

## Appendix A SHORELINE CRITICAL AREAS REGULATIONS

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### **18.60.010 Purpose.**

The purpose of this appendix is to designate, classify, and protect the critical areas within the shoreline jurisdiction of Maple Valley by establishing regulations and standards for development and use of

properties which contain or adjoin shoreline jurisdictional critical areas for protection of the public health, safety, and welfare. The purpose and intent of this appendix is also to ensure that there is no net loss of the acreage or functions and values of shoreline jurisdictional critical areas regulated by this appendix. The regulations in this appendix are fully enforceable and considered part of the SMP.

- A. Establishing development standards to protect defined shoreline jurisdictional critical areas;
- B. Protecting members of the public and public resources and facilities from injury, loss of life, property damage or financial loss due to flooding, erosion, landslides, seismic events, soil subsidence or steep slope failures;
- C. Protecting unique, fragile and valuable elements of the environment including, but not limited to, wildlife and its habitat;
- D. Requiring mitigation of unavoidable impacts on environmentally critical areas by regulating alterations in or near shoreline jurisdictional critical areas;
- E. Preventing cumulative adverse environmental impacts on water availability, water quality, ground water, wetlands and streams;
- F. Measuring the quantity and quality of wetland and stream resources and preventing overall net loss of wetland and stream functions;
- G. Protecting the public trust as to navigable waters and aquatic resources;
- H. Alerting members of the public including, but not limited to, appraisers, owners, potential buyers or lessees to the development limitations of shoreline jurisdictional critical areas; and
- I. Providing City officials with sufficient information to protect shoreline jurisdictional critical areas.

**18.60.020 Applicability.**

A. The provisions of this chapter shall apply to all lands, land uses, and development activity in areas of shoreline jurisdiction in the City of Maple Valley. No action shall be taken by any person, which results in any alteration of any shoreline jurisdictional critical areas except as consistent with the purposes, objectives, and goals of this SMP.

**18.60.030 Definitions.**

A. "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) 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.

B. "Critical aquifer recharge areas (CARA)" means those areas with a critical recharging effect on aquifers used for potable water as defined by WAC [365-190-030](#)(3). CARA include:

1. Those areas that have prevailing geologic conditions associated with infiltration rates that create a high potential for contamination of ground water resources or contribute significantly to the replenishment of ground water.
2. Wellhead protection areas defined by the boundaries of the 10-year time of ground water travel, or boundaries established using alternate criteria approved by the Department of Health in those settings where ground water time of travel is not a reasonable delineation criterion, in accordance with WAC [246-290-135](#).
3. Those critical aquifer recharge areas delineated by a hydrogeologic study prepared in accordance with the State Department of Ecology guidelines.
4. Susceptible ground water management areas as designated pursuant to Chapter [173-100](#) WAC.
5. Special protection areas as defined by WAC [173-200-090](#).
6. Those aquifer recharge areas meeting the criteria for susceptibility or vulnerability established by the State Department of Ecology.
7. Sole source aquifers as designated by the U.S. Environmental Protection Agency under the Sole Source Aquifer Protection Plan authorized by Section 1424(e) of the Safe Drinking Water Act of 1974.

C. "Director" means the Director of the Community Development Department or designee.

D. "Erosion" means the process by which soil particles are mobilized and transported by natural agents such as wind, rainsplash, frost action or surface water flow.

E. "Erosion hazard areas" means those areas underlain by soils which are subject to severe erosion when disturbed. Such soils include, but are not limited to, those classified as having a severe to very severe erosion hazard according to the USDA Natural Resources Conservation Service. These soils include, but are not limited to, any occurrence of River Wash ("Rh") or Coastal Beaches ("Cb") and the

following when they occur on slopes 15 percent or steeper: Alderwood Gravelly Sandy Loam (AgD), Alderwood and Kitsap (AkF), Beausite Gravelly Sandy Loam (BeD and BeF), Ovall Gravelly Loam (OvD and OvF), Ragnar Fine Sandy Loam (RaD), and Ragnar-Indianola association (RdE).

F. "Flood hazard areas" means those areas subject to a general and temporary condition of partial or complete inundation of normally dry land areas from:

1. The overflow of inland waters; and/or
2. The unusual and rapid accumulation of runoff of surface waters from any source.

G. "Hazardous substance processing or handling" means the use, storage, manufacture, or other land use activity involving hazardous substances, but does not include individually packaged consumer products or quantities of hazardous substances less than five gallons in volume per container. Hazardous substances shall not be disposed on site unless in compliance with Dangerous Waste Regulations, Chapter [173-303](#) WAC, and any pertinent local ordinances, such as sewer discharge standards.

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

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

- a. Have short-lived, toxic properties that may cause death, injury, or illness or have mutagenic, teratogenic, or carcinogenic properties; or
- b. Are corrosive, explosive, flammable, or may generate pressure through decomposition or other means.

2. "Extremely hazardous waste" means any waste which:

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

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

I. "Landslide" means episodic downslope movement of a mass including, but not limited to, vegetation, soil and rock.

J. "Landslide hazard area" means those areas subject to landslides based on a combination of geologic, topographic, and hydrologic factors, and include, at a minimum, the following:

1. Areas of historic failures, such as:

a. Those areas delineated by the United States Department of Agriculture Natural Resources Conservation Service as having a significant limitation for building site development;

b. Those coastal areas mapped as class u (unstable), uos (unstable old slides), and urs (unstable recent slides) in the department of ecology Washington coastal atlas; or

c. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geological Survey or Washington department of natural resources.

2. Areas with all three of the following characteristics:

a. Slopes steeper than 15 percent;

b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

c. Springs or ground water seepage;

3. Any area which has shown movement during the Holocene epoch, from 10,000 years ago to the present, or which is underlain or covered by mass wastage debris of this epoch;

4. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

5. Slopes having gradients steeper than eighty percent subject to rockfall during seismic shaking;

6. Any area potentially unstable as a result of rapid stream incision, stream bank erosion or undercutting by wave action, including stream channel migration zones; or

7. Any area located in a canyon or on an alluvial fan, presently subject to or potentially subject to inundation by debris flows or catastrophic flooding; and

8. Any area with a slope of forty percent or steeper and with a vertical relief of ten or more feet except areas composed of bedrock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

K. "Qualified professional," for purposes of this chapter, means a person with experience and training in the applicable critical area. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology or related field, and two years of related work experience.

1. A qualified professional for watercourses, wetlands, and wildlife habitat conservation areas must have a degree in biology or related field and relevant professional experience.

2. A qualified professional for preparing geotechnical reports and geotechnical design recommendations must be a professional geotechnical engineer, licensed in the State of Washington, as defined under WAC [16-210-010\(5\)](#). Identification and evaluation of geologic hazards may be performed by geologists or other geology professionals with experience identifying geologic hazards.

