.10.060 Use of Professional Judgement

A. The Director or designee may apply professional judgement in administering this chapter to interpret standard, evaluate technical information, and address site-specific conditions, provided such determinations are consistent with best available science and documented in the record.

18.10.065 Classification and Mapping of Critical Areas

A. Mapping. The approximate location and extent of known critical areas is shown on Cowlitz County's critical area maps.
B. Site-Specific Information Required. The county maps and reports should be used as a general guide for critical area investigation. Detailed site investigations may be needed for project-specific critical area identification and regulation.
C. Limitation of Liability. The maintenance of critical area maps does not imply that land outside of mapped critical areas will be without risk. Preparation and maintenance of such maps shall not create a liability on the part of Cowlitz County, The City of Castle Rock, or any officer or employee thereof, for any damages that result from the reliance on said maps for any decision lawfully made hereunder.
D. For defining critical aquifer recharge areas in the City of Castle Rock and the Urban Growth Area the following additional resources are adopted:
    a. Wellhead Protection Program Guidance Document, Washington Department of Health (April 1995, Publication #331-018).
    b. Washington State Department of Ecology Critical Aquifer Recharge Areas Guidance Document. Revised March 2021, Publication 05-10-028
    NRCS Web Soil Survey and Cowlitz County GIS Web Map for up-to-date recharge area mapping.
    c. If field investigations show discrepancies in mapped aquifer recharge areas, the field assessment prevails.

Article 4. Allowed, Exempt, and Prohibited Activities

18.10.070 Allowed and Exempt Activities

A. The activities not otherwise required to obtain a permit from the City of Castle Rock shall not require a critical area assessment, review or permit as part of this chapter, provided that they are conducted in a manner consistent with Best Available Science (BAS) and the Growth Management Act (GMA) to ensure no net loss of ecological functions and values."

B. Activities Allowed without a City of Castle Rock Permit. The activities in subsections (C) through (E) of this section are allowed without the submission of a City of Castle Rock critical areas permit or critical areas report; provided, that a critical area report shall be required for the activities when they are not specifically exempted from local review and the actions:
1. Result in the loss of the functions and values of a critical area and/or a critical area buffer;
2. Are proposed as part of a larger project that has other components that require the submission of a critical areas report.

C. Permit Exempt Activities - Critical Areas and Buffers. The following activities are allowed within critical areas and their buffers without a critical areas permit, when the activities meet the requirements of subsection (B) of this

section:

1. Normal and routine maintenance and repair of existing public or private facilities within an existing right-of-way; provided, that the maintenance or repair does not increase the footprint of the facility or right-of-way.
2. Activities and uses conducted pursuant to the Washington State Forest Practices Act and its rules and regulations, WAC 222-12-030, where state law specifically exempts local authority. This exemption, however, shall not apply to developments that require local approval for a Class IV - General forest practice permit (conversions), as defined in Chapter 76.09 RCW and Chapter 222-12 WAC.
3. Existing and ongoing agricultural activities are not subject to this chapter.
4. The harvesting of wild crops in a manner that is not injurious to the natural reproduction of such crops, and does not require the tilling of soil, planting of crops, chemical applications, or the alteration of a critical area by changes to topography, water conditions, or water sources.
5. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.
6. Educational and scientific research activities.
7. The enhancement of a critical area or critical area buffer through the removal of noxious weeds and/or nonnative invasive plant species, so long as:
    a. The removal of the noxious weeds and/or invasive plant species is done by hand, unless guidance by the Washington State or Cowlitz County Noxious Weed Control Board recommends an alternative approach to prevent, control or eradicate the species.
    b. All removed plant material is taken away from the site and appropriately disposed.
    c. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds are handled and disposed of according to a noxious weed control plan appropriate to the species.
    d. Revegetation of the site with appropriate native species and at natural densities is allowed in conjunction with the removal of invasive plant species.
8. Emergency actions, including 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.
    a. 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 have the least possible impact to the critical area or its buffer. The person or agency undertaking such action shall notify the administrator within 14 working days following commencement of the emergency activity, except for county-wide or regional disasters for which the director shall provide alternative deadlines.
    b. After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and/or mitigation for any impacts to the critical area and buffers resulting from the emergency action. The person or agency undertaking the action shall obtain all approvals required for this chapter. Restoration and/or mitigation activities must be initiated within one year of the date of the emergency and be completed as provided for in this chapter.
9. Passive recreational uses, sport fishing or hunting, hiking, canoeing, viewing, nature study, photography, scientific or educational review, or similar minimal impact, nondevelopment activities.
10. Site investigative work required by a city, county, state, or federal agency in conjunction with the preparation of a land use application submittal, or the monitoring of a restoration or mitigation site, such as surveys, soil logs, percolation tests, and other related activities. In any such activity, impacts on the critical areas must be avoided where possible, minimized where necessary, and disbursed to the extent possible. Critical areas shall be restored to the preexisting level of function and value within one year after tests are concluded.
11. Maintenance of existing, lawfully established landscaping and gardens within a critical area or its buffer, including, but not limited to, mowing lawns, weeding, removal of noxious and invasive species, harvesting and replanting of garden crops, pruning, and replanting and replacement of ornamental vegetation or indigenous native species to maintain the condition and appearance of such areas as they existed prior to adoption of this code. Home and garden herbicides, pesticides, and fertilizers may be used to maintain existing landscaping and gardens within critical area buffers, when applied at times and rates specified on the label in accordance with Washington State Department of Agriculture and other applicable regulations. Home and garden herbicides, pesticides, and fertilizers may not be used in wetlands, streams, or other water bodies without the submittal of a critical areas permit.
12. Residential remodels that do not alter the footprint or increase the gross floor area of the structure.

D. Permit Exempt Activities - Wetlands and their Buffers. The following activities are additionally allowed within wetlands and their buffers without a critical areas permit, when the activities meet the requirements of subsection (B) of this section:

1. Drilling for utilities/utility corridors under a wetland buffer with entrance/exit portals located completely outside of the wetland boundary; provided, that the drilling does not interrupt the ground water connection to the wetland or stream or the percolation of the surface water through the soil column. Specific studies

shall be submitted by a hydrologist to determine whether the ground water connection to the wetland, or the percolation of surface water through the soil column, will be disturbed.

2. Walkways and trails; provided that those pathways are generally parallel to the perimeter of the wetland, are located in the outer twenty five percent of the buffer area, are constructed with a surface which does not interfere with soil permeability, and the surface of which is no more than eight feet wide. The design and construction of walkways and trails shall avoid impacts to established native woody vegetation. Raised boardwalks utilizing non-treated pilings are acceptable.
3. Stormwater management facilities. A wetland or its buffer can be physically or hydrologically altered to meet the requirements of a low-impact development, runoff treatment or flow control best management practice if all of the following criteria are met:
    a. The wetland is classified as a Category III or a Category IV wetland with a habitat score of three to five points.
    b. There will be no net loss of the functions and values of the wetland.
    c. The wetland does not contain a breeding population of any native listed or protected amphibian species.
    d. The hydrologic functions of the wetland can be improved as outlined in questions 3, 4, 5 of Chart 4 and questions 2, 3, 4 of Chart 5 in the guidance: Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington) (Ecology Publication No. 09-06-32, December 2009); or the wetland is part of a priority restoration plan that achieves the restoration goals identified in a shoreline master program or another local or regional watershed plan.
    e. The wetland lies in the natural routing of the runoff, and the discharge follows the natural routing.
    f. All regulations regarding stormwater management and wetlands are followed, including but not limited to local and state wetland and stormwater codes, manuals, and permits.
    g. Alterations to the structure of the wetland or its soils obtain the necessary permits for the proposal.
    h. Stormwater management facilities in wetland buffers (limited to stormwater dispersion outfalls and bioswales) are located within the outer twenty-five percent of the wetland buffer. Stormwater management facilities may encroach farther into the wetland buffer at discretion of the responsible official or designee, provided that no other location is feasible.
    i. All lost functions and values of the wetland are compensated/replaced.

E. To determine if a low-impact development best management practice will be feasible at a project site, a site-specific characterization by a qualified professional is required. Wetlands may contain features that render low-impact development best management practices infeasible.

F. Permit Exempt Activities - Buffers Only. The following activities are allowed within critical area buffers without a critical areas permit, when the activities meet the requirements of subsection (1) of this section:
    1. Repair and maintenance of nonconforming uses or structures, when legally established within the buffer; provided, that the activities do not increase the degree of nonconformity for the critical area or otherwise cause a net loss in the ecological functions of the critical area or buffer.

18.10.075 Prohibited Activities

A. Except as expressly allowed by this chapter, the following activities are prohibited within critical areas and required buffers:
    1. Development, grading, filling, excavation, dredging, or vegetation removal that would result in a loss or degradation of critical area functions and values;
    2. Placement of structures, impervious surfaces, or storage of materials not expressly allowed by this chapter;
    3. Alteration of natural hydrologic patterns, including drainage, diversion, or obstruction of surface or groundwater flows, except as allowed in compliance with this chapter;
    4. Discharge of pollutants, hazardous substances, or untreated stormwater into critical areas or buffers;
    5. Removal, conversion, or degradation of native vegetation within required buffers, except as part of an approved mitigation, restoration, or enhancement plan;
    6. Creation of new lots, parcels, or building sites that would result in increased impacts to critical areas or buffers, except as allowed through compliance with this chapter;
    7. Expansion of nonconforming uses or structures that would increase impacts to critical areas or buffers, except as expressly authorized.

B. The absence of an activity from this section shall not be construed as authorization for that activity within a critical area or buffer. For a proposed action to be considered allowable it must be compliant with zoning, land use, and result in no-net-loss of critical areas functions and values.

Article 5. Critical Area Reports

18.10.080 When Reports are Required

A. A Critical area report is required when a proposed development or land use activity may affect a critical area or required buffer, or when needed to determine the presence, extent, or classification of a critical area.

B. A critical area report shall be required when any of the following apply:

1. Development, grading, filling, construction, or vegetation removal is proposed within a critical area or required buffer;

2. A critical area is mapped on or within 300 feet of the site and field verification is needed to confirm site conditions;

3. The proposal involves alteration of hydrology, drainage, utilities, or infrastructure that may affect a critical area;

4. The proposal requests buffer averaging, buffer modification, a reasonable use exception, or a variance under this chapter;

5. Expansion, replacement, or modification of a nonconforming use or structure is proposed within or adjacent to a critical area or buffer; or

6. Site conditions, project scale, or potential impacts warrant technical analysis to demonstrate compliance with this chapter, as determined by the Director or designee.