L. "Seismic hazard areas" means those areas subject to severe risk of earthquake damage as a result of soil liquefaction in areas underlain by cohesionless soils of low density and usually in association with a shallow ground water table or of other seismically induced settlement.

M. "Steep slope hazard areas" means those areas on slopes 40 percent or steeper within a vertical elevation change of at least 10 feet. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least 10 feet of vertical relief. For the purpose of this definition:

1. The toe of a slope is a distinct topographic break in slope which separates slopes inclined at less than 40 percent from slopes 40 percent or steeper. Where no distinct break exists, the toe of a steep slope is the lowermost limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet; and

2. The top of a slope is a distinct, topographic break in slope which separates slopes inclined at less than 40 percent from slopes 40 percent or steeper. Where no distinct break exists, the top of a steep slope is the uppermost limit of the area where the ground surface drops 10 feet or more vertically within a horizontal distance of 25 feet.

N. "Stream functions" means natural processes performed by streams including functions which are important in facilitating food chain production, providing habitat for nesting, rearing and resting sites for aquatic, terrestrial and avian species, maintaining the availability and quality of water, such as purifying water, acting as recharge and discharge areas for ground water aquifers, moderating surface and stormwater flows and maintaining the free flowing conveyance of water, sediments and other organic matter.

O. "Streams" means those areas where surface waters produce a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses, unless they are used by salmonids or are used to convey streams naturally occurring prior to construction in such watercourses.

For the purpose of this definition, a "defined channel or bed" is an area which demonstrates clear evidence of the passage of water and includes, but is not limited to, bedrock channels, gravel beds, sand and silt beds and defined-channel swales.

The channel or bed need not contain water year-round.

For the purpose of defining the following categories of streams, "normal rainfall" is rainfall that is at or near the mean of the accumulated annual rainfall record, based upon the water year as recorded at the Seattle-Tacoma International Airport:

1. "Streams with fish" are those used by salmonids;
2. "Streams without fish" are those streams not used by salmonids that flow year-round during years of normal rainfall; and
3. "Intermittent streams" are those streams that are intermittent or ephemeral during years of normal rainfall and that are not used by salmonids.

P. "Wetland edge" means the line delineating the outer edge of a wetland, consistent with the approved federal wetland delineation manual and applicable regional supplements.

Q. "Wetland functions" means natural processes performed by wetlands including functions which are important in facilitating food chain production, providing habitat for nesting, rearing and resting sites for aquatic, terrestrial and avian species, maintaining the availability and quality of water, acting as recharge and discharge areas for ground water aquifers and moderating surface and stormwater flows, as well as performing other functions including, but not limited to, those set forth in [33 CFR 320.4\(b\)\(2\)](#), [1988](#).

R. "Wetland, isolated" means a wetland which has a total size less than 5,000 square feet excluding buffers, which is hydrologically isolated from other wetlands or streams, does not have permanent open water, and is determined to be of low function.

S. "Wetlands" means those areas which are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and 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, or other artificial features intentionally created to mitigate conversions of wetlands pursuant to wetlands mitigation banking.

Wetlands do not include artificial features created from nonwetland areas 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.

T. "Wildlife habitat conservation areas" means those 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 of species richness. "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. All areas within the City of Maple Valley meeting one or more of the following criteria are designated wildlife habitat conservation areas:

1. Areas with which nonaquatic State- or federally designated endangered, threatened, and sensitive species have a primary association.

- a. Federally designated endangered and threatened species are those wildlife species identified by the U.S. Fish and Wildlife Service that are in danger of extinction or are threatened to become endangered.

- b. State-designated endangered, threatened, and sensitive nonaquatic wildlife species are those wildlife species native to the State of Washington identified by the Washington State Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a

significant portion of their range within the State without cooperative management or removal of threats. State-designated endangered, threatened, and sensitive species are periodically recorded in WAC [232-12-014](#) (State endangered species), and WAC [232-12-011](#) (State threatened and sensitive species).

2. Habitats and species of local importance. Habitats and species of local importance are those identified by the City Council, including those that possess unusual or unique habitat warranting protection, or land areas found by the City Council to be essential for preserving connections between habitat blocks and open spaces.

**18.60.100 Disclosure by applicant.**

A. The applicant shall disclose to the City the presence of critical areas on the development proposal site and any mapped or identifiable critical areas within 100 feet of the applicant's property to the extent known by, or readily available to, the applicant.

B. If the development proposal site contains or is within a critical area, the applicant shall submit a statement which declares whether the applicant has knowledge of any illegal alteration to any or all critical areas on the development proposal site and whether the applicant previously has been found in violation of this chapter. If the applicant previously has been found in violation, the applicant shall declare whether such violation has been corrected to the satisfaction of the City.

**18.60.110 Critical area review.**

A. The City shall perform a critical area review for any development proposal permit application or other request for permission to proceed with an alteration on a site which includes a critical area or is within an identified critical area buffer or building setback area.

B. As part of the critical area review, the City shall:

1. Determine whether any critical area exists on the property and confirm its nature and type;
2. Determine whether a critical area special study is required;
3. Evaluate the critical area special study;
4. Determine whether the development proposal is consistent with this chapter;
5. Determine whether any proposed alteration to the critical area is necessary; and

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

**18.60.120 Critical area special study requirement.**

A. When review is required, an applicant for a new development proposal which includes a critical area or is within an identified critical area buffer shall submit a critical area special study to adequately evaluate the proposal and all probable impacts.

B. The City may waive the requirement for a special study if the applicant shows, to the City's satisfaction, that any of the following are met:

1. There will be no alteration of the critical area or buffer;
2. The development proposal will not have an impact on the critical area in a manner contrary to the goals, purposes, objectives and requirements of this chapter; and
3. The minimum standards required by this chapter are met.

C. If necessary to ensure compliance with this chapter, the City may require additional information from the applicant, separate from the special study.

**18.60.130 Contents of critical area special study.**

A. The critical area special study shall be in the form of a written report that has been prepared by a qualified professional and shall contain the following, as applicable:

1. Identification and characterization of all critical areas on or encompassing the development proposal site;
2. Assessment of the impacts or risks of any alteration proposed for a critical area or buffer, assessment of the impacts of any alteration on the development proposal, other properties and the environment, and/or assessment of the impacts to the development proposal resulting from development in the critical area or buffer;
3. Studies which propose adequate mitigation, maintenance, monitoring and contingency plans and bonding measures;
4. A scale map of the development proposal site;

5. Detailed studies on habitat value, hydrology, geological hazard, erosion and sedimentation and/or water quality. Such detailed studies shall include specific recommendations for mitigation which may be required as a condition of any development proposal approval. The recommendations may include, but are not limited to, construction techniques or design, drainage or density specifications; and

6. Other detailed studies, as required by the Director.

B. A critical area special study may be combined with any studies required by other laws and regulations; and

C. If the development proposal will affect only a part of the development proposal site, the City may limit the scope of the required special study to include only that part of the site which may be affected by the development.