C. The Director or designee may waive the requirement for a critical area report when impacts are clearly minimal or when sufficient existing information demonstrates compliance with this chapter.

D. Previously approved critical area reports may be accepted when site conditions and proposed activities have not materially changed, the report is not more than five years old, and the report remains applicable, as determined by the Director or designee.

18.10.085 General Critical Areas Report Requirements

(1) A critical areas report shall be required when a proposal is located within the areas specified in the following sections of this critical areas section:

(a) Wetlands

(b) Habitat Areas

(c) Geological Hazard Areas

(d) Critical Aquifer Recharge areas

(2) The critical areas report shall include the required information as specified in the corresponding critical area section(s). The director may waive portions of the submittal requirements, if they determine that they are not applicable to the proposed activity.

(3) Impacts to Critical Areas Known. When a project will impact critical areas and/or their buffers, beyond any standards allowed for buffer averaging and reduced buffer widths, the applicant may submit a report that consolidates the requirements for both the critical areas report and the mitigation plan.

(4) Submittal of Electronic Information. Applicants shall provide the reports and maps in an electronic format that allows site data to be incorporated into the city geographic information system (GIS) database; provided, that the administrator may waive this requirement for single-family developments. Applicants are encouraged to coordinate the electronic submittal guidelines with the administrator. Please note: this standard shall not be construed as a requirement to use a specific computer software.

18.10.090 General Mitigation Plan Requirements

(1) Mitigation Report. Where a proposal would alter or impact a critical area or buffer, the applicant shall submit a mitigation plan, critical aquifer recharge area report or geotechnical report in accordance with the following requirements:

(a) Wetlands

(b) Fish and wildlife habitat areas.

(c) Geologically hazardous areas.

(d) Critical aquifer recharge areas.

(2) Mitigation Sequencing. The mitigation plan, critical aquifer recharge area report or geotechnical report shall demonstrate that all reasonable efforts have been taken to mitigate impacts in the following prioritized order:

(a) Avoiding the adverse impact altogether by not taking a certain action or parts of an action, or by moving the action.

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

(c) Rectifying the adverse impact by repairing, rehabilitating or restoring the affected environment.

(d) Reducing or eliminating the adverse impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments, monitoring any adverse impact and mitigation, and taking appropriate corrective or adaptive management measures.

(f) Monitoring the impact and taking appropriate corrective measures.

(3) The mitigation of individual projects may include a combination of the above measures as needed to achieve the most effective protection or compensatory mitigation of the critical area functions and values.

(4) On-Site Versus Off-Site Mitigation. The order of preference for onsite versus offsite compensatory mitigation for wetland and fish and wildlife habitat areas is stated in following sections. All other critical areas shall follow the onsite versus offsite preferences below:

(a) To assure that a mitigation report relieves the direct impacts of an action, on-site mitigation is preferred over off-site mitigation.

(b) Off-site mitigation is allowed:

(i) Where appropriate, adequate on-site mitigation is not reasonable or desirable to achieve; or

(ii) Where off-site mitigation better achieves the purposes of this chapter.

18.10.095 Mitigation Monitoring

(1) Monitoring Required. The administrator shall require applicants to monitor mitigation projects to ensure that the performance standards are satisfactorily met. Monitoring reports shall be submitted to the city in accordance with the monitoring timetables articulated in the mitigation plan or geotechnical report, typically over a period of five to 10 years.

(a) Monitoring should occur for at least five years from the date of plant installation and ten years where woody vegetation (such as in forested or shrub wetlands) is the intended result.

(b) The administrator may reduce the time frame for monitoring to three years for small mitigation projects that involve limited critical area or buffer revegetation or vegetation enhancement; provided, that this provision shall not apply to wetland mitigation sites.

(c) The administrator may waive the monitoring requirement for structural improvements, such as retaining walls, foundations or bulkheads, when located near critical areas or their buffers

(2) Schedule for Monitoring. Monitoring reports for mitigation projects shall be submitted for a 10-year period, unless an alternative schedule is approved. A potential schedule for a 10-year monitoring period includes the submittal of reports in years one, three, five, seven and 10.

(3) Monitoring Report. Monitoring reports shall include sufficient information to document and assess the degree of mitigation success or failure as defined by the performance standards articulated in the approved mitigation plan or geotechnical report. Information to be provided in monitoring reports shall include the following:

(a) Methods used to document compliance with the performance standards;

(b) Measurements of the percent survival of planted material, plant cover, stem density, presence of invasive species, and/or other attributes;

(c) For sites that involve wetland creation, re-establishment or rehabilitation, hydrologic observations of soil saturation/inundation as needed to demonstrate that a site meets the wetland hydrology criterion;

(d) Representative photographs of the site;

(e) A written summary of the overall site conditions and recommendations for maintenance actions if needed; and;

(f) Other information that the administrator deems necessary to ensure the success of the mitigation.

(4) Projects that fail to meet monitoring objectives. For projects that fail to meet the performance standards identified in the mitigation plan or geotechnical report, the administrator may (among other options):

(a) Require corrective mitigation measures; and/or

(b) Extend the required monitoring period.

(5) The permanent protection of mitigation areas or facilities shall be achieved through deed restriction and/or other protective covenant.

18.10.100 Mitigation Assurance

(1) A project applicant shall demonstrate sufficient capability to implement the mitigation project, monitor the site, and make corrections if the mitigation fails to meet projected goals. A surety to ensure the success of the mitigation may be required:

(a) When deemed necessary by the administrator, the applicant shall post a mitigation surety in the amount of 125 percent of the estimated cost of the uncompleted mitigation actions. The value of the surety shall be based on an itemized cost estimate of the proposed mitigation activities, including clearing and grading, plant materials, plant installation, irrigation, weed management, monitoring, and other costs.

(b) The surety shall be in the form of an assignment of funds or other means approved by the administrator.

(c) The surety shall remain in effect until the administrator determines, in writing, that the standards that have been bonded for have been met. The surety shall generally be held by the county for a period of five years to ensure that the required mitigation has been fully implemented and demonstrated to function. The surety may be held for longer periods when necessary.

(d) After the initial completion of the mitigation, a surety for the construction of the mitigation may be reduced to an amount not to exceed the cost of the monitoring plus not less than 25 percent of the construction cost.

(e) The depletion, failure, or collection of surety funds shall not discharge the obligation of an applicant or violator to complete the required mitigation, maintenance, or monitoring.

(f) Public development proposals may be relieved from having to comply with the bonding requirements of this section if the agency demonstrates that: public funds have been committed to the mitigation, maintenance, or monitoring; and the funds will be available throughout the monitoring period.

(2) Default. Any failure to satisfy the critical area requirements established by law or condition, including but not limited to the failure to provide a monitoring report within 30 days of its due date or the failure to comply with other provisions of an approved mitigation plan, shall constitute a default of the surety. The jurisdiction may demand the payment of the financial guarantee or pursue some other remedy that is authorized by the county code or other applicable law. All funds recovered pursuant to this section shall be used to complete the required mitigation.

18.10.105 Qualified Professional Required

(1) Technical analyses, including critical areas assessments, mitigation plans, and geotechnical reports, that are submitted as part of an application shall be completed by a qualified critical area professional.

(2) Generally a qualified professional is defined as “Whether a person is a qualified scientific expert with expertise appropriate to the relevant critical areas is determined by the person's professional credentials and/or certification, any advanced degrees earned in the pertinent scientific discipline from a recognized university, the number of years of experience in the pertinent scientific discipline, recognized leadership in the discipline of interest, formal training in the specific area of expertise, and field and/or laboratory experience with evidence of the ability to produce peer-reviewed publications or other professional literature. No one factor is determinative in deciding whether a person is a qualified scientific expert. Where pertinent scientific information implicates multiple scientific disciplines, counties and cities are encouraged to consult a team of qualified scientific experts representing the various disciplines to ensure the identification and inclusion of the best available science.” WAC 365-195-905(4)

(3) Further clarifications on each critical area requirements ae as follows:

(a) Geologically Hazardous Areas

(i) A geologist, geotechnical engineer, or engineering geologist licensed in the State of Washington.

(ii) Must have demonstrated experience evaluating geological hazards and preparing geotechnical reports in compliance with WAC 365-190-120(3).

(b) Critical Aquifer Recharge Areas

(i) A hydrogeologist licensed in the State of Washington, or a professional with equivalent expertise in groundwater hydrology, contamination risk assessment, and mitigation planning.

(ii) Must have demonstrated experience evaluating impacts to groundwater in compliance with WAC 173-200-080.

(c) Wetlands and Fish and Wildlife Habitat Conservation Areas

(i) A specialist who has received a degree from an accredited college or university in the pertinent scientific discipline, and at least two years of full-time work experience as an ecological professional with experience conducting function assessments and developing and implementing mitigation plans.

(ii) A wetland professional has appropriate education or training in the pertinent scientific discipline, including training from Ecology in the wetland rating system, and specific experience in delineating wetlands and preparing wetlands delineation reports.

(d) Fish and Wildlife Habitat Conservation Areas

(i) A habitat biologist with experience in conservation biology, fish and wildlife management, and habitat restoration planning.

(ii) Must meet standards outlined in WAC 365-195-905(4).

(4) Peer Review Allowed. During the course of review, the administrator may retain, at the applicant’s expense, a qualified professional to perform a peer review of the assessment and mitigation reports. The administrator may similarly consult outside agencies with expertise that pertains to the proposal when necessary.

18.10.110 Independent Review

A. The City may require independent technical review of critical area reports or mitigation plans when necessary to evaluate compliance with this chapter. Independent review shall be conducted by a qualified professional at the applicant’s expense.

18.10.115 Validity and Use of Existing Reports

A. Previously approved critical area reports may be accepted when site conditions and proposed activities have not materially changed and the report remains applicable, and is less than five years old, as determined by the Director or designee.

Article 6. Wetlands

18.10.120 Purpose

A. The purposes of this section are to:
1. Regulate land use to avoid adverse effects on wetlands and maintain the functions and values of wetlands by ensuring that the proposal results in no net loss of wetland functions and values.
2. Protect the beneficial functions performed by wetlands, which include, but are not limited to: providing food, breeding, nesting and/or rearing habitat for fish and wildlife; providing habitat for endangered, threatened and sensitive species; recharging and discharging ground water; contributing to stream flow during low flow periods; stabilizing stream banks and shorelines; storing storm and flood waters to reduce flooding and erosion; and improving water quality through biofiltration, adsorption, and the retention and transformation of sediments, nutrients, and toxicants.
3. Establish review procedures for development proposals, which are consistent with Best Available Science, in and adjacent to wetlands.

18.10.125 Other Provisions Apply

A. Compliance with the provisions of this article does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required. The applicant is responsible for complying with those requirements, in addition to the process established in this article.

18.10.130 Administration

A. Administration of this article shall occur in accordance with Article 1 of this Chapter.
B. When a project is subject to these requirements and does not fall within the activities listed in Article 4 of this chapter, the following reports shall be required to review the projects:
1. A wetland assessment report is required for projects within 300 feet of a mapped wetland or wetland buffer. This report will be prepared based on the standards in this chapter.
2. A wetland mitigation report, which complies with this title is required for projects that submits a proposal for impacts to a wetland or wetland buffer in which the wetland buffers are less than that is less than what is allowed under the standards for buffer width reductions or buffer width averaging. The mitigation plan provided must meet the requirements in in this code and include evidence that the proposal will result in no net loss of wetland functions and values.

C. State and federal permits may be required even when a wetland is exempt from City requirements.

18.10.135 Wetland Identification

(1) Wetlands shall be identified and delineated in accordance with the requirements of RCW 36.70A.175.

(2) The administrator may accept a written determination by the U.S. Army Corps of Engineers and the Washington State Department of Ecology (Ecology) that a specific parcel is not a wetland, as long as the determination is consistent with current local, state, or federal law.

18.10.140 Wetland Rating/Classification

A. Rating. Wetlands shall be identified and rated according to the Washington Department of Ecology wetland rating system, Publication No. 23-06-009, Washington State Wetland Rating System for Western Washington: 2014 Update, published July 2023 (or as revised by Ecology), which contains the definitions and methods for determining whether the criteria below are met.
B. The descriptions of wetland categories according to the Rating System are generally as follows:
1. Category I. Category I wetlands represent a unique or rare wetland type, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain some ecological attributes that are impossible to replace within a human lifetime, or provide a very high level of functions. Category I wetlands are:

a. Wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program of the Department of Natural Resources;
b. Bogs;
c. Mature and old-growth forested wetlands, as defined by WDFW priority habitat and species provisions, larger than one acre; or
d. Wetlands that function at high levels, as characterized by a score of 23 points or more on the rating form.

2. Category II. Category II wetlands are wetlands that perform with a moderately high level of functions and are difficult, though not impossible to replace, scoring between 20 and 22 points on the rating form).

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

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

C. Illegal Modifications. Illegal modifications to a wetland made by the applicant or with the applicant's knowledge shall not change a wetland's rating.

18.10.145 Mitigation Sequencing

Projects proposed in or adjacent to wetlands are required to utilize the mitigation sequence shown in Article 6.

18.10.150 Buffer Widths and Land Use Intensity

A. The land use intensities in Table 18.10.150(A) shall be used in connection with the standards to classify wetlands in Article 6 to determine required buffers. Land use intensity is determined by the highest intensity in Table 1, Land Use Intensity Table.

Table 18.10.150(A) Land Use Intensity Table

Land Use Intensity	**Common Types of Land Use***
High	• Commercial • Residential (Density greater than 1 unit per acre)[1] • Institutional • Retail Sales • Railroads • Roads: federal and state highways, including on-ramps and exits, state routes, and other roads associated with high-impact land uses • High-intensity recreation (golf courses, ball fields, etc.) • Hobby farms
Moderate	• Residential (density between 1 unit per acre and 1 unit per 4.99 acres)[1] • Moderate-intensity open/recreational space (parks with paved trails of playgrounds, biking, jogging, etc.) • Conversion to moderate-intensity agriculture (orchards, hay fields, etc.) • Forest Service Roads and roads associated with moderate impact land uses • Utility corridor or right-of-way shared by several utilities, including access/maintenance roads
Low	• Residential (Five acres or greater)[1,2] • Low-intensity open space (hiking, birdwatching, preservation or natural resources, etc.) • Unpaved trails • Utility corridor without a maintenance road and little or no vegetation management

1Measured as density averaged over a development site, not individual lot sizes within a site.

2 Use of low land use intensity for residential use requires: 1) No greater than 10% total effective impervious surface on the site, 2) 65% native or naturalized cover retained on site, and 3) less than 300 sq. ft. developed area for public roads and utilities, located within a right-of-way, easement, or tract.

*The above list of land use types are examples and not an exhaustive list; other similar uses may be included in each category at the discretion of the City.

D. Wetland buffers are required in order to protect wetland functions and values. The buffer standards in Tables 2 and 3 shall be used as the standard to designate wetland buffers.
  1. Utilizing the impact levels specified above, the buffer widths in Tables 2 and 3 have been established in accordance with Best Available Science.
  2. Buffer widths are established by comparing the wetland rating habitat score, wetland rating category, and the intensity of land uses proposed on development sites per Tables 1, 2 and 3. For Category IV wetlands, the required water quality buffers in Table 3 are adequate to protect habitat functions.
  3. All wetland buffers shall be measured horizontally outward from the wetland boundary.

E. Functionally Isolated Wetland Buffers. Preexisting roads, structures, and other impervious surfaces, or vertical separation shall be considered areas which provide functional isolation of the wetland buffer and shall be excluded from buffers otherwise required by this chapter. Vertical separation is defined as an area having a vertical topographical feature, human-made or natural, that exceeds thirty (30) percent slope and may include, but is not limited to, bluffs, cliffs, retaining walls and steep slopes. For the purpose of establishing the outer limit of a buffer width of a wetland containing vertical separation, the greater of the two distances shall apply: the top of slope or highest point of other similar feature (bluff, cliff, retaining wall); or fifty (50) percent of the base buffer width of the regulated wetland.

F. Increased or Enhanced Wetland Buffer Widths.
  4. In addition to the buffer widths based on the criteria in Tables 18.10.150 (A-B), the department may require increased buffer widths or enhanced buffer vegetation on a case-by-case basis when necessary, as applicable:
    a. To protect wetland functions and values to meet the "no net loss" objective of this section.
    b. When the standard buffer has sparsely vegetated cover or is vegetated with non-native or invasive species that do not perform needed functions.
    c. When required, buffer enhancement is preferred to increasing the buffer width. Enhancement of the buffer through native planting or invasive species removal shall be demonstrated infeasible or ineffective prior to buffer width increases.

G. When the standard buffer is exempt as stated in Article 4 (Activities Allowed Without A Permit In Critical Areas And Buffers), the buffer will not be required to be increased or enhanced.

Table 18.10.150 (B) Buffers Required to Protect Habitat Functions in Category I, II, and III Wetlands

	Land Use Intensity		
Habitat Score in the Rating Form	Low	Moderate	High
8 or 9 points	150 ft.	225 ft.	300 ft.[1]
Wetland of high conservation value with a habitat score of 7 points or less	125 ft.	190 ft.	250 ft.
6 or 7 points	75 ft.	110 ft.	150 ft.
5 points or less	See Table 3	See Table 3	See Table 3

Table 18.10.150 (C) Buffers Required to Protect Water Quality Functions

	Land Use Intensity		
Wetland Rating	Low	Moderate	High
Category I or II	50 ft.	75 ft.	100 ft.
Category III	40 ft.	60 ft.	80 ft.
Category IV	25 ft.	40 ft.	50 ft.

18.10.155 Buffer Width Reduction

A. The following buffer widths reductions are permitted:
  1. Minimum buffer width. Wetland buffer widths shall not, at any location, be reduced to less than seventy-five (75) percent of the required buffer, except as allowed in Item (B) of this section.
  2. Reduction in Buffer Width by Reducing the Intensity of Land Use Impacts. The widths of buffers

recommended for proposed land uses with high-intensity impacts can be reduced to the buffers recommended for moderate-intensity impacts under the following conditions:

a. For wetlands that score moderate or high for habitat (five points or more for the habitat functions), the width of the buffer can be reduced if both of the following criteria are met:

i. A relatively undisturbed, vegetated corridor at least one-hundred (100) feet wide is protected between the wetland and any other priority habitats as defined by the Washington State Department of Fish and Wildlife in their most recent guidance documents. The corridor must be protected for the entire distance between the wetland and the priority habitat by some type of legal protection such as a conservation easement.

(A) A corridor as narrow as 50 feet wide may be allowed, at the discretion of the responsible official, if vegetation enhancement and/or the installation of habitat features is included in the proposal for corridor development and if a qualified professional can demonstrate the use of a narrower corridor will result in an increase in critical area functions and values. Monitoring, if determined to be necessary and is recommended by a qualified professional will be consistent with 18.10.060.

ii. Measures to minimize the impacts of different land uses on wetlands, such as the examples summarized in Table 18.10.150 (B-C) measures that are demonstrated to have equivalent effectiveness in reducing impacts on wetland functions.

3. For wetlands that score five or less points for habitat, the buffer width can be reduced to that required for moderate land-use impacts by applying the measures to minimize the impacts of the proposed land uses (see examples in Table 18.10.150 (A)).

B. If an applicant impacts a wetland or its buffer and submits a proposal in which the wetland buffers are less than what is allowed under the standards for buffer width reductions or buffer width averaging in this section and Article 6. The proposal shall include a mitigation plan that meets the requirements in Article 6 and includes evidence that the proposal will result in no net loss of wetland functions and values.

Table 18.10.155 Measures to Reduce Impacts from Land Use

Impact Type	Activities and Uses that Cause Disturbances	Examples of Measures to Reduce Impacts
Stormwater runoff	• Parking lots • Roads • Manufacturing • Residential areas • Commercial • Landscaping • Other impermeable surfaces, compacted soil, etc.	• Provide stormwater detention and treatment meeting the latest adopted Stormwater Management Manual for all impervious surfaces that drain to the wetland • Provide infiltration, except where soil conditions preclude • Prevent flow from lawns that
Lights	• Residential • Warehouse • Manufacturing • Parking lots • Recreation	• Direct lights away from wetland • Only use lighting where necessary for public safety and keep lights off when not needed • Use motion-activated lights • Use lower-intensity LED lighting • Dim light to the lowest acceptable intensity
Noise	• Residential • Commercial • Warehouse • Manufacturing • Agriculture	• Locate activity that generates noise away from wetland • Place loading areas, garbage pickup, and other pickup/delivery functions on the building side furthest from the wetland
Toxic runoff	• Parking lots • Roads • Manufacturing • Residential areas • Application of agricultural pesticides	• 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 • Require development and

	• Landscaping • Pesticides	implementation of integrated pest management plan to reduce chemical use
Pets and human disturbance	• Residential areas • Recreation	• Fence buffer area with privacy fencing • Plant dense native vegetation to delineate buffer edge
Dust	• Tilled fields • Roads	• Use Best Management Practices to control dust

18.10.160 Buffer Averaging

An applicant may request to average the width of a wetland buffer, thereby reducing the width of a portion of the buffer and increasing the width of another portion, if all of the following requirements are met:

(1) Averaging to improve wetland protection may be permitted when all of the following conditions are met:

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

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

(c) Buffer averaging cannot be paired with buffer reduction methodology on the same wetland.