**18.60.140 Mitigation, maintenance, monitoring and contingency.**

A. As determined by the City, mitigation, maintenance and monitoring measures shall be in place to protect critical areas and buffers from alterations occurring on the development proposal site.

B. Where monitoring reveals a significant deviation from predicted impacts or a failure of mitigation or maintenance measures, the applicant shall be responsible for appropriate corrective action which, when approved, shall be subject to further monitoring.

**18.60.150 Financial guarantees.**

Financial guarantees may be required by the Director in the form of bonds, letters of credit, assignment of savings accounts, or similar performance or maintenance security devices.

**18.60.160 Vegetation management plan.**

A. For all development proposals where preservation or enhancement of existing vegetation is required by this chapter or by conditions of approval for a Process 2, 3, or 4 application, a vegetation management plan shall be submitted and approved prior to issuance of the permit or other request for permission to proceed with an alteration.

B. The vegetation management plan shall identify the proposed clearing limits for the project and any areas where vegetation in a critical area or its buffer is proposed to be disturbed.

C. Where clearing includes cutting any merchantable stand of timber, as defined in WAC [222-16-010\(28\)](#), the vegetation management plan shall include a description of proposed logging practices which demonstrates how all critical areas will be protected in accordance with the provisions of this chapter.

D. Clearing limits as shown on the plan shall be marked in the field in a prominent and durable manner. Proposed methods of field marking shall be reviewed and approved by City prior to any site alteration. Field marking shall remain in place until the Certificate of Occupancy or final project approval is granted.

E. The vegetation management plan may be incorporated into a temporary erosion and sediment control plan or landscaping plan where either of these plans is required by other laws or regulations.

F. Submittal requirements for vegetation management plans shall be set forth in administrative rules.

**18.60.170 Critical area tract markers and signs.**

A. Permanent survey stakes delineating the boundary between adjoining property and critical area tracts shall be set, using iron or concrete markers as established by current survey standards.

B. The boundary between a critical area tract and contiguous land shall be identified with permanent signs at intervals as required by the Director.

**18.60.180 Notice on title.**

A. The owner of any property containing critical areas or buffers on which a development proposal is approved, except a public right-of-way or the site of a permanent public facility, shall file a notice approved by the City with the King County Records and Elections Division. The required contents and form of the notice shall be set forth in administrative rules. The notice shall inform the public of the presence of critical areas or buffers on the property, of the application of this chapter to the property and that limitations on actions in or affecting such critical areas or buffers may exist. The notice shall run with the land.

B. The applicant shall submit proof that the notice has been filed for public record before the City shall issue permits for any development proposal for the property or, in the case of subdivisions, short subdivisions and binding site plans, at or before recording the final plat or final binding site plan.

**18.60.190 Critical area tracts and designations on site plans.**

A. Critical area tracts shall be used to delineate and protect those critical areas and buffers listed below in development proposals for subdivisions, short subdivisions or binding site plans and shall be recorded on all documents of title of record for all affected lots:

1. All landslide hazard areas and buffers which are one acre or greater in size;
2. All steep slope hazard areas and buffers which are one acre or greater in size;
3. All wetlands and buffers; and

4. All streams and buffers.

B. Any required critical area tract shall be held in an undivided interest by each owner of a building lot within the development with this ownership interest passing with the ownership of the lot or shall be held by an incorporated homeowner's association or other legal entity which assures the ownership, maintenance and protection of the tract.

C. Site plans submitted as part of development proposals for Building Permits, master plan developments and Clearing and Grading Permits shall include and delineate all landslide and steep slope hazard areas, streams and wetlands, buffers and building setbacks.

**18.60.200 Alteration.**

Any human activity which results or is likely to result in an impact upon the existing condition of a critical area is an alteration which is subject to specific limitations as specified for each critical area. Alterations include, but are not limited to, grading, filling, dredging, draining, channelizing, applying herbicides or pesticides or any hazardous substance, discharging pollutants except stormwater, grazing domestic animals, paving, constructing, applying gravel, modifying for surface water management purposes, cutting, pruning, topping, trimming, relocating or removing vegetation or any other human activity which results or is likely to result in an impact to existent vegetation, hydrology, wildlife or wildlife habitat.

Alterations do not include walking, fishing or any other passive recreation or other similar activities.

**18.60.210 Building setbacks.**

Unless otherwise provided, buildings and other structures shall be set back a distance of 15 feet from the edges of all critical area buffers or from the edges of all critical areas, if no buffers are required. The following may be allowed in the building setback area:

A. Landscaping;

B. Uncovered decks;

C. Building overhangs if such overhangs do not extend more than 18 inches into the setback area; and

D. Impervious ground surfaces, such as driveways and patios; provided, that such improvements may be subject to special drainage provisions.

**18.60.220 Erosion hazard areas.**

A. Clearing on an erosion hazard area is allowed only from April 1st to September 1st, except that:

1. Up to 15,000 square feet may be cleared on any lot, subject to any other requirement for vegetation retention and subject to any Clearing and Grading Permit required by the MVMC; and
2. Timber harvest may be allowed pursuant to an approved Forest Practice Permit issued by the Washington State Department of Natural Resources.

B. All development proposals on sites containing erosion hazard areas shall include a temporary erosion control plan consistent with this section and other laws and regulations prior to receiving approval. Specific requirements for such plans shall be set forth by the Director.

C. All subdivisions, short subdivisions or binding site plans on sites with erosion hazard areas shall comply with the following additional requirements:

1. Except as provided in this section, existing vegetation shall be retained on all lots until Building Permits are approved for development on individual lots;
2. If any vegetation on the lots is damaged or removed during construction of the subdivision infrastructure, the applicant shall be required to submit a restoration plan to the City for review and approval. Following approval, the applicant shall be required to implement the plan;
3. Clearing of vegetation on lots may be allowed without a separate Clearing and Grading Permit if the City determines that:
  - a. Such clearing is a necessary part of a large-scale grading plan;
  - b. It is not feasible to perform such grading on an individual lot basis; and
  - c. Drainage from the graded area will meet water quality standards to be established by administrative rules.

D. Where the City determines that erosion from a development site poses a significant risk of damage to downstream receiving waters, based either on the size of the project, the proximity to the receiving water or the sensitivity of the receiving water, the applicant shall be required to provide regular monitoring of surface water discharge from the site. If the project does not meet water quality standards established by law or administrative rules, the City may suspend further development work on the site until such standards are met.

E. The use of hazardous substances, pesticides and fertilizers in erosion hazard areas shall be prohibited unless specifically approved on a case-by-case basis by the City.