(2) Averaging to allow the reasonable use of a parcel may be permitted when all of the following are met:

(a) Buffer averaging is necessary to accommodate existing conditions, such as topography, existing roads, public facilities, or similar features that prevent reasonable development in compliance with standard buffers.

(b) There are no feasible site design alternatives that could be accomplished without buffer averaging.

(c) Averaging will not impair or reduce the habitat, water quality purification and enhancement, stormwater detention, ground water recharge, shoreline protection, erosion protection, and other functions of the wetland and buffer as demonstrated by a report from a qualified wetland professional.

(d) The inability to derive reasonable economic use is not the result of the applicant's actions, such as by segregating or dividing the property and creating an undevelopable condition.

(3) Buffer averaging must meet the following criteria:

(a) The total area of the buffer on the subject property is not less than the buffer that would be required if averaging was not allowed.

(b) No part of the width of the buffer is less than 75 percent of the required width.

18.10.165 Wetland Exemptions from the Requirement to Avoid Impacts

A. The wetlands that meet the following criteria are not subject to the avoidance and minimization requirements of the mitigation sequence as defined in the mitigation sequence in 18.10.145. The wetlands may be filled if the remaining actions in the mitigation sequence and general mitigation requirements in 18.10.135 ensure that no net loss of wetland functions and values will occur from the activity.

1. All isolated Category IV wetlands less than 4,000 square feet that:

a. Are located in the areas covered by the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (U.S. Army Corps of Engineers, 2010);

b. Are not associated with riparian areas or their buffers;

c. Are not associated with Shorelines of the State or their associated buffers;

d. Are not part of a wetland mosaic;

e. Do not score 6 or more points for habitat function based on Publication No. 23-06-009, Washington State Wetland Rating System for Western Washington: 2014 Update, published July 2023 (or as revised by Ecology), or as revised by Ecology) and;

f. Do not contain a Priority Habitat or a Priority Area for a Priority Species identified by the Washington Department of Fish and Wildlife and do not contain state or federally listed species or their critical habitat or species of local importance identified in Article 8.

2. Wetlands less than 1,000 square feet that meet the above criteria are exempt from the buffer provisions contained in this chapter.

B. To ensure that no reduction of wetland values and functions occurs as a result of this section, a wetland assessment report and mitigation plan meeting the requirements in Article 6 must be submitted.

18.10.170 Compensatory Mitigation

A. Requirements for compensatory mitigation. The following requirements must be met for all types of compensatory mitigation:

1. Before being authorized to impact any wetland or its buffer, an applicant must demonstrate that they have utilized the mitigation sequencing shown in 18.10.145.

2. The alteration of wetlands shall only be used for impacts that cannot be avoided or minimized and shall achieve equivalent or greater functions and values. Permittees shall compensate for unavoidable impacts by taking actions to restore, replace, preserve, or enhance ecological functions to the extent necessary to ensure no net loss of functions and values.

3. Compensatory mitigation plans shall be consistent with Wetland Mitigation in Washington State–Part 2: Developing Mitigation Plans— Version 1 (Ecology Publication #06-06-011b, or as revised), and Selecting Wetland Mitigation Sites Using a Watershed Approach (Ecology Publication #09-06-32, or as revised).

B. Compensatory Mitigation Approaches. If, through mitigation sequencing in accordance with Article 6, it is determined that compensatory mitigation is necessary, the applicant must provide an alternative approach to compensation. Compensation is prioritized as follows:

(a) Mitigation Bank Credits*:* Allows applicants to compensate for wetland loss by purchasing credits from a bank that is commissioned to restore, create, enhance, or preserve wetland areas in order to provide compensatory mitigation for authorized impacts to wetlands. Mitigation bank credits may be used to provide compensatory mitigation as follows:

(i) The administrator determines that the credits provide ecologically appropriate compensation for the proposed impacts;

(ii) The impact site is located in the service area, or an out-of-service area credit purchase has been authorized as specified in the establishing instrument; and

(iii) The calculation of debits and proposed use of credits are consistent with the terms and conditions of the establishing instrument.

(b) Permittee-responsible mitigation (PRM). The permittee constructs, installs, and maintains compensatory mitigation after the permit is issued and is held responsible for completion and performance for an established maintenance period. Concurrent mitigation may occur at the site of the permitted impacts, or at an off-site location, usually within the same watershed.

C. Types of wetland mitigation actions for permittee-responsible mitigation (PRM). The following are types of mitigation actions used for compensatory mitigation, in the order of preference:

(a) Creation. The manipulation of the physical, chemical, or biological characteristics present to develop a wetland where a biological wetland did not previously exist. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species. Creation results in a gain in wetland acres and functions.

(b) Reestablishment. The manipulation of the physical, chemical or biological characteristics of a site with the goal of returning natural or historic functions and environmental processes to a former wetland. Activities could include removing fill material, plugging ditches, or breaking drain tiles. Reestablishment results in a gain in wetland acres and functions.

(c) Rehabilitation. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions and processes of a degraded wetland. Activities could involve breaching a dike to reconnect wetlands to a floodplain, restoring tidal influence to a wetland, or breaking drain tiles and plugging drainage ditches. Rehabilitation results in a gain in wetland functions but not in wetland acres.

(d) Preservation. The removal of a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This term includes activities commonly associated with the protection and maintenance of wetlands through the implementation of appropriate legal and physical mechanisms (such as recording conservation easements and providing structural protection like fences and signs). Preservation does not result in a gain of wetland area and functions (but may result in a gain in functions over the long term).

(e) Enhancement. The manipulation of the physical, chemical, or biological characteristics of a biological wetland to increase or improve specific functions or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention or wildlife habitat. Activities typically consist of planting vegetation, controlling nonnative or invasive species, modifying site elevations or the proportion of open water to influence hydroperiods, or some combination of these. Enhancement results in a change in certain wetland functions and can lead to a decline in other wetland functions. It does not result in a gain in wetland acres.

(f) Mixed Compensatory Mitigation. Involves more than one of the listed types of compensatory

D. Standard permittee-responsible mitigation ratios. The following mitigation ratios listed in Table 18.10.170, Permittee Responsible Mitigation Ratios apply and are based on wetland mitigation actions as listed in (list the code number for the previous item (3)) and wetland category.

Table 18.10.170 Permitee Responsible Mitigation Ratios

	Wetland Mitigation Type and Replacement Ratio[1]*			
Impacted Wetland Category or Type	**Creation or Re-establishment**	**Rehabilitation**	**Preservation[2]**	**Enhancement**
Wetland of High Conservation Value	Consult with DNR[3]	Consult with DNR[3]	24:1	Consult with DNR[3]
Category I: Forested	6:1	12:1	24:1	24:1
Category I: Based on Functions	4:1	8:1	16:1	16:1
Category II	3:1	6:1	12:1	12:1
Category III	2:1	4:1	8:1	8:1
Category IV	1.5:1	3:1	6:1	6:1

1Ratio is the replacement area: impact area.

2Preservation area may include both wetlands and associated priority habitat uplands and buffers.

3Washington Department of Natural Resources

E. Buffer/Indirect Impact Mitigation. Impacts to wetland buffers for permittee-responsible mitigation sites shall be mitigated as indirect impacts to the wetland, using fifty percent of the recommended ratio for permanent impacts as shown in Table 5. The recommended ratio for indirect impacts which are mitigated at a wetland mitigation bank shall be determined by the agency responsible for approval of the project.

F. Increasing or Decreasing Replacement Ratios. Mitigation ratios may be increased or decreased based on the following circumstances:

(a) The degree of uncertainty as to the probable success of the proposed mitigation;

(b) The period of time between the alteration of the wetland or buffer and the replacement of lost functions and values; and

(c) The projected gains or losses in functions and values; provided, that the findings of special studies coordinated with agencies with expertise demonstrate that no loss of wetland functions or values will result from a reduced ratio.

G. Replacement of Functions and Values. In lieu of mitigation based on land area, as provided above, an applicant may alternatively propose mitigation based on the credit/debit methodology established by the Washington Department of Ecology. Such a proposal shall follow the process and provide the details established in Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington (Ecology Publication #10-06-011, or as revised) and note:

(a) The degree of uncertainty as to the probable success of the proposed mitigation;

(b) The period of time between the alteration of the wetland or buffer and the replacement of lost functions and values;

(c) Projected gains or losses in functions and values; provided, that findings of special studies, coordinated with agencies with expertise, demonstrate that no loss of wetland functions or values will result from the proposal.

18.10.175 Standard Mitigation Requirements

The following standard requirements shall apply to mitigation plans except where certain provisions may not be applicable due to approved mitigation through the purchase of bank or in-lieu fee credits:

(1) Approved construction limits shall be clearly marked on the site prior to construction and markings shall be maintained until construction is completed.

(2) Permanent physical demarcation along the outer extent of wetlands, and wetland buffers shall be installed and thereafter maintained. Such demarcation may consist of logs, a tree or hedgerow, fencing, or other prominent physical marking approved by the responsible official.

(3) Signs shall be posted at an interval of one per lot or one sign every one hundred (100) feet, whichever is less. Signs shall be maintained in perpetuity and shall read “Protected Critical Areas – Leave in Natural State”

(4) All wetlands, and wetland buffers shall be subject to a conservation covenant or other legal protection mechanism unless waived by the responsible official.

(5) All mitigation reports shall be completed in compliance with Article 5.

18.10.180 References to Mapping

The approximate location and extent of wetlands and hydric soils are shown on the Cowlitz County critical area maps. These maps should only be used as possible indications of potential wetland and hydric soils areas. The actual critical area boundaries must be determined by an approved wetland assessment, which follows the requirements outlined in 18.10.065. Sources that have contributed to the development of the Cowlitz County’s critical areas maps include:

(1) United States Fish and Wildlife Service National Wetland Inventory.