F. No new development or creation of new lots is allowed that would cause foreseeable risk from geological conditions to people or improvements during the life of the development (WAC 173-26-221(2)(c)(ii)(B)).

G. No new development is allowed that would require structural shoreline stabilization over the life of the development. Exceptions may be made for the limited instances where stabilization is necessary to protect allowed uses where no alternative locations are available and no net loss of ecological functions will result. (WAC 173-26-221(2)(c)(ii)(C)).

H. Where no alternatives, including relocation or reconstruction of existing structures, are found to be feasible, and less expensive than the proposed stabilization measure, stabilization structures or measures to protect existing primary residential structures may be allowed in strict conformance with WAC 173-26-231 requirements and then only if no net loss of ecological functions will result.

#### **18.60.230 Landslide hazard areas.**

A development proposal on a site containing a landslide hazard area shall meet the following requirements:

A. A minimum buffer of 50 feet shall be established from all edges of the landslide hazard area. The buffer shall be extended as required to mitigate a steep slope or erosion hazard or as otherwise necessary to protect the public health, safety and welfare;

B. Unless otherwise provided herein or as part of an approved alteration, removal of any vegetation from a landslide hazard area or buffer shall be prohibited, except for limited removal of vegetation necessary for surveying purposes and for the removal of hazard trees determined to be unsafe according to tree selection rules promulgated pursuant to this chapter. Notice to the City shall be provided prior to any vegetation removal permitted by this subsection;

C. Vegetation on slopes within a landslide hazard area or buffer which has been damaged by human activity or infested by noxious weeds may be replaced with vegetation native to the City pursuant to an enhancement plan approved by the City. The use of hazardous substances, pesticides and fertilizers in landslide hazard areas and their buffers may be prohibited by the City; and

D. Alterations to landslide hazard areas and buffers may be allowed only as follows:

1. A landslide hazard area located on a slope 40 percent or steeper may be altered only if the alteration meets the standards and limitations set forth for steep slope hazard areas in SMP Appendix A [18.60.250](#);

2. A landslide hazard area located on a slope less than 40 percent may be altered only if the alteration meets the following requirements:

- a. The development proposal will not decrease slope stability on contiguous properties; and
- b. Mitigation based on the best available engineering and geological practices is implemented which either eliminates or minimizes the risk of damage, death or injury resulting from landslides; and

3. Neither buffers nor a critical area tract shall be required if the alteration meets the standards of subsection (D) of this section.

E. No new development or creation of new lots is allowed that would cause foreseeable risk from geological conditions to people or improvements during the life of the development (WAC 173-26-221(2)(c)(ii)(B)).

F. No new development is allowed that would require structural shoreline stabilization over the life of the development. Exceptions may be made for the limited instances where stabilization is necessary to protect allowed uses where no alternative locations are available and no net loss of ecological functions will result. (WAC 173-26-221(2)(c)(ii)(C)).

G. Where no alternatives, including relocation or reconstruction of existing structures, are found to be feasible, and less expensive than the proposed stabilization measure, stabilization structures or measures to protect existing primary residential structures may be allowed in strict conformance with WAC 173-26-231 requirements and then only if no net loss of ecological functions will result.

#### **18.60.240 Seismic hazard areas.**

A development proposal on a site containing a seismic hazard area shall meet the following requirements:

A. Unless exempt, development proposals shall be subject to review standards based on two occupancy types: critical facilities and other structures. The review standards for critical facilities shall be based on longer earthquake reoccurrence intervals. The review standards for both occupancy types shall be set forth in administrative rules;

B. Alterations to seismic hazard areas may be allowed only as follows:

1. The evaluation of site-specific subsurface conditions shows that the proposed development site is not located in a seismic hazard area; or

2. Mitigation based on the best available engineering and geological practices is implemented which either eliminates or minimizes the risk of damage, death or injury resulting from seismically induced settlement or soil liquefaction; and

3. Mobile homes may be placed in seismic hazard areas without performing special studies to address the seismic hazard. Such mobile homes may be subject to special support and tie-down requirements. These requirements shall be set forth in administrative rules;

C. Buildings with less than 2,500 square feet of floor area or roof area (whichever is greater) that contain no living quarters and that are not used as places of employment or public assembly are exempt from the provisions of this section.

D. No new development or creation of new lots is allowed that would cause foreseeable risk from geological conditions to people or improvements during the life of the development (WAC 173-26-221(2)(c)(ii)(B)).

E. No new development is allowed that would require structural shoreline stabilization over the life of the development. Exceptions may be made for the limited instances where stabilization is necessary to protect allowed uses where no alternative locations are available and no net loss of ecological functions will result. (WAC 173-26-221(2)(c)(ii)(C)).

F. Where no alternatives, including relocation or reconstruction of existing structures, are found to be feasible, and less expensive than the proposed stabilization measure, stabilization structures or measures to protect existing primary residential structures may be allowed in strict conformance with WAC 173-26-231 requirements and then only if no net loss of ecological functions will result.

#### **18.60.250 Steep slope hazard areas.**

A development proposal on a site containing a steep slope hazard area shall meet the following requirements:

A. A minimum buffer of 50 feet shall be established from the top, toe and along all sides of any slope 40 percent or steeper. The buffer shall be extended as required to mitigate a landslide or erosion hazard or as otherwise necessary to protect the public health, safety and welfare. The buffer may be reduced to a minimum of 10 feet if, based on a special study, the City determines that the reduction will adequately protect the proposed development and the critical area. For single-family residential Building Permits only, the City may waive the special study requirement if other development in the area has already provided sufficient information or if such information is otherwise readily available. The City may authorize buffer reductions to no less than 10 feet if the City determines that the reduction will adequately protect

the proposed development and the critical area pursuant to the requirements for a special study under SMP Appendix A [18.60.130](#).

B. Unless otherwise provided herein or as part of an approved alteration, removal of any vegetation from a steep slope hazard area or buffer shall be prohibited, except for limited removal of vegetation necessary for surveying purposes and for the removal of hazard trees determined to be unsafe according to tree selection rules promulgated pursuant to this chapter. Notice to the City shall be provided prior to any vegetation removal permitted by this subsection.

C. Vegetation on steep slopes within steep slope hazard areas or their buffers which has been damaged by human activity or infested by noxious weeds may be replaced with vegetation native to the City pursuant to a vegetation management plan approved by the City. The use of hazardous substances, pesticides and fertilizers in steep slope hazard areas and their buffers may be prohibited by the City.

D. Alterations to steep slope hazard areas and buffers may be allowed only as follows:

1. Approved surface water conveyances, as specified in the King County Surface Water Design Manual or other reference source or manual in use by the City, may be allowed on steep slopes if they are installed in a manner to minimize disturbance to the slope and vegetation;
2. Public and private trails may be allowed on steep slopes as approved by the City. Under no circumstances shall trails be constructed of concrete, asphalt or other impervious surfaces which will contribute to surface water runoff, unless such construction is necessary for soil stabilization or soil erosion prevention or unless the trail system is specifically designed and intended to be accessible to handicapped persons. Additional requirements for trail construction may be set forth in administrative rules;
3. Utility corridors may be allowed on steep slopes if a special study shows that such alteration will not subject the area to the risk of landslide or erosion;
4. Limited trimming and pruning of vegetation may be allowed on steep slopes pursuant to an approved vegetation management plan for the creation and maintenance of views if the soils are not disturbed and the activity is subject to administrative rules;
5. Approved mining and quarrying activities may be allowed;
6. Stabilization of sites where erosion or landsliding threaten public or private structures, utilities, roads, driveways or trails, or where erosion and landsliding threatens any lake, stream, wetland or

shoreline. Stabilization work shall be performed in a manner which causes the least possible disturbance to the slope and its vegetative cover;

7. Reconstruction, remodeling, or replacement of existing structures;

8. Reconstruction, remodeling, or replacement of an existing structure upon another portion of an existing impervious surface which was established pursuant to City laws and regulations may be allowed, provided:

a. If within the buffer, the structure is located no closer to the steep slope than the existing structure;

b. The existing impervious surface within the buffer or steep slope is not expanded as a result of the reconstruction or replacement.

E. The following are exempt from the provisions of this section:

1. Slopes which are 40 percent or steeper with a vertical elevation change of up to 20 feet if no adverse impact will result from the exemption based on the City's review of and concurrence with a soils report prepared by a geologist or geotechnical engineer; and

2. The approved regrading of any slope which was created through previous legal grading activities. Any slope which remains 40 percent or steeper following site development shall be subject to all requirements for steep slopes.

F. No new development or creation of new lots is allowed that would cause foreseeable risk from geological conditions to people or improvements during the life of the development (WAC 173-26-221(2)(c)(ii)(B)).

G. No new development is allowed that would require structural shoreline stabilization over the life of the development. Exceptions may be made for the limited instances where stabilization is necessary to protect allowed uses where no alternative locations are available and no net loss of ecological functions will result. (WAC 173-26-221(2)(c)(ii)(C)).

H. Where no alternatives, including relocation or reconstruction of existing structures, are found to be feasible, and less expensive than the proposed stabilization measure, stabilization structures or measures to protect existing primary residential structures may be allowed in strict conformance with WAC 173-26-231 requirements and then only if no net loss of ecological functions will result.

**18.60.255 Critical aquifer recharge areas.**

Development on or adjacent to a critical aquifer recharge area shall meet the following requirements:

A. For projects where the construction of structures and improvements, including additions, results in more than 50 percent total site impervious surface area, the applicant shall provide surface water infiltration according to a surface water management plan that mitigates impacts to the aquifer recharge process, or shall submit a hydrogeologic assessment that indicates the proposal will not impact the recharge effect of the aquifer. Surface water management plans and hydrogeologic assessments shall be subject to review and approval by the Director.

B. For development that includes hazardous substance processing or handling, or significant diversion, alteration or reduction to the flow of surface or ground waters, or otherwise significantly reduces the recharging of the aquifer, the development must be designed and constructed in accordance with a critical areas study that includes a hydrogeologic assessment of ground water vulnerability, including an assessment of predicted impacts to ground water recharge and ground water quality. Applications for development that will significantly affect ground water recharge or quality shall be denied if such impacts cannot be adequately mitigated.

C. The proposed activity must comply with the water source protection requirements and recommendations of the Federal Environmental Protection Agency, State Department of Health, and Seattle-King County Public Health.

D. Storage Tanks. The Fire Marshal specifically regulates and authorizes permits for underground storage tanks, and the Washington State Department of Ecology also regulates and authorizes permits for underground storage tanks. All storage tanks proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to the following requirements:

1. Underground Tanks. All new underground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:
  - a. Prevent releases due to corrosion or structural failure for the operational life of the tank;
  - b. Be protected against corrosion, constructed of noncorrosive material, steel-clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substances; and
  - c. Use material in the construction or lining of the tank that is compatible with the substance to be stored.

2. Aboveground Tanks. All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

- a. Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;
- b. Have a primary containment area enclosing or underlying the tank or part thereof; and
- c. For all tanks, a secondary containment system either built into the tank structure or a dike system built outside the tank.

E. Vehicle Repair and Servicing.

1. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.

2. No dry wells shall be allowed in critical aquifer recharge areas on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility establishment must be abandoned using techniques approved by the State Department of Ecology prior to commencement of the proposed activity.

F. Uses Prohibited from Critical Aquifer Recharge Areas. The following activities and uses are prohibited in critical aquifer recharge areas, provided expansion of existing uses may be allowed by the City if the applicant demonstrates through a special study that the proposed expansion will not negatively impact ground water quality or recharge:

1. Waste transfer stations, landfills, and disposal of hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste;
2. Junk yards;
3. Inoperative Vehicles. Storage of wrecked or inoperative vehicles, except as an accessory to an allowed use when stored over impervious paving with drainage controls designed to prevent ground water contamination;
4. Underground Injection Wells.
  - a. Class I wells;

b. Class III wells;

c. Class IV wells;

d. Class V well subclasses 5F01 (Agricultural Drainage Wells), 5D03 (Improved Sinkholes), 5F04, 5W09 (Untreated Sewage Waste Wells), 5W10 (Cesspools), 5W11 (Septic Systems – Undifferentiated Disposal Method), 5W31 (Septic Systems – Well Disposal Method), 5X13 (Mining, Sand, or Other Backwells), 5X14 (Solution Mining Wells), 5X15 (In Situ Fossil Fuel Recovery Wells), 5W20, 5X28 (Motor Vehicle Waste Disposal Wells), and 5N24 (Radioactive Waste Disposal Wells);

5. Mining.

a. Metals and hard rock mining;

b. Sand and gravel mining;

6. Wood Treatment Facilities. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);

7. Storage, Processing, or Disposal of Radioactive Substances. Facilities that store, process, or dispose of radioactive substances; and

8. Other.

a. Activities that would significantly reduce the recharge to aquifers currently or potentially used as potable water sources;

b. Activities that would significantly reduce the recharge to aquifers that are sources of significant baseflow to regulated streams;

c. Activities that are not connected to an available sanitary sewer system are prohibited from critical aquifer recharge areas associated with sole source aquifers; this includes residential developments on septic systems, as well as other commercial or industrial uses that may drain to underground reservoirs.

G. State and Federal Regulations. The uses listed below shall be conditioned as necessary to protect critical aquifer recharge areas in accordance with the applicable State and federal regulations.