(2) Natural Resources Conservation Service soils map for Cowlitz County, hydric soils designations.

18.10.185 Wetland Assessment Reports

A wetland assessment describes the characteristics of the subject property and adjacent areas. The assessment shall include the following:

(1) A site plan that shows:

(a) A vicinity map with the site clearly defined.

(b) Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.

(c) A detailed depiction of the proposed development, if known and available at the time of the assessment, including features such as utility location (well, septic, drainfield, etc.); parking and access location; the limits of grading and vegetation removal; and the location of any proposed building(s).

(d) An identification and delineation of critical areas, including wetlands, and their buffers within 300 feet of the site and an estimate of the existing approximate acreage for each. Assessment of off-site wetlands and other critical areas shall be based on available information and shall not require access to off-site properties.

(2) The following additional information:

(a) The wetland category and standard wetland buffers.

(b) All data sheets and rating forms used to assess the wetland conditions.

(c) Wetland inventory map showing the site from the National Wetland Inventory and any available Cowlitz County wetland mapping.

(d) Natural Resources Conservation Service soils mapping for the site.

(3) A mitigation plan, if applicable, meeting the requirements outlined in Article 6.

18.10.190 Wetland Mitigation Plan

When required, a mitigation plan for wetland and wetland buffer impacts shall meet the following requirements:

(1) The plan shall be based on applicable portions of the Wetland Mitigation in Washington State–Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication #06-06-011b, or as revised).

(2) The plan shall contain sufficient information to demonstrate that the proposed activities are logistically feasible, constructible, ecologically sustainable, and likely to succeed. Specific information to be provided in the plan shall include:

(a) Basic Requirements. The plan shall include the name and contact information of the applicant; the name, qualifications, and contact information of the primary author(s); a description of the proposal; a summary of the impacts and proposed compensation concept; identification of all required local, state, and/or federal wetland-related permit(s); and a vicinity map for the project.

(b) Project Description. A project description that includes:

(i) Existing Conditions. An explanation of the existing wetland and buffer areas proposed to be altered including acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding land uses, and functions and values.

(ii) Plan Goals. Overall goals for the plan, including future wetland function, value, and acreage.

(iii) Mitigation Sequencing. A description of how the project design has been modified to avoid, minimize, or reduce adverse impacts to wetlands.

(iv) Type and Location of Mitigation Activities. A narrative that describes the nature of mitigation activities including:

(A) Site Treatment. A description of measures that are proposed to protect existing wetlands and desirable vegetation on the site including planting, invasive species removal, use of mulch and fertilizer, placement of erosion and sediment control devices, and other best management practices.

(B) Hydrology. An analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. The narrative shall include illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions.

(C) Buffers. A description of the appropriateness of the buffer widths to protect the wetland functions into perpetuity.

(D) Impacts to Ecological Functions. A description of the ecological functions and values that the proposed alteration will affect and the specific ecological functions and values that the proposed mitigation area(s) will provide, together with a description of the required or recommended mitigation ratios and an assessment of factors that may affect the success of the mitigation program.

(E) Expected Future Conditions. Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes.

(F) Performance Standards. Specific measurable performance standards that the proposed mitigation action(s) will achieve together with a description of how the mitigation action(s) will be evaluated and monitored to determine if the performance standards are being met; and an identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates that project performance standards are not being met. The performance standards shall be tied to and directly related to the mitigation goals and objectives.

(v) Scaled Drawings for the Project. Scaled drawings of the activities proposed including, but not limited to:

(A) Existing site conditions, including the location of the wetlands and associated buffers.

(B) Extent of clearing, grading, excavation, and construction impacts.

(C) Development plan (site plan, plat, plot plan)

(D) All proposed impacts to wetlands and wetland buffers.

(E) Stormwater and utility plans

(F) Existing hydrological features and proposed alterations.

(G) Overall plan for mitigation, including grading, mitigation types and locations, proposed planting, invasive plant management, installation of habitat structures, irrigation, and other site treatments associated with the development and proposed mitigation action(s).

(H) Existing topography, ground-proofed, at two-foot contour intervals in the area of the proposed compensation actions, if any grading activity is proposed. Also existing cross-sections (estimated one-foot intervals) of wetland areas on the development site that are proposed to be altered, or used as wetland or buffer compensation sites.

Article 7. Fish and Wildlife Habitat Conservation Areas

18.10.195 Purpose

(1) The purpose of this article is to allow the reasonable use of private property, while:

(a) Encouraging no net loss of habitat functions and values within designated habitat areas; and

(b) Conserving the functional integrity of the habitats that are necessary to perpetually support fish and wildlife populations.

(2) Key priorities of the article are to:

(a) Identify and protect areas with which endangered, threatened, and sensitive species have a primary association;

(b) Identify and protect habitats and species of local importance, including waters of the state, lakes, ponds, and terrestrial and riparian habitats that are essential to their protection; and

(c) Give special consideration to conservation or protection measures that are necessary to preserve or enhance anadromous fisheries.

18.10.200 Classification of Habitat Areas

Critical fish and wildlife habitat conservation areas are designated according to the classifications in the following Table 18.10.200.

Table 18.10.200 Fish and Wildlife Habitat Conservation Area Classifications

Classification	Definition
(1) Priority habitats and those areas associated with primary species	Habitat areas which, if altered, may reduce the likelihood that the species will reproduce over the long term. Habitats associated with these species are those identified by the Washington Department of Fish and Wildlife's current system for mapping species of concern and priority habitats, or by the U.S. Fish and Wildlife Services Information for Planning and Consultation. These habitats are designated as critical areas, where endangered, threatened, candidate, and sensitive species are verified to have a primary associate or suitable habitat.
(2) Habitats and species of local importance	Habitats and species of local importance are fish and wildlife habitat conservation areas which are not designated as priority habitats and species by the state but are designated as locally significant by the City of Castle Rock. Castle Rock does not have any locally important designations beyond the WDFW Priority Habitats and Species List.
(3) Commercial and recreational shellfish areas	As defined in WAC-365-190-130, counties and cities should consider both commercial and recreational shellfish as critical areas. These areas are defined as all public and private tidelands and bedlands that are suitable for shellfish harvest and are located in vulnerable areas according to the Washington State Department of Health's classifications of commercial and recreational shellfish growing areas.
(4) Kelp and eelgrass beds; herring and smelt spawning areas.	As defined in WAC 365-190-130, locations and classifications of kelp and eelgrass beds are compiled in the Washington Coastal Atlas published by the Washington Department of Ecology. Herring, smelt, and other forage fish spawning times and locations are outlined in WAC-220-110-240 through 220-110-271.
(5) Waters of the state	Waters of the state shall be those defined in WAC 222-16-030 and 031, Forest Practices Board, and Definitions.[1] Special consideration must be applied to anadromous fisheries based on best available science and as defined in WAC 365-195-925
(6) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;	As defined in WAC 365-190-130, naturally occurring ponds are waters with a surface area of less than twenty acres but greater than one acre and man-made ponds developed as mitigation as part of a permitting process or mitigation agreement. 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 (of less than three years duration) and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.
(7) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;	Includes game fish planted in these water bodies under the auspices of a federal, state, local, or tribal program or which supports priority fish species as identified by the Washington State Department of Fish and Wildlife.
(8) State natural area preserves, natural resource conservation areas, and state wildlife areas.	Natural area preserves and natural resource conservation areas are defined, established, and managed by the Department of Natural Resources. State wildlife areas are defined, established, and managed by the Washington State Department of Fish and Wildlife, which provides information about state wildlife areas for each county.

[1.] Type S Streams, inventories as “shorelines of the state” under RCW 90.58 are regulated under the City of Castle Rock Shoreline Master Program

18.10.205 Development and Habitat Classification Performance Standards

(1) Regulated development shall conform and be governed by Article 7. The performance standards contained in this section shall be used to develop plans submitted for regulated activities. In addition to the performance standards listed in Article 7 the responsible official shall defer to WDFW in regard to classification and interpretation of priority habitats and species. The responsible official shall follow WDFW recommendations in the interpretation of site-specific conditions as they relate to the definitions of priority habitat and species and water types. The administrator shall, however, determine habitat mitigation sufficiency guidelines and may solicit recommendations from WDFW and/or a qualified professional, if deemed necessary. The administrator shall not permit a development where a net loss of habitat functions and values will occur.

(2) Habitat Protection for Classifications 1, 2, 3, and 4 (Table 18.10.200). A habitat management plan that meets the requirements of this title will be required if the regulated activity is within these classifications.

(3) Habitat Protection for Classifications 5, 6, and 7 (Table 18.10.200). These classifications shall require riparian habitat areas as shown on Table 18.10.210 unless bordered by a wetland, in which case the riparian habitat area shall consist of the buffer that affords the greatest resource protection, the riparian management zone (RMZ) or the wetland and buffer required by Table 18.10.210 of this chapter, whichever is larger. Within Classification 5—Types F, Np, and Ns waters shall be classified by the criteria defined in WACs 222-16-030 and 031. Type S waters are regulated by the City of Castle Rock Shoreline Master Program. A habitat management plan that meets the requirements of 18.10.265 will be required if the regulated activity is within these classifications.

(4) Habitat Protection for Classification 8 (Table 18.10.200). Protection for state natural area preserves, natural resource conservation areas, and state wildlife areas will require development of a habitat management plan which meets the requirement of 18.10.265. Protection for State natural area preserves, natural resource conservation areas, and state wildlife areas will require development of a habitat management plan which meets the requirement of 18.10.265.

18.10.210 Riparian Management Zones

(1) Establishment of RMZ. Riparian Management Zones shall be established for habitats that include aquatic and terrestrial ecosystems that mutually benefit each other, and that are located adjacent to rivers, perennial or intermittent streams, drainage ways, seeps, and springs.

(2) RMZ Widths. RMZ widths shall be based on the estimated average two hundred (200) year site potential tree height, extending outward on each side of the stream from the ordinary high water mark to the distances in Table 18.10.210 for each site class (defined in WAC 222-16-010) by water type (defined in WAC 222-16-030). In cases where there are multiple site classes on a property, the site class which is closest to the development area within the site applies. When a development area or site bisects multiple site classes, the predominant site class on the site shall apply.

Table 18.10.210. Riparian Management Zone Widths – Average 200 Year Site Potential Tree Height

Site Class[1]	Type F Waters[2]	Type Np Waters	Type Ns Waters[2]
II	235	155	100
III	205	135	100
IV	165	105	100
V	150	100	100

[1]Type S streams, inventoried as "shorelines of the state" under RCW 90.58 are regulated under the City of Castle Rock Shoreline Master Program, and therefore are not included in Table 2.