Statutes, Regulations, and Guidance Pertaining to Ground-Water-Impacting Activities

| Activity   | Statute – Regulation – Guidance   |
|--|---|
| Above Ground Storage Tanks   | WAC <a href="#">173-303-640</a>   |
| Automobile Washers   | Chapter <a href="#">173-216</a> WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)                                 |
| Below Ground Storage Tanks   | Chapter <a href="#">173-360</a> WAC   |
| Chemical Treatment Storage and Disposal Facilities   | WAC <a href="#">173-303-182</a>   |
| Hazardous Waste Generator ( <i>Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.</i> ) | Chapter <a href="#">173-303</a> WAC   |
| Injection Wells  | Federal <a href="#">40</a> CFR Parts <a href="#">144</a> and <a href="#">146</a> ;<br>Chapter <a href="#">173-218</a> WAC                             |
| Junk Yards and Salvage Yards   | Chapter <a href="#">173-304</a> WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)          |
| Oil and Gas Drilling   | WAC <a href="#">332-12-450</a> ; Chapter <a href="#">173-218</a> WAC  |
| On-Site Sewage Systems (Large-Scale)   | Chapter <a href="#">173-240</a> WAC   |
| On-Site Sewage Systems (< 14,500 gal./day)   | Chapter <a href="#">246-272</a> WAC; Local Health Ordinances  |
| Pesticide Storage and Use  | Chapters <a href="#">15.54</a> and <a href="#">17.21</a> RCW  |
| Sawmills   | Chapters <a href="#">173-303</a> and <a href="#">173-304</a> WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53) |
| Solid Waste Handling and Recycling Facilities  | Chapter <a href="#">173-304</a> WAC   |
| Surface Mining   | WAC <a href="#">332-18-015</a>  |

Statutes, Regulations, and Guidance Pertaining to Ground-Water-Impacting Activities

| Activity                                | Statute – Regulation – Guidance   |
|---|---|
| Waste Water Application to Land Surface | Chapters <a href="#">173-200</a> and <a href="#">173-216</a> WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture |

**18.60.260 Wetlands.**

A. Identification of wetlands and delineation of their boundaries shall be done in accordance with the approved wetland delineation manual and applicable regional supplement. All areas within the City shoreline jurisdiction meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Appendix.

B. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication #14-06-029, or as revised and approved by Ecology), which contains the definitions and methods for determining whether the criteria below are met.

1. Category I wetlands are those wetlands that represent unique or rare wetland types, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or provide a high level of functions (scoring 23 points or more). Category I wetland are those that meet any of the following criteria:

- a. wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR;
- b. bogs; or
- c. mature and old-growth forested wetlands larger than 1 acre.

2. Category II wetlands are those wetlands with a moderately high level of functions (scoring between 20 and 22 points).

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

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

D. The following buffer widths have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication #14-06-029, or as revised and approved by Ecology). The adjacent land use intensity is assumed to be high.

1. For wetlands that score 6 points or more for habitat function, the buffers in Table 260.1 can be used if both of the following criteria are met:

a. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW web site at: <http://wdfw.wa.gov/hab/phshabs.htm> ) 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. Presence or absence of a nearby habitat must be confirmed by a qualified biologist. If no option for providing a corridor is available, Table 260.1 may be used with the required measures in Table 260.2 alone.

b. All of the measures in Table 260.2 are implemented, where applicable, to minimize the impacts of the adjacent land uses.

2. For wetlands that score 3-5 habitat points, only the measures in Table 260.2 are required for the use of Table 260.a.

3. If an applicant choose not to apply the mitigation measures in Table 260.2, or is unable to provide a protected corridor where available, then Table 260.3 must be used.

4. The buffer widths in Tables 260.1 and 260.3 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform the needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.



**Table 260.1: Wetland Buffer Requirements if Table 260.2 is Implemented and Corridor Provided**

| <b>Wetland Category</b>  | <b>Buffer Width (in feet) based on Habitat Score</b> |            |            |
|--|--|------------|------------|
|  | <i>3-5</i>   | <i>6-7</i> | <i>8-9</i> |
| <b>Category I:</b><br>Based on total score                         | 75   | 110        | 225        |
| <b>Category I:</b><br>Bogs and Wetlands of High Conservation Value | 190  | 190        | 225        |
| <b>Category II (all)</b>   | 75   | 110        | 225        |
| <b>Category III (all)</b>  | 60   | 110        | 225        |
| <b>Category IV (all)</b>   | 40   |            |            |

**Table 260.2: Required Measures to Minimize Impacts to Wetlands** (All measures required if applicable to a specific proposal)

| <b>Disturbance</b>         | <b>Required Measures to Minimize Impacts</b>   |
|----------------------------|--|
| Lights                     | <ul style="list-style-type: none"> <li>• Direct lights away from wetland</li> </ul>  |
| Noise                      | <ul style="list-style-type: none"> <li>• Locate activity that generates noise away from wetland</li> <li>• If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</li> <li>• For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</li> </ul> |
| Toxic runoff               | <ul style="list-style-type: none"> <li>• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</li> <li>• Establish covenants limiting use of pesticides within 150 ft of wetland</li> <li>• Apply integrated pest management</li> </ul>   |
| Stormwater runoff          | <ul style="list-style-type: none"> <li>• Retrofit stormwater detention and treatment for roads and existing adjacent development</li> <li>• Prevent channelized flow from lawns that directly enters the buffer</li> <li>• Use Low Intensity Development techniques (for more information refer to the drainage ordinance and manual)</li> </ul>   |
| Change in water regime     | <ul style="list-style-type: none"> <li>• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</li> </ul>  |
| Pets and human disturbance | <ul style="list-style-type: none"> <li>• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion</li> <li>• Place wetland and its buffer in a separate tract or protect with a conservation easement</li> </ul>  |
| Dust                       | <ul style="list-style-type: none"> <li>• Use best management practices to control dust</li> </ul>  |

**Table 260.3: Wetland Buffer Requirements if Table 260.2 is NOT Implemented or Corridor NOT Provided**

| Wetland Category   | Buffer Width (in feet) based on Habitat Score |     |     |
|--|---|-----|-----|
|  | 3-5   | 6-7 | 8-9 |
| <b>Category I:</b><br>Based on total score                         | 100   | 150 | 300 |
| <b>Category I:</b><br>Bogs and Wetlands of High Conservation Value | 250   | 250 | 300 |
| <b>Category II (all)</b>   | 100   | 150 | 300 |
| <b>Category III (all)</b>  | 80  | 150 | 300 |
| <b>Category IV (all)</b>   | 50  |     |     |

E. Buffer width averaging may be allowed by the City if it will provide additional protection to wetlands or enhance their functions, as long as the total area contained in the buffer on the development proposal site does not decrease and the minimum buffer width remains at least 75 percent of the full width;

F. Increased buffer widths and enhancements to buffer vegetation shall be required by the City when necessary to protect wetlands. Provisions for additional buffer widths may be contained in administrative rules promulgated pursuant to this chapter including, but not limited to, provisions pertaining to critical drainage areas, location of hazardous substances, critical fish and wildlife habitat, landslide or erosion hazard areas contiguous to wetlands, ground water recharge and discharge and the location of trail or utility corridors;

G. The use of hazardous substances, pesticides and fertilizers in the wetland and its buffer is prohibited;

**18.60.265 Wetlands – Regulated activities.**

Land use and development activities in shoreline jurisdictional wetlands shall ensure no net loss of wetland area and functions, including lost time when the wetland does not perform the functions.