[2]No Site Class 1 soils are mapped in the City of Castle Rock.

[3]Type Ns Streams must have a minimum channel width of one foot, be supported by groundwater (and not solely precipitation), and have a defined bank and bed to warrant buffers required using site potential tree height methodology. Type Ns streams which do not meet these minimum conditions shall be considered ephemeral and will be allocated a standard 25-foot buffer to be measured landward from the edge of the channel.

18.10.215 Functionally Isolated Riparian Management Zones (RMZ)

Pre-existing impervious surfaces, except for roads and driveways, and pre-existing structures shall be considered areas which provide functional isolation of a RMZ. In the case of existing roads and driveways, RMZ's which are at least one hundred (100) feet from the ordinary high water mark and disconnected from the water body by permanent continuous public or private roadways, shall be excluded from fish and wildlife habitat conservation areas. Vertical separation may also result in functional isolation of RMZ. Vertical separation is defined as an area having a vertical topographical feature, human-made or natural, that exceeds 30 percent slope and may include, but is not limited to, bluffs, cliffs, retaining walls and steep slopes. For the purpose of establishing the outer limit of a buffer width of a RMZ containing vertical separation, the greater of the two distances shall apply: the top of slope or highest point of other similar feature (bluff, cliff, retaining wall); or 50 percent of the buffer width of the RMZ.

18.10.220 Increased RMZ Widths

The recommended riparian management zone widths shall be increased, as follows:

(1) When the environmental review determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;
(2) When the frequently flooded area exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the frequently flooded area;
(3) When the channel migration zone exceeds the recommended riparian habitat area width, the riparian habitat area shall extend from the outer edge of the channel migration zone;
(4) When the habitat area is with an erosion or landslide hazard area, or buffer, the riparian habitat area shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

18.10.225 Decreased RMZ Widths

(1) The administrator may also allow an RMZ buffer width to be reduced when all of the following can be demonstrated:
  (a) The buffer reduction is supported by one or more of the following justifications:
    (i) The smaller buffer, in conjunction with site design and buffer enhancement, will provide equal or better habitat and pollution removal functions than the larger buffer, as demonstrated by a fish and wildlife habitat management plan pursuant to Article 7.
    (ii) The buffer reduction is necessary to allow reasonable use of the property and the remaining buffer is enhanced in accordance with a fish and wildlife habitat management plan pursuant to 18.10.265; and,
  (b) The need for buffer width reduction is not due to the property owners' actions;
  (c) There are no feasible alternatives to the site design that could be accomplished without buffer reduction.
  (d) The standard buffers listed in Table 2 are not reduced by more than twenty-five (25) percent for Type F and NP waters, and fifty (50) percent for Type Ns waters.

(2) The recommended riparian management zones may also be decreased in the following instances:
  (a) Native landscaping, lawn/decks, and non-pollutant generating low impact uses such as woodchip trails may be located within the outer fifty (50) percent of the buffer of all site class and water types so long as all impervious and pollutant generating surfaces maintain the minimum required 100 feet to reduce pollutants.
  (b) If steep slopes (thirty (30) to sixty (60) percent) are located in the RMZ then the applicant may reduce the site potential tree height required width by ten (10) percent. The applicant will be responsible for demonstrating the potential for generating woody debris in the RMZ is still present. Steep slope RMZ buffer reduction cannot be combined with buffer reductions allowed in this title.

18.10.230 RMZ Width Averaging

The responsible official may allow reduction of riparian management zone width in one location and replacement in another on the site such that the total area of the RMZ increases or remains unchanged and habitat functions and values within the site are maintained. Areas to be averaged cannot be reduced to a width less than fifty percent (50) of the required site potential tree height. RMZ width averaging cannot be combined with the RMZ width reduction allowed in 18.10.255 Land beyond the maximum two hundred (200) year site potential tree height width of 235 feet that is not part of the RMZ cannot be used for averaging unless warranted by soil type

18.10.235 Mitigation Sequencing

Projects proposed in or adjacent to fish and wildlife conservation areas are required to utilize the mitigation sequence shown in Article 7.

18.10.240 Mitigation of Adverse Impacts

RMZ mitigation and mitigation to other Fish and Wildlife Habitat Conservation Areas that may not be considered RMZ (i.e. priority habitats, etc.,) shall result in equivalent functions and values on a per function basis, be located as near the alteration as feasible, and be located in the same sub-drainage basin as the habitat impacted. Types of habitat mitigation actions allowed are listed below:

(1) Restoration and enhancement. Restoring native plant communities or physical habitat characteristics in an ecologically appropriate manner within existing fish and wildlife habitat conservation areas to improve or restore habitat functions and values.
(2) Creation. Altering native plant communities of physical habitat characteristics in a manner designed to add new or increase the total area of an existing fish and wildlife habitat conservation area.
(3) Long term habitat protection: Use of legal instruments to identify and protect fish wildlife habitat conservation areas, such as conservation covenants or conservation easements.
(4) Site specific mitigation actions: The responsible official may authorize other mitigation actions to replace fish and wildlife habitat conservation areas functions and values.
(5) Purchase of mitigation bank or in-lieu fee credits. Certified mitigation bank or approved in-lieu fee program (ILF) credits may be used to provide compensatory mitigation if the following applies:
    (a) The responsible official determines that the credits provide ecologically appropriate compensation and the proposed credit purchase is consistent with the goals and objectives of the approved mitigation banking instrument (MBI).
    (b) The impact site is located in the service area or an out-of-service area credit purchase has been authorized by the appropriate agency
    (c) There is no practicable form of onsite or offsite compensatory mitigation in the same watershed as the impact site.

18.10.245 Preferred Locations of Permittee Responsible Mitigation

Compensatory mitigation actions shall be designed based on the preferred locations outlined below:

(1) Onsite Mitigation. compensatory mitigation actions shall generally be conducted onsite except when the applicant can demonstrate that:
    (a) Onsite mitigation is not practicable; or
    (b) Offsite mitigation is ecologically preferrable; or
    (c) The use of established mitigation banks or in-lieu fee programs are ecologically preferrable.

18.10.250 Designation of Locally Important Habitat

The City of Castle Rock may use a legislative process to designate or de-designate locally important habitats and species.

(1) Criteria. The classification of locally important habitats and species shall consider unusual or unique habitats that warrant protection because of the qualitative species diversity or habitat system health indicators; or local species that demonstrate a need for special consideration based on:
    (a) Declining population;
    (b) Sensitivity to habitat manipulation;
    (c) Commercial, recreational, cultural, or other special value; and
    (d) The availability of linkages between existing habitat areas.
(2) Recommendation. Recommendations for designating or de-designating areas with habitats or species that meet these criteria may be submitted by any person or group and be included for potential review on the planning commission annual docket.
(3) Review. Review of the proposal, if deemed to merit formal consideration by the Planning Commission and the City Council, shall progress as an amendment.
(4) Notice. Notice of proposals to designate or de-designate locally important habitat or species shall be forwarded to impacted property owners in a manner similar to the standards for noticing as applicable.

(5) Not allowed as part of other proposals. Designation or de-designation of locally important habitats or species may not occur concurrent with or as part of an associated development request.

18.10.255 Classification and Mapping of Fish and Wildlife Habitat Conservation Areas

(1) Definitions and maps of fish and wildlife habitat conservation areas are based on the following documents:
  (a) The 2014 Washington Department of Fish and Wildlife Priority habitats and species list, as amended.
  (b) Priority Habitat and Species (PHS) on the Web (online), WA State Department of Fish and Wildlife, as amended.
  (c) SalmonScape (online), WA State Department of Fish and Wildlife, as amended.
  (d) Statewide Integrated Fish Distribution (SWIFD) Web Map (online). Northwest Indian Fisheries Commission
  (e) Hydric soils (Natural Resources Conservation Service of U.S. Department of Agriculture (NRCS))
  (f) Forest Practices Application Mapping Tool (online), WA State Department of Natural Resources, as amended.
  (g) Washington National Heritage Program (WNHP) Data Explorer – Rare Plant and Ecosystem Locations (online), Department of Natural Resources
  (h) U.S. Fish and Wildlife Service (USFWS) Information for Planning Consultation (IPaC) (online)
  (i) Associated GIS data files maintained by Cowlitz County GIS department.

(2) Updated as Needed. Maps supporting this chapter may be updated and/or reevaluated as new information comes available

18.10.260 Inconsistencies Between Conditions on Ground and Mapping

(1) Determining Site-Specific Applicability. In the event of inconsistencies, official fish and wildlife habitat conservation area definitions shall prevail over maps in determining applicability of this chapter. The City shall follow the recommendations of WDFW in the interpretation of site-specific conditions as they relate to the definition of priority habitat and species.

18.10.265 Fish and Wildlife Habitat Management Plan

When required, a management plan for impacts to fish and wildlife habitat conservation areas and buffers shall meet the following requirements:

(1) The plan shall contain sufficient information to demonstrate that the proposed activities are logistically feasible, constructible, ecologically sustainable, and likely to succeed. Specific information to be provided in the plan shall include:
  (a) Basic Requirements. The plan shall include the name and contact information of the applicant; the name, qualifications, and contact information of the primary author(s); a description of the proposal; a summary of the impacts and proposed compensation concept; identification of all related permit(s) required for the project; and a vicinity map for the proposal. The plan will be prepared by a qualified professional as specified in (code number for Qualified Professional Required Section in main CAO).
  (b) Project Description. A project description that includes:
    (i) Existing Conditions. An explanation of the existing habitat, critical area types (i.e., stream type), and buffer areas proposed to be altered including items such as acreage (or square footage), vegetation, soils, landscape position, water bodies, surrounding land uses, and functions.
    (ii) Management Plan Goals. Overall mitigation goals for the plan, including future habitat functions and values, and acreage.
    (iii) Mitigation Sequencing. A description of how the project design has been modified to avoid, minimize, or reduce adverse impacts to fish and wildlife habitat.
  (c) A detailed description including the effects on fish and wildlife species including those state or federally designated endangered, threatened or sensitive fish or wildlife species, or species of local importance, on-site or adjacent to the subject property within a distance typical of the normal range of the species, if applicable, to include:
    (i) Any areas of direct or indirect disturbance;
    (ii) Effects of stormwater management; if applicable, and;
    (iii) Temporary construction impacts
  (d) Type and Location of Mitigation Activities. A narrative that describes the nature of mitigation activities applicable to the proposal including:

(i) Mitigation Site Treatment. A description of measures that are proposed to protect existing habitat areas on the site including native vegetation retention, planting, invasive species removal, placement of erosion and sediment control devices, and other best management practices.

(ii) Buffers. A description of the appropriateness of the buffer widths to protect the habitat functions into perpetuity.

(iii) Impacts to Ecological Functions. A description of how the proposed mitigation will result in no net loss of ecological functions, and the expected future conditions from the proposed mitigation site treatment.

(iv) Performance Standards. Specific measurable performance standards that the proposed mitigation action(s) will achieve, together with a description of how the mitigation action(s) will be evaluated and monitored to determine if the performance standards are being met; and an identification of potential courses of action, and any corrective measures or adaptive management to be taken if the monitoring or evaluation indicates that the project performance standards are not being met. The performance standards shall be tied to and directly related to the mitigation goals and objectives.

(e) Scaled Drawings for the Project. Scaled drawings of the activities proposed including, but not limited to:

(i) The location of the habitat area and its buffer.

(ii) Existing physical features of the site, including but not limited to, buildings, fences, and other structures, roads, parking lots, utilities, existing habitat features, and water bodies.

(iii) A detailed depiction of the proposed development including, but not limited to, features such as lot location (for land divisions); utility location (well, septic, drainfield, etc.); parking and access location; the limits of clearing, grading, and vegetation removal; construction impacts, and the location of any proposed building(s).

(iv) Proposed planting, invasive plant management, installation of habitat structures, irrigation, and other site treatments associated with the development and the proposed mitigation action(s).

Article 8. Geologically Hazardous Areas

18.10.270 Purpose

The purpose of this article is to minimize hazards to the public from development activities on or adjacent to geologically hazardous areas. For the purposes of this chapter, geologically hazardous areas include: erosion hazard areas, steep slope and landslide hazard areas, seismic hazard areas, mine hazard areas, and volcanic hazard areas.

18.10.275 Administration

The administration of this article shall occur in accordance with Article 1 of this chapter and the standards listed below.

A. Review. The applicant shall prepare a geotechnical report consistent with the requirements in the reporting section when required by table 18.10.280.

(2) Qualified Professional. Geotechnical reports shall be prepared by a qualified professional as defined in Article 1. Geotechnical reports shall include a discussion of how the project incorporates mitigation sequencing and maintains the long-term stability of the geologic hazard (including any recommended buffers). Geotechnical reports shall also address the potential impact of the proposed mitigation on the hazard area, the subject property, and any affected adjacent properties.

18.10.280 Designation

(1) Designation of Geologically Hazardous Areas. Lands that meet the criteria for geologically hazardous areas and their buffers are presented in Table 18.10.280:

Table 18.10.280. Designation

Classification	Report Required
Erosion Hazard Area	Within severe and very severe erosion hazard area
Steep Slope and Landslide Hazard Area	Within steep slope and landslide hazard area and buffer that is equal to the largest of: (a) 50 feet; or (b) The vertical height of the slope multiplied by: (i) 1 for slopes from 15 to 40 percent.

	(ii) 1.5 for slopes from 40 to 50 percent. (iii) 2 for slopes that are greater than 50 percent.
Seismic Hazard Area	No report is required in a seismic hazard area, though the applicable standards below must be met.
Volcanic Hazard Area	No report is required in a volcanic hazard area, though the applicable standards below must be met.

18.10.285 Standards

A. Standards for Certain Geologically Hazardous Areas and Their Buffers. The following standards apply to geologically hazardous areas and their required buffers, except for alluvial fan, volcano and seismic hazards:
    a. Development of geologically hazardous areas and their required buffers shall follow the mitigation sequence in in the mitigation sequencing requirements for critical areas.
    b. Where no reasonable alternative to the alteration of a potentially hazardous area is available, the administrator may allow the development of the area when a geotechnical report, is submitted by a qualified professional.
    c. When a geotechnical report has been submitted, the administrator may only allow the alteration when the report shows:
        i. The site is stable under existing conditions based on a plane of failure analysis with a factor of safety of 1.5 under seismic conditions for unconsolidated deposits or other factor of safety relevant to the type of development and hazard.
        ii. The alteration of vegetation will not increase the probability of the failure of the geologically hazardous area.
        iii. The proposed grading, excavation and structures will not increase the probability of the failure of the geologically hazardous area, and the construction of facilities to reduce risk, such as drainage systems, are effective in the absence of mechanical systems and ongoing long-term maintenance.
        iv. The development will incorporate measures to control additional erosion and deposition downslope or downstream, and the proposed measures to control the erosion are feasible.
        v. The development will not increase the risk of geologic failure on the site or adjacent properties.
        vi. The alteration will not adversely impact other critical areas or their associated buffers, such as wetlands, wildlife habitat areas, frequently flooded areas and critical aquifer recharge areas.
    d. The alteration may be approved, approved with conditions, or denied based on the administrator's evaluation of the suitability of the geotechnical report and proposed mitigation measures to protect life, safety, and stability on the subject and nearby properties.

B. Standards for Seismic Hazard Areas. Developments that are proposed within seismic hazard areas shall meet the applicable provisions of the International Building Code.

C. Standards for Alluvial Fan Hazard Areas. Development is not permitted within alluvial fan hazard areas, beyond what is allowed in the reasonable use provisions of this code.

D. Standards for Critical Facilities. Critical facilities shall only be allowed within seismic and volcanic hazard areas; provided, that no critical facilities shall be allowed within one-quarter mile of an active fault or trench. When an application for a critical facility is proposed within a seismic or volcanic hazard area, the proposal shall articulate the planned strategies to evacuate individuals within the facility, or ensure continuity of operations, in the case of a natural hazard.

E. Verification of Completion of Mitigation. Upon the completion of a project, a qualified professional shall verify that any mitigation or safety measures associated with a geotechnical report have been properly implemented. Depending on the nature of the mitigation (i.e., structural versus planting (of vegetation) or small or large scale improvements), the administrator may waive the five-year monitoring time frame that is specified within that section.

18.10.290 Classification of Erosion Hazard Areas

Erosion hazard areas are those areas that have severe or very severe erosion potential as detailed in the soil descriptions contained in the Web Soil Survey for Cowlitz County, Washington, Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture and

18.10.295 Classification of Steep Slope and Landslide Hazard Areas

A. Classification of Steep Slope Hazard Areas. Steep slope hazard areas are areas where there is not a mapped or designated landslide hazard, but where there are steep slopes equal to or greater than a 35 percent slope with a vertical relief of 10 or more feet. Steep slopes which are less than 10 feet in vertical height and are not part of a larger steep slope system, and steep slopes created through previous legal grading activity, are not regulated steep slope hazard areas. Presence of a steep slope suggests potential slope stability problems.

B. Classification of Landslide Hazard Areas. Landslide hazard areas are those areas meeting any of the following criteria:
    a. Areas subject to previous slope failures, including areas of unstable old or recent landslides;
    b. Areas with all of the following characteristics:
        i. A slope greater than 15 percent;
        ii. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
        iii. Springs or ground water seepage;
    c. Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
    d. Slopes having gradients greater than 80 percent subject to rockfall during seismic shaking;
    e. Areas potentially unstable as a result of rapid stream incision and streambank erosion or undercutting;
    f. Areas located in a canyon, on an alluvial fan, or presently or potentially subject to inundation by debris flows or catastrophic flooding.

C. Mapped Landslide Hazard Areas. Landslide hazard areas include the following mapped sources:
    a. Areas mapped as unstable, landslides, and old landslides by Cowlitz County as available, and;
    b. Department of Natural Resources Landslide Study 2006 - Digital Landslide Inventory, Cowlitz County, WA. Wegman, 2006 (I-5 Corridor Study)
    c. NRCS Cowlitz County Soil Survey

18.10.300 Seismic Hazard Areas

A. Classification of Seismic Hazard Areas. Seismic hazard areas are locations subject to severe risk of damage as a result of earthquake-induced soil liquefaction, ground shaking amplification, slope failure, settlement, or surface faulting.
    a. All structures that require a building permit within the City of Castle Rock are required to be consistent with the D1 seismic zone (as specified in the International Building Code).
    b. Active faults or trenches are considered seismic hazards.
    c. Areas of known faults and soil liquefaction hazards are depicted in Ground Response Geographic Information System data dated June 2010 and Seismogenic Features, retrieved from the Washington Department of Natural Resources Division of Geology and Earth Resources.

18.10.305 Volcanic Hazard Areas

A. Classification of Volcanic Hazard Areas. Volcanic hazard areas are locations where the risk to life and property by a large volcanic event is high. For the purpose of these regulations, damage from lahars and near volcano hazards constitute the primary volcanic hazards. Volcanic tephra (ash), while disruptive and potentially dangerous, is not considered a volcanic hazard that is subject to these regulations.
    a. Volcanic hazards are depicted in the Simplified Volcanic Hazards available from the Washington Department of Natural Resources Division of Geology and Earth and Mount St. Helens Flowage-Hazard Zones Map, 1995 USGS.

18.10.310 Geotechnical Report

A. When a site proposed for development or alteration is located or may be located within a geologically hazardous area or its buffer, or will negatively impact a geologically hazardous area, the administrator shall have the authority to require the submittal of a geotechnical report.

B. A geotechnical report is an evaluation of the geologic characteristics of the subject property and adjacent areas. A geotechnical report shall include a field investigation and may include an analysis of historical aerial photographs, review of public records and documentation, and interviews with adjacent property owners.

C. Submittal requirements will vary depending on the type of project and the type of hazard mitigations that are proposed. The administrator may waive parts of the submittal requirements if he/she determines that they are not applicable to the proposed activity.