Regulated activities include, but are not limited to, the following activities consistent with WAC 173-26-221(2)(c)(i)(A):

- A. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;
- B. The dumping, discharging, or filling with any material, including discharges of stormwater and domestic, commercial, or industrial wastewater;
- C. The draining, flooding, or disturbing of the water level, duration of inundation, or water table;
- D. The driving of pilings;
- E. The placing of obstructions;
- F. The construction, reconstruction, demolition, or expansion of any structure;
- G. Significant vegetation removal, provided that these activities are not part of a forest practice governed under chapter 76.09 RCW and its rules;
- H. Other uses or development that results in an ecological impact to the physical, chemical, or biological characteristics of wetlands; or
- I. Activities reducing the functions of buffers described in WAC 173-26-221(2)(c)(i)(D).

**18.60.280 Wetlands – Mitigation requirements.**

A. Mitigation Sequencing. Before impacting any wetland or its buffer, an applicant shall demonstrate that the following actions have been taken. Actions are listed in order of preference:

1. Avoid the impact altogether by not taking a certain action or parts of an action.
2. Minimize 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.
3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment.
4. Reduce or eliminate the impact over time by preservation and maintenance operations.
5. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments.
6. Monitor the required compensation and take remedial or corrective measures when necessary.

B. Compensatory mitigation actions shall generally be conducted within the same sub-drainage basin and on the site of the alteration except when the applicant can demonstrate that off-site mitigation is ecologically preferable. The following criteria will be evaluated when determining whether the proposal is ecologically preferable. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu-fee program, or advance mitigation. A watershed plan is required if off-site mitigation is proposed.

1. There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and required widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);
2. On-site mitigation would require elimination of high-quality upland habitat.
3. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the altered wetland.
4. Off-site locations shall be in the same sub-drainage basin unless:
  - a. Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site; or
  - b. Credits from a state-certified wetland mitigation bank are used as compensation, and the use of credits is consistent with the terms of the certified bank instrument;
  - c. Fees are paid to an approved in-lieu-fee program to compensate for the impacts.

C. It is preferred that compensatory mitigation projects be completed prior to activities that will impact wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

D. Wetland Mitigation Ratios

| <b>Wetland Category</b>  | <i>Creation or Re-establishment</i> | <i>Rehabilitation</i> | <i>Enhancement</i> |
|--|-------------------------------------|-----------------------|--------------------|
| <b>Category I:</b><br>Bogs and Wetlands of High Conservation Value | Not considered possible             | Case by case          | Case by case       |
| <b>Category I:</b><br>Based on total score                         | 4:1                                 | 8:1                   | 16:1               |
| <b>Category II (all)</b>   | 3:1                                 | 6:1                   | 12:1               |
| <b>Category III (all)</b>  | 2:1                                 | 4:1                   | 8:1                |
| <b>Category IV (all)</b>   | 1:5:1                               | 3:1                   | 6:1                |

G. Surface water management or flood control alterations including, but not limited to, wetponds shall not constitute replacement or enhancement unless other functions are simultaneously improved.

**18.60.300 Isolated wetlands – Limited exemption.**

Isolated wetlands less than 5,000 square feet may be altered by filling or dredging if the City determines that the cumulative impacts do not unduly counteract the purposes of this chapter and are mitigated pursuant to an approved mitigation plan.

**18.60.310 Streams.**

A. Stream ratings shall be consistent with the Washington Department of Natural Resources water typing categories (WAC 222-16-030), which are based on existing habitat functions and classified as follows:

1. Type S: Streams and waterbodies inventoried as Shorelines of the State, under RCW 90.58. These watercourses and waterbodies shall be regulated under the Maple Valley Shoreline Master Program.
2. Type F: Those streams that are known to be used by fish or meet the physical criteria to be potentially used by fish (as established in WAC 222-16-031(3)) and have perennial (year-round) or seasonal flows.
3. Type Np: Those stream segments within the ordinary high water mark that are perennial and are not Type S or Type F streams. However, for the purpose of classification, Type Np streams include intermittent dry portions of the channel below the uppermost point of perennial flow. If the

uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see Washington Forest Practices Board Manual, Section 23), then said point shall be determined by a qualified professional selected or approved by the City.

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

B. The following minimum buffers shall be established from the ordinary high water mark or from the top of the bank if the ordinary high water mark cannot be identified:

1. Type F streams shall have a 100-foot buffer;
2. Type Np streams shall have a 50-foot buffer;
3. Type Ns streams shall have a 50-foot buffer;
4. Any stream restored, relocated, replaced or enhanced because of a stream alteration shall have the minimum buffer required for the stream class involved;
5. Any stream with an ordinary high water mark within 25 feet of the toe of a slope 30 percent or steeper, but less than 40 percent, shall have:
  - a. The minimum buffer required for the stream class involved or a 25-foot buffer beyond the top of the slope, whichever is greater, if the horizontal length of the slope including small benches and terraces is within the buffer for that stream class; or
  - b. A 25-foot buffer beyond the minimum buffer required for the stream class involved if the horizontal length of the slope including small benches and terraces extends beyond the buffer for that stream class; and
6. Any stream adjoined by a riparian wetland or other contiguous critical area shall have the buffer required for the stream class involved or the buffer which applies to the wetland or other critical area, whichever is greater;

C. Buffer width averaging may be allowed by the City if it will provide additional natural resource protection, as long as the total area contained in the buffer on the development proposal site does not decrease and the minimum buffer width remains at least 75 percent of the full buffer width;

D. Increased buffer widths shall be required by the City when necessary to protect streams. Provisions for additional buffer widths shall be contained in administrative rules promulgated pursuant to this chapter including, but not limited to, critical drainage areas, location of hazardous substances, critical fish and wildlife habitat, landslide or erosion hazard areas contiguous to streams, ground water recharge and discharge and the location of trail or utility corridors;

E. The use of hazardous substances, pesticides and fertilizers in the stream corridor and its buffer is prohibited;

F. Except as provided in subsection (G) of this section, public and private trails may be allowed in stream buffers only upon adoption of administrative rules consistent with the following:

1. The trail surface shall not be made of impervious materials; and
2. Buffers shall be expanded, where possible, equal to the width of the trail corridor including disturbed areas;