D. Submittal Requirements. The following submittals may be required for a geotechnical report:

a. A site plan that shows:
    i. The site boundary lines.
    ii. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.
    iii. A detailed depiction of the proposed development including features such as lot location (for land divisions); utility location (well, septic, drain field, etc.); parking and access location; the location of any proposed building(s); and the limits of grading and vegetation removal.
    iv. An identification of critical areas and buffers within 300 feet of the site and an estimate of the existing acreage for each. The assessment of off-site critical areas shall be based on available information and shall not require access to off-site properties.
    v. Site Geology Information.
    vi. Topographic contours at two-foot intervals or as specified by the responsible official.
    vii. Subsurface data including the exploration method, location of soil borings, borings, logs, soil and rock stratigraphy, and ground water levels including seasonal changes.
    viii. The location of landslides, or down-slope soil movement, faults, and geologic contacts on the subject property and adjacent properties.
    ix. A site history that describes any prior grading, soil instability and/or slope failure.
    x. A description of the site vulnerability to seismic events.
    xi. Geotechnical Information and Plan Requirements.
    xii. A slope stability study and opinion of slope stability on the subject property and adjacent properties.
    xiii. A grading plan, including road profiles.
    xiv. Structural foundation requirements and estimated foundation settlements.
    xv. Soil compaction criteria.
    xvi. Allowable soil-bearing pressure for foundations, minimum footing widths, piling recommendations for foundations, and design pressure for retaining walls.
    xvii. Laboratory data and soil index properties for soil samples.
    xviii. Suitability for fill.
    xix. Lateral earth pressures.
    xx. A description of erosion vulnerability and an erosion control plan, including measures to reduce the impacts of erosion on neighboring critical areas.
    xxi. An evaluation of proposed surface and subsurface drainage, and a drainage control plan.
    xxii. Building limitations.
    xxiii. A vegetation management and restoration plan or other means to maintain long term stability of the hazardous areas and their buffers.
b. A site evaluation that describes the suitability of the site to accommodate the proposed activity.
c. Such additional information describing existing physical features of the site and the surrounding area as required by the responsible official to complete a review of the project.

Article 9. Frequently Flooded Areas

18.10.315 Frequently Flooded Areas

A. Purpose. It is the intent of the Town to recognize and diminish potential hazards that may be caused by inappropriate development in areas where severe and costly flooding is anticipated to occur. Based on historical observation and information collected by the Federal Emergency Management Agency, the Town endorses a cautious posture that limits construction in areas located within zones designated to be flood prone. This decision stems from local, as well as state and federal, understanding that development limitations in these areas help to serve the health, safety and public welfare of the people of the Town.

B. Classification. Classification of frequently flooded areas, according to the minimum guidelines, should include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program. The following are categories of frequently flooded areas established for the purpose of classification:

1. Floodways. The channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment in order that the base flood be carried without substantial increases in flood heights.

2. Floodplains. The floodway and special flood hazard areas.

3. Special Flood Hazard Areas. The areas adjoining the floodway which are subject to a one percent or greater chance of flooding in any given year, as identified and determined by the Federal Insurance Administration.

C. Designation. All city lands and waters which are currently identified within the 100-year floodplain in the Federal Emergency Management Agency publication entitled "The Flood Insurance Rate Map for Cowlitz County, WA, and Incorporated Areas," with accompanying flood insurance rate and boundary maps are designated as frequently flooded areas. If and when this study becomes updated to reflect new conditions, designation of frequently flooded areas will include the changes.

D. All new development within designated frequently flooded areas shall be in compliance with Chapter 15.24 Flood Damage Prevention.

Article 10. Critical Aquifer Recharge Areas

18.10.320 Purpose

The purpose of the City of Castle Rock Critical Aquifer Recharge Areas code is to:

A. Prevent the significant degradation of the quality and quantity of ground water resources.
B. Recognize the potential connection between surface and ground waters.
C. Comply with Chapter 90.48 RCW, the Water Pollution Control Act of the state of Washington.

18.10.325 Administration

A. Administration of this article shall occur in accordance with Article 1 of this code.
   1. Applicability. Development activities that are located in a critical aquifer recharge area shall require the submittal of a critical aquifer recharge area report; provided, that the regulations shall not apply to land uses and/or activities that exist as of the date of the regulation. Expansion of the scale or intensity of an existing use that is listed as a prohibited or conditional uses shall require the submittal of a critical aquifer recharge area report.
   2. Report Requirements. The requirements for a critical aquifer recharge area report are included in this article.

18.10.330 Designation

C. Classification – Critical Aquifer Recharge Areas. For the purposes of this classification, the critical aquifer recharge areas are determined by the combined effects of soil types and hydrogeology. (Critical Aquifer Recharge Map, Cowlitz-Wahkiakum Council of Governments, 1993.)

Classification 1: High susceptibility areas, identified on the Aquifer Recharge Map, with a very high susceptibility to contamination of the underlying aquifer due to high soil permeability and high water table.

D. Regulated Activities – Classification 1. The following activities are regulated in classification critical aquifer recharge areas:

1. Solid Waste Disposal Facilities, Junkyards, Etc. Landfills, junkyards, salvage yards, auto wrecking yards, and other solid waste disposal facilities, except those for the disposal of brush and stumps, sawdust, and inert construction debris.

2. Aboveground and Underground Storage Tanks and Vaults. Aboveground or underground storage tanks or vaults for the storage of hazardous substances or dangerous wastes as defined in Chapter 173-303 WAC, Dangerous Waste Regulations, or any other substances, solids, or liquids in quantities identified by the county health department, consistent with Chapter 173-303 WAC, as a risk to groundwater quality, shall conform to the Uniform Fire Code, Chapter 173-360 WAC, Underground Storage Tank Regulations.

3. Utility Transmission Facilities. Utility facilities which carry liquid petroleum products or any other hazardous substance as defined in Chapter 173-303 WAC.

4. Land Divisions. Subdivisions, short subdivisions and other divisions of land will be evaluated for their impact on groundwater quality within the Classification 1 aquifer recharge areas. The following measures may be required:

a. An analysis of the potential contaminate loading;

b. Alternative site designs, phased development and/or groundwater quality monitoring;

c. Open spaces within development proposals.

18.10.335 Hydrogeologic Testing and Site Evaluation.

5. Hydrogeologic testing and site evaluation may be required for any regulated activity. If federal or state regulations require hydrogeologic testing, the city may waive the requirement for additional testing provided the staff has adequate factual information to evaluate the proposal.

6. If hydrogeologic testing and site evaluation are required, they shall be conducted by a qualified expert (at the applicant's cost), and must include but are not limited to the requirements in in this chapter.

7. Development which negatively impacts the quality of any Classification 1 critical aquifer recharge area shall be prohibited unless the hydrogeologic testing and site evaluation satisfactorily demonstrate that significant adverse impacts will be mitigated.

Article 11. Reasonable Use Exceptions and Variances

18.10.340 Reasonable Use Exception

A. Project review: If the application of this title would deny all reasonable use of the subject property, the property owner may apply for an exception pursuant to this section. To qualify for an exception the applicant must demonstrate all of the following:

1. That no other reasonable use can be made of the property that will have a lesser adverse impact on the critical area and adjoining and neighboring lands;

2. That the proposed use does not pose a threat to the public health, safety or welfare;

3. Any alteration is the minimum necessary to allow reasonable use of the property; and,

4. The inability of the proponent to derive reasonable use of the property is not the result of actions by the applicant after the effective date of this chapter.

5. A request for a reasonable use exception shall be submitted to the City with the application materials for the

particular development proposal. The application shall be supplemented with an explanation as to how the reasonable use exception criteria are satisfied. The City may require additional information or studies to supplement the reasonable use exception request.

18.10.345 Variance Criteria

A. A variance from the standards of this chapter may be granted only when the applicant demonstrates that strict application of the standards would deny reasonable use of the property and that the variance is consistent with the purposes of this chapter.

B. A variance may be approved only when all of the following criteria are met:

1. The property contains critical areas or buffers that, due to their size, shape, location, or configuration, prevent reasonable use of the property;
2. The need for the variance is not the result of actions by the applicant or property owner;
3. The variance is the minimum necessary to allow reasonable use of the property;
4. The variance will not result in a net loss of critical area functions and values;
5. The variance will not create a public safety hazard or increase risks to adjacent properties; and
6. Impacts to critical areas and buffers are avoided and minimized to the maximum extent feasible and mitigated in accordance with this chapter.

C. The City may impose conditions on an approved variance to minimize impacts, require mitigation, and achieve compliance with this chapter.

D. Approval of a variance shall not establish precedent for future variances.

18.10.350 Burden of Proof

A. The applicant bears the burden of demonstrating compliance with all applicable standards of this chapter.

B. Where a variance, reasonable use exception, buffer modification, or mitigation is requested, the applicant shall demonstrate, through substantial evidence, that all applicable criteria and standards are satisfied.

C. Failure to provide adequate information to demonstrate compliance shall be grounds for denial of the proposal or request.

18.10.355 Minimum Necessary Disturbance

A. All development, land use activities, and mitigation approved under this chapter shall be limited to the minimum necessary disturbance to critical areas and required buffers.

B. Minimum necessary disturbance shall be determined based on site conditions, project scale, and the feasibility of alternative design approaches, including changes to site layout, location, or construction methods.

C. Disturbance beyond the minimum necessary to accommodate reasonable use of the property is prohibited.

D. Determinations regarding minimum necessary disturbance shall be supported by the record and, where applicable, documented in a critical area report or mitigation plan.

Article 12. Nonconforming Uses and Structures

18.10.360 Existing Development

A. Development, uses, and structures lawfully established prior to the effective date of this chapter and located within critical areas or required buffers may continue, subject to the provisions of this article.

B. Existing development may not be expanded, enlarged, or intensified in a manner that increases impacts to critical areas or required buffers, except as expressly allowed by this chapter.

C. Continuation of existing development is subject to compliance with any conditions of approval, recorded mitigation requirements, or other obligations previously imposed.

18.10.365 Alterations and Expansion

A. Alteration, replacement, or modification of existing development within or adjacent to critical areas or required buffers may be permitted only when the activity does not increase impacts to critical areas or buffers and complies with the standards of this chapter.

B. Expansion of an existing use or structure within a critical area or buffer is prohibited unless expressly authorized by this chapter and demonstrated to meet all applicable standards, including mitigation and no net loss.

C. The City may require a critical area report or mitigation plan to evaluate proposed alterations or expansions.

18.10.370 Repair and Maintenance

A. Normal repair and maintenance of existing structures, utilities, or facilities within critical areas or buffers may be allowed, provided that such activities do not expand the footprint, increase intensity, or result in additional impacts.

B. Emergency repairs necessary to protect public health, safety, or property may be undertaken immediately. Any temporary impacts shall be restored as soon as practicable and in compliance with this chapter.

C. Repair and maintenance activities shall not be used to justify expansion of development or increased impacts to critical areas or buffers.

Article 13. Severability and Effective Date

18.10.375 Severability & Effective Date

A. If any provision of this chapter or its application to any person or circumstance is held invalid, such invalidity shall not affect the remaining provisions or applications of this chapter.

B. Effective Date

1. This chapter shall take effect on _____, as provided by law.