G. Stream crossings may be allowed and may encroach on the otherwise required stream buffer if:

1. All crossings use bridges or other construction techniques which do not disturb the stream bed or bank, except that bottomless culverts or other appropriate methods demonstrated to provide fisheries protection may be used if the applicant demonstrates that such methods and their implementation will pose no harm to the stream or inhibit migration of fish;
2. All crossings are constructed during the summer low flow and are timed to avoid stream disturbance during periods when use is critical to salmonids;
3. Crossings do not occur over salmonid spawning areas unless the City determines that no other possible crossing site exists;
4. Bridge piers or abutments are not placed within the FEMA floodway or the ordinary high water mark;
5. Crossings do not diminish the flood-carrying capacity of the stream;
6. Underground utility crossings are laterally drilled and located at a depth of four feet below the maximum depth of scour for the base flood predicted by a civil engineer licensed by the State of Washington. Temporary bore pits to perform such crossings may be permitted within the stream

buffer established in subsection (A) of this section. Crossing of Class 3 streams when dry may be made with open cuts; and

7. Crossings are minimized and serve multiple purposes and properties whenever possible;

H. A stream channel may be stabilized if:

1. Movement of the stream channel threatens existing residential or commercial structures, public facilities or improvements, unique natural resources or the only existing access to property; and

2. The stabilization is done in compliance with the requirements of any applicable rules or regulations related to flood hazard or floodplain areas;

I. Stream enhancement not associated with any other development proposal may be allowed if accomplished according to a plan for its design, implementation, maintenance and monitoring prepared by a civil engineer and a qualified biologist and carried out under the direction of a qualified biologist;

J. A minor stream restoration project for fish habitat enhancement may be allowed if:

1. The restoration is sponsored by a public agency with a mandate to do such work;

2. The restoration is unassociated with mitigation of a specific development proposal;

3. The restoration is limited to placement of rock wiers, log controls, spawning gravel and other specific salmonid habitat improvements;

4. The restoration only involves the use of hand labor and light equipment; or the use of helicopters and cranes which deliver supplies to the project site; provided, that they have no contact with critical areas or their buffers; and

5. The restoration is performed under the direction of a qualified biologist;

K. Roadside and agricultural drainage ditches which carry streams with salmonids may be maintained through the use of best management practices developed in consultation with relevant county, State and federal agencies; and

L. Reconstruction, remodeling, or replacement of an existing structure upon another portion of an existing impervious surface which was established pursuant to City codes and regulations may be allowed, provided:

1. If within the buffer, the structure is located no closer to the stream than the existing structure;
2. The existing impervious surface within the buffer or stream is not expanded as a result of the reconstruction or replacement.

**18.60.320 Restoration and mitigation.**

A. Restoration shall be required when a stream or its buffer is altered in violation of law or without any specific permission or approval by the City. A mitigation plan for the restoration shall demonstrate that:

1. The stream has been degraded and will not be further degraded by the restoration activity;
2. The restoration will reliably and demonstrably improve the water quality and fish and wildlife habitat of the stream;
3. The restoration will have no lasting significant adverse impact on any stream functions; and
4. The restoration will assist in stabilizing the stream channel.

B. The following minimum requirements shall be met for the restoration of a stream:

1. All work shall be carried out under the direct supervision of a qualified biologist;
2. Basin analysis shall be performed to determine hydrologic conditions;
3. The natural channel dimensions shall be replicated including its depth, width, length and gradient at the original location, and the original horizontal alignment (meander lengths) shall be replaced;
4. The bottom shall be restored with identical or similar materials;
5. The bank and buffer configuration shall be restored to its original condition;
6. The channel, bank and buffer areas shall be replanted with vegetation native to the City which replicates the original vegetation in species, sizes and densities; and
7. The original biologic functions of the stream shall be recreated.

C. The requirements in subsection (B) of this section may be modified if the applicant demonstrates to the satisfaction of the City that a greater biologic function can otherwise be obtained.

D. Replacement or enhancement shall be required when a stream or buffer is altered pursuant to an approved development proposal. There shall be no net loss of stream functions on a development

proposal site and no impact on stream functions above or below the site due to approved alterations. The requirements that apply to the restoration of streams in subsection (B) of this section shall also apply to the relocation of streams, unless the applicant demonstrates to the satisfaction of the City that a greater biologic function can be obtained by modifying these requirements.

E. Replacement or enhancement for approved stream alterations shall be accomplished in streams and on the site unless the applicant demonstrates to the satisfaction of the City that:

1. Enhancement or replacement on the site is not possible;
2. The off-site location is in the same drainage sub-basin as the original stream; and
3. Greater biologic and hydrologic functions will be achieved.

F. Surface water management or flood control alterations shall not be considered enhancement unless other functions are simultaneously improved.

#### **18.60.325 Wildlife habitat conservation areas.**

A development proposal on a site containing a wildlife habitat conservation area or habitat buffer shall meet the following requirements:

A. When appropriate due to the type of habitat or species present or the project area conditions, the Director may require an assessment of habitats including the following site- and proposal-related information at a minimum:

1. Identification of any nonaquatic priority species, or endangered, threatened, sensitive or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
2. A discussion of any federal, State, or local special management recommendations, including Washington State Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
3. A discussion of any ongoing management practices that will protect habitat after the project site has been developed, including any proposed monitoring, maintenance, and adaptive management programs;
4. When appropriate, due to the type of habitat or species present or the project area conditions, the Director may also require the habitat management plan to include an evaluation by the

Washington State Department of Fish and Wildlife or other qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate.

B. Where needed to protect habitat conservation areas, the Director shall require the establishment of buffers in or adjacent to these areas. Buffers shall consist of an undisturbed area of native vegetation, or areas identified for restoration, established to protect the integrity and functions of the habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby. When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Activities may be further restricted and buffers may be increased during the specified season.

C. Development in or adjacent to habitat conservation areas shall meet the following general requirements:

1. A habitat conservation area and associated buffer may be altered only if the proposed alteration of the habitat and associated buffer does not degrade the functions of the habitat and associated buffer.

2. Plant or wildlife species not indigenous to Western Washington shall be excluded from habitat conservation areas and associated buffers unless authorized by a State or federal permit or approval.

3. Mitigation sites should be located to achieve contiguous wildlife habitat corridors in accordance with a mitigation plan that is part of an approved critical area study to minimize the isolating effects of development on habitat areas.

4. The Director shall condition approvals of activities allowed within or adjacent to a habitat conservation area or its buffers, as necessary to minimize or mitigate any potential adverse impacts. Conditions may include, but are not limited to, the following:

- a. Establishment of buffer zones;

- b. Preservation of critically important vegetation;

- c. Limitation of public access to the habitat area, including fencing to deter unauthorized access;

- d. Seasonal restriction of activities;

e. Establishment of a duration and timetable for periodic review of mitigation activities; and

